West Virginia 2019 Career Development Events Rules and Regulations



2018 Sweepstakes Winner Wirt County High School









Horse Evaluation Contest – April 27, 2019 Spring Events –June 4 & 5, 2019 Dairy Cattle Evaluation – August 11, 2019 Fall Events – September 10 & 11, 2019

## Welcome Letter

Agricultural and Extension Education School of Design and Community Development Davis College of Agriculture, Natural Resources and Design West Virginia University Morgantown, West Virginia

January 2, 2019

Dear Agriculture Teachers and Students:

We extend to each of you a cordial invitation to attend the Ninety-fifth Annual State Agriculture Career Development Events to be held on the campus of West Virginia University, Potomac State College, and Jackson's Mill on April 27, June 4 & 5, August 11, and September 10-11, 2019.

All events will be registered and scored with the Judgingcard.com system. There will be no provision for late registrations. All Scantron data will be scanned and submitted online. No changes can be made to team and student numbers, therefore incorrect team and student numbers will result in the student being disqualified from the event. Please see page 4 for more details. It will be valuable to you and your students to visit the AGEE homepage to access the CDE Rules and Regulations which includes scantron sheets and other contest materials. You can access the CDE homepage at https://aged.wvu.edu/.

The Rules and Regulations posted on the website will be considered the "OFFICIAL" source of information for the contest. All contests will be scored with official SCANTRONs. Students must possess two #2 pencils and a firm substance on which to write. They should also have something to protect their Scantron sheets from the weather.

- All chaperones attending the 2019 Career Development Events must be formally approved by their local Boards of Education.
- The **basic entry fee cost per team is \$10.00** (make checks payable to WVU CDE Fund) for each team registered. An additional fee will be assessed for the Floriculture, Meats, and Poultry contests. Schools will be charged for teams registered as opposed to teams competing.
- *Rule Change for 2019:* Once a contest has started, there will be no communication among contestants until the contest has been completed and all score cards have been turned in. If a contestant is observed talking at any time he/she has a scantron in hand, the group leader will record the student's name, school and contestant number and give it to the contest coordinator and/or the results tabulator. This individual will be disqualified from the contest.

If you have **specific questions about a contest**, please *call the Contest Coordinator*. Phone numbers for contest coordinators are located in the back of the Ag Teachers Directory.

Sincerely,

Harry N. Boone, Jr.

Professor and Chair Deborah H. Boone

Professor

Jessica M. Blythe

Assistant Professor Emily Perdue Assistant Professor

**Stacy H. Gartin** Professor *Kerry S.* Odell

Associate Professor Jason D. McKibben

Assistant Professor Haley Rosson Assistant Professor

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# **Registration Location and Deadlines**

	Equine	Spring Events	Dairy	Fall Events
Registration Deadline	April 12	May 24	August 2	August 30
	11:59 PM	11:59 PM	11:59 PM	11:59 PM

# **Registration Sites:**

All registrations are completed on the https://www.judgingcard.com/ web site.

For the 2019 judging season the following procedures will be in place. They include:

- 1. All CDE registrations will be submitted through judgingcard.com
- 2. All CDE scoring will be done via the judgingcard.com system
- 3. You will use your chapter number supplied by the National FFA Organization for your team number
- 4. Because this is an online service, deadlines will be strictly enforced. (There will not be an opportunity for late registrations.)
- 5. The scantrons will be scanned and entered into the system. There will be no changes made to scantron information by WVU. That includes names, team numbers, and/or student numbers.
- 6. PLEASE NOTE the new scantrons.

Please note the instructions for registering your teams:

- 1. Log on to judgingcard.com using your AET login and password
- 2. It is the same username and password you use for the AET recordbook system.
- 3. Once you are logged in, you click the icon for "Registration & Information"
- 4. Then bump to the correct month on the calendar and click the link for the correct contest.
- 5. Finally, you click "Online Registration" at the top and register.
- 6. You need to register your team and include names of the individual students. (You must include student names to complete the registration.)

# Scantron Scoresheet Directions

Must be given by Coordinators at the Beginning of each Contest

# **DIRECTIONS:**

# IMPORTANT!!!!

- 1. Students must possess a #2 pencil or a mechanical pencil with similar type lead. They must also have a hard surface to write on. All numbers, names, and answers must be DARK. If bubbles are not DARK and completely filled there is a chance that the Scantron Reader may not correctly read their answers, thus they may receive no points.
- 2. Students <u>must not</u> fold, bend, or roll the edges of the Scantron sheet. If they are using clipboards, students should not lift the Scantron sheet or they will bend the top portion of it. They should depress the clip and remove the sheet from the bottom of the clipboard to mark the back side if necessary.
- 3. Group leaders should check periodically to see that the students are placing his/her answers in the appropriate category or section of the Scantron sheet.

**EXAMPLE:** Make certain that they darken in the correct placing for the class they are evaluating...DON'T MARK CLASS 1 if you are starting with CLASS 2. All possible sections for placing each class are located from top to bottom under each CLASS.

Contest Coordinators must provide the ANSWER KEY to Dr. Boone in room 4417of the Ag Science Building as soon as possible so he can set the Scoring Program. Coordinators must indicate the order for TIE BREAKERS (1<sup>ST</sup>, 2<sup>ND</sup>, 3<sup>RD</sup>, etc.).

2019 State Career Development

**Events** Parking



# **ALL BUSES**

# Must be PARKED

# at the Evansdale Crossing or the Coliseum

# Other Vehicles must pay and park in the <u>PAID LOT</u> next to the WVU Water Tower

# The Davis College can/will not provide parking passes for CDEs.

(Ticketing and/or Towing Regulations will be enforced.)

# Rules, Regulations and Recognition

- 1. The teacher must complete all registration information online (judgingcard.com) for each contest (see page 4 for deadlines). Teams not properly registered will be declared ineligible to participate.
- 2. Late registrations will not be allowed.
- 3. A final registration/check-in of teams will take place. The check in will be used to provide each contestant with a name badge/contestant number. This badge must be worn at all times during the contest (unless it poses a safety hazard). Changes in team members will be taken care of by the contestants filling out the scantron cards properly. Teams will report directly to the designated contest location.
- 4. A team shall consist of four students (except the Meats Evaluation is limited to 3 participants). See the first section of each respective contest or the "Maximum Number of Participants per Team" section to determine the number of scores that will count as the team score.
- 5. Check the program of events so that you will avoid scheduling the same student(s) for two contests which may overlap due to unforeseen circumstances.
- 6. Students may compete in a Career Development Event even if their school does not have a full team (3 or 4 members). If a school has less than 3 team members, the students are only eligible for individual awards. A school may enter only one team (maximum 4 students) per event. (Passed 11/6/2006)
- 7. All chaperones attending the Career Development Events must be formally approved by the local Board of Education.
- 8. Any student who fails to correctly enter his/her team and student numbers on the Scantron sheets will be disqualified from the event.
- 9. The *National FFA Bulletin on Career Development Events* will serve as an excellent reference in preparing teams for competition.
- 10. All exam questions will be taken from the past five years of exams used in the National FFA Organization's contests.

# Use of Technology in WV Career Development Events

- 1. The use of all electronic devices are prohibited once the career development events starts. If an event requires the use of calculators, the event coordinator will provide exact specifications on the type(s) of devices (including functions) that will be permitted.
- 2. If a contestant is observed using an electronic device during a contest (student has his/her Scantron in hand), the group leader will record the student's name, school and contestant number and give it to the contest coordinator and/or the results tabulator. This individual will be disqualified from the contest.

# Use of Reference Materials in WV Career Development Events

- Students participating in West Virginia Career Development Events are prohibited from bringing reference materials, paper, and/or other aids into the contest area unless the materials/aids are specified by the event coordinators in the official rules and regulations. The exception, all students are permitted to use a standard clipboard. Cover sheets will be provided for all contestants in all contests. Contestants participating in contests with oral reasons will be provided two sheets of unlined white paper to take notes.
- 2. Failure to comply with this regulation will result in the elimination of the entire team from competition. A letter will be sent to the school principal and superintendent by the state staff detailing the reasons for the dismissal.

# **Communication among Contestants**

1. Once a contest has started, there will be no communication among contestants until the contest has been completed and all score cards have been turned in. If a contestant is observed talking at any time he/she has a scantron in hand, the group leader will record the student's name, school and contestant number and give it to the contest coordinator and/or the results tabulator. This individual will be disqualified from the contest.

# ELIGIBILITY

Student must be a current high school student (9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grade students), enrolled in secondary agriculture, and an FFA member to be eligible to participate in the Career Development Events (Exception: students who recently graduated from high school (May-June of current year) are eligible to compete in the June events as well as the Dairy Evaluation Contest in August.). Middle school students are eligible to compete only in the 7<sup>th</sup> & 8<sup>th</sup> Grade Agriscience and the Middle School Food Science Contests. Students are eligible to participate in the same contest four years.

Secondary students of agriculture meeting the following requirements are eligible for officially designated National FFA Career Development Events.

- 1. The student is a bona fide dues paying FFA member in good standing with the local chapter, state association and the National Organization at the time of his or her selection and at the time of the Nation Career Development Events in which he or she competes.
- 2. The student, at the time of his/her selection as a state/national team member, must be:
  - i. a high school student (or a recent graduate),
  - ii. enrolled in at least one course for an agricultural occupation and/or following a planned course of study, including a supervised agricultural experience program the objective of which is related to the field of agriculture.
- 3. The State Supervisor of Agricultural Education must certify that contestants are eligible. If an ineligible student is entered in any contest, the team of which that student is a member shall be declared ineligible.

- 4. Teams and/or schools or teachers/coaches will not visit the WVU livestock facilities or greenhouse with **60 days of the event**.
- 5. No advisor or coach will be allowed in the livestock pavilion or within 300 feet of penned livestock while students are judging, <u>unless his/her assistance is needed to help facilitate</u> the contest.
- 6. A school must enter a minimum of six contests to be eligible for the Sweepstakes Award. The sweepstakes award will be based upon the cumulative team placing standings in the high six contests. In case of a tie, the team with the most first places, then second places, etc., will win. *Winning the sweepstakes award does not denote the best secondary agriculture program in WV*.
- 7. The sweepstakes year will run from July 1 to June 30 with the Sweepstakes award presented at the Spring CDE Awards ceremony.
- 8. Student participation in all Career Development Events is limited to four years.
- 9. Members of first place State teams may not participate in the same contest again.

# AWARDS

All announcements of winners and presentation of awards will be made at the Awards Program which is held on the final day of the Career Development Events.

- 1. Contest results as announced are final.
- 2. Plaques will be presented to the winning teams in the contests. Competition areas are requested to select a method of breaking team and individual ties so as to eliminated misunderstanding and confusion.
- 3. Agricultural and Extension Education will award medals to the three high scoring individuals in each contest.
- 4. The West Virginia Association FFA will present the sweepstakes award.
- 5. The winning high team in any contest is given the right to represent West Virginia in any national career development event in which FFA teams are eligible to participate.
- 6. All plaques and trophies become the permanent possession of the school.

# Schedule Horse Evaluation

# April 27, 2019 – Potomac State College (Livestock –Form #: 476-3)

# Spring CDE Schedule

Time	Contest	Forms	Location	Coordinator(s)
8:30 - 3:00	Agriscience Fair		4443 Ag Sciences Building (Landscape Arch. Studio)	Jason Hughes Nathan Taylor
9:00 - 4:00	CDE Check In		4418 Ag Sciences Bldg.	Elizabeth McConnell
10:30 - 12:00	Agricultural Technology and Mechanical Systems	Ag Sales/Fb Mgmt./Ag Mech – CDE# 105481	SAS 1021	Dr. Jason McKibben Dr. Stacy Gartin Dr. Kerry Odell
11:30 - 1:30	Plant Pathology	Horticulture – CDE# 105482	PER 332	
12:30 - 4:30	Milk Quality and Products	Dairy Foods – Form: 479-6	AGR 2003, 2004, 2010	Dr. Marie Krause Dr. Kristen Matak
1:30 - 5:00	Nursery/ Landscape	Horticulture CDE# 105482	AGR 4438, 4436, 4004	Dr. David Davis
2:00 - 6:00	Agricultural Technology and Mechanical Systems		Ag Science Annex (Rm.142 &144 Labs)	Dr. Jason McKibben Dr. Stacy Gartin Dr. Kerry Odell
2:00 - 5:30	Vet Science CDE	Horticulture CDE# 105482	Pierpont Campus, Fairmont State University	Anna Romano Nathan Taylor
2:00 - 5:30	Food Science CDE	Horticulture – CDE# 105482	Pierpont Campus, Fairmont State University	Brian A. Floyd Nathan Taylor

#### Wednesday, June 5, 2019

Time	Contest	Forms	Location	Coordinator(s)
7:00 - 10:00	CDE Check In		4418 Ag Sciences Bldg.	Elizabeth McConnell
8:00 - 9:30	Entomology	Horticulture –	AGR G06	
		CDE# 105482		
9:00 - 11:00	Farm Business	Ag Sales/FB	AGR 2010	Dr. Elizabeth Byrd
	Management	Mgmt./Ag.		
		Mech –		
		CDE# 105481		
9:30 -1:00	Agronomy	Agronomy –	332 Percival	Dr. Tom Basden
		Form #708-4	Greenhouse	Gail Sikrosky
9:30-11:30	7th & 8th	Horticulture	AGR 2004	Dr. Deborah Boone
	Agriscience Contest	CDE#105482		

# Wednesday, June 5, 2019

5:00 - 7:00	Results	Chestnut Ridge Church	Dr. Harry N. Boone, Jr.
		2223 Cheat Road	Jason Hughes
		Morgantown, WV 26508	Nathan Taylor
Special Guests will be: Davis College Administration, WV State FFA Officer Team			

# Dairy Cattle Evaluation

# August 11, 2019 – Jackson's Mill (Dairy Cattle – CDE# 105477)

# Fall CDE Schedule

# Tuesday, September 10, 2019

Time	Contest		Location	Coordinator(s)
1:00 - 3:00	CDE Check In		4418 Ag Sciences Bldg.	Elizabeth McConnell
3:00 - 7:00	Floriculture	Horticulture -	Meet in Greenhouse lobby	Dr. Sven Verlinden
		CDE# 105482		Dr. Jessica Blythe
5:00 - 7:00	Meats Evaluation and	Meats –	WVU Meats Lab	Dr. Brett Kenney
	Technology	Form#: 480-4	(meet on loading dock)	

#### Wednesday, September 11, 2019

Time	Contest		Location	Coordinator(s)
7:00 - 10:00	CDE Check In		4418 Ag Sciences Bldg.	Elizabeth McConnell
8:00-2:00	Livestock Evaluation	Livestock – Form#: 476-3	WVU Livestock Farm Pavilion	Dr. Scott Bowdridge
8:15-2:00	Poultry Evaluation	Poultry – Form# 478-7	WVU Livestock Farm Poultry Bldg.	Dr. Joseph Moritz
9:00-3:00	Forestry	Forestry – Form# 530-3	Westvaco Center	Dr. Dave McGill
5:00 - 6:00	Results		TBA	Dr. Harry N. Boone, Jr. Jason Hughes Nathan Taylor

## Special Needs Requests Information Regarding the Policy and Procedures for Special Needs Accommodation in West Virginia FFA Career Development Events

Based on recommendations from the West Virginia Association of Agricultural Educators Program and Policy Committee, the following policy and procedures have been implemented for processing requests for special needs accommodations for state career development event (CDE) participants. Special needs accommodations will be granted only for those with medically documented disabilities and special needs. The form used for a participant to make a special needs request is available on the WVU Career Development Events website (http://www.aged.wvu.edu). The details of the policy and procedure are outlined within the following steps.

**First Step:** If any advisor has a participant for a Career Development Event that has a disability for which they feel they will need to be provided an accommodation needs to complete the form entitled *Requests for Special Needs Accommodation for West Virginia FFA Career Development Events Application*. This form is available on the WVU Career Development Events website (http://www.aged.wvu.edu). The advisor; along with the participant, guardian, and school administrator; need to complete this form and send it to the WVU Agricultural and Extension Education Department by the CDE registration deadline. The request must be received by the deadline in order for the application to be reviewed and possible accommodations given. This means that we can make no guarantees for advisors who have add-deletes after the registration deadline that needs to request special needs assistance. Every attempt will be made to work late applications into the process but there may not be time. This is only an application for accommodation. After the application is reviewed by CDE staff further documentation will be required.

**Second Step:** Once the participants' application request for a special needs accommodation is received, the application will be reviewed and if valid evidence is shown, contact with the advisor. The advisor and participant will be sent information on the documentation that will be needed to determine what, if any accommodations can be provided in the event area. The request for documentation will be in a checklist form with instructions so that the advisor and participant know exactly what documentation will be needed to make a decision.

The advisor and participant will be given a deadline in which the needed documentation must be provided. Once again, no guarantee can be made that there will be time to process the information if it is not received by the deadline set. The documentation that will be required will be information regarding the diagnosis and limiting nature of the participant's disability. Much of this information will probably be in a student's file with the physician, psychologist, or psychiatrist that has diagnosed and treated the disability. Once all the documentation is compiled it will need to be sent to the Agricultural and Extension Education Department. If there is any further information that is needed the advisor will be contacted.

**Third Step:** Once all the documentation has been compiled and sent to the Agricultural and Extension Education Department the documentation for each request will be reviewed. A team of independent reviewers who are accredited in special needs assistance may be consulted. At

that time it will be determined what accommodations are needed for the participant in their specific event. In some cases it may be recommended by the reviewers that no accommodation is needed.

Once the status of the participant has been determined, the advisor and participant will be notified of what accommodations are going to be provided for the participant. The advisor and participant will receive a list of responsibilities that they will need to sign and return to understand what obligations they have in the process.

**The Final Step - The Event:** CDE superintendents will be given the names and a list of accommodations for every participant in their event that has been approved to receive special needs assistance. The superintendent will not view any of the documentation but will only be made aware of the accommodations that need to be provided. CDE Superintendents and CDE Staff will recruit a core of volunteers to help facilitate the accommodations. At the start of the event the participants who have been approved for special needs assistance need to check in with event superintendent and check in any special equipment or services they are providing as a part of their accommodation.

# Request for Special Needs Accommodation for West Virginia FFA Career Development Events Application

The following information is required if there is a student that plans to participate in a West Virginia FFA Career Development Event and wishes to request an accommodation for a disability. Please complete the following information and send in this form along with your registration form by the date that certification forms are due. This information will be kept strictly confidential and will be used only to process services for participants needing special needs assistance. Additional documentation on the participant's disability may be requested upon receipt of this application.

Student	Infor	mation
---------	-------	--------

Student Name:	
Home Address:	
Chapter Name:	
Chapter Address:	_
City, State, & Zip	
Chapter/School Telephone:	
CDE area:	
Description of Disability	and Accommodations Requested
Specific Disability:	
Please describe the limiting nature of the disability a	nd the accommodations requested:
Student Name (print)	Advisor Name (print)
Student Signature	Advisor Signature
Date	Date
Parent Name (print)	School Administrator (print)
Parent Signature	Title
Date	School Administrator Signature
	Date

This is only an application for special needs assistance. A complete application including formal documentation request will be sent to you after we receive this special needs request form.

Contest	Maximum Number of Team Members	Number of Team Members Scored
Agricultural Technology and Mechanical Systems	4	4
Agronomy	4	4
Dairy Cattle Management	4	4
Entomology	4	3
Farm and Agribusiness Management	4	4
Floriculture	4	4
Food Science	4	4
Food Science (Middle School)	4	4
Forestry	4	4
Horse Evaluation	4	4
Livestock Evaluation	4	4
Meats Evaluation	3	3
Milk Quality and Products	4	4
Nursery/Landscape	4	4
Plant Pathology	4	3
Poultry Evaluation	4	4
Veterinary Science	4	4
7 <sup>th</sup> and 8 <sup>th</sup> Grade Agriscience	4	3

# Maximum Number of Participants per Team

Maximum Number of Team Members	4	
Number of Team Members Scored	3	a a
Scantron	Horticulture	
	CDE#105482	
Committee:		
Samantha Funk		
Roy Harper		
Tim Kidwell		
Jason Miihlbach		
Michael Withrow		

# 7<sup>th</sup> and 8<sup>th</sup> Grade Agriscience Knowledge

# To be held in Conjunction with the State Ag Career Development Events at WVU

**Purpose:** To promote the growth of knowledge of 7<sup>th</sup> and 8<sup>th</sup> grade FFA members within the various areas of agriculture. Eligibility/Rules This Career Development will be open to 7<sup>th</sup> and 8<sup>th</sup> grade members who are enrolled in the agricultural education program at some point during the current school year. A contestant must be an active (dues paying) member of a chartered FFA chapter in good standing with the West Virginia FFA Association. Members from the team that previously won this 7<sup>th</sup> and 8<sup>th</sup> Grade Agriscience Knowledge Career Development Event are ineligible to compete. Each school may send ONE TEAM that meets the above guidelines to participate.

# **Scoring**

Category A	
Weed Identification	10 pts
Plant Identification	10 pts
Seed Identification	5 pts
Category B	
Breed Identification – Dogs	5 pts
Breed Identification – Cattle and Sheep	10 pts
Breed Identification – Horses and Swine	10 pts
Category C	
Ag Mechanics Tool Identification	25 pts
Category D	
FFA History & Knowledge	25 pts
Seed Identification Category B Breed Identification – Dogs Breed Identification – Cattle and Sheep Breed Identification – Horses and Swine Category C Ag Mechanics Tool Identification Category D FFA History & Knowledge	5 p 5 p 10 p 10 p 25 p 25 p

<u>Awards</u> Top three teams overall Top three individuals overall

**<u>References for Category D – FFA Knowledge and History</u>** FFA Website <u>www.ffa.org</u> (FFA Sections) *FFA Student Handbook* (Current Issue) *FFA Manual* (Current Issue) FFA Quiz Bowl Contest – State FFA Convention, *New Horizons* Magazines (January – September issues of the current year)

# **Career Development Event Outline**

#### Category A – Plant Component – Twenty-Five Points

Part One - Students will be asked to identify ten weeds from the list provided below

			Weeds		
001	Broadleaf plantain	008	Goldenrod	015	Morning glory
002	Canadian thistle	009	Green foxtail	016	Pokeweed
003	Chickory	010	Horse nettle	017	Quack grass
004	Chickweed	011	Ironweed	018	Ragweed
005	Cocklebur	012	Jimsonweed	019	Smartweed
006	Crabgrass	013	Johnson grass	020	Spanish needle
007	Dandelion	014	Lambsquarter		

Part Two - Students will be asked to identify ten plants from the list provided below

#### **Plants (Economically Important)**

		•	L /
051	African Violet/Saintpaulia ionantha cv.	061	Orchard grass
052	Alfalfa	062	Perennial ryegrass
053	Asparagus "Fern"/Asparagus setacus	063	Poinsettia/Euphorbia pulcherrima cv.
054	Birdsfoot trefoil	064	Serecia lespedeze
055	Christmas Cactus/Schlumbergia	065	Snake Plant/Sanseviertia trifasciata cv.
bridg	gesii		
056	Crown vetch	066	Spider Plant/Chlorophytum commosum
		cv.	
057	"Decors" Rubber Plant/Ficus elastica	067	Tall fescue
"Dec	cora"		
058	Heartleaf Phildendron/Philodendron	068	Timothy
scan	dens oxycardium		
059	Jade plant/Crassula argentea	069	Wandering Jew/Zebrina pendula cv.
060	Kentucky bluegrass	070	White clover

Part Three - Students will be asked to identify five seeds from the list provided below

			Seeds		
101	Barley 10	)5 (	Dats	108	Sorghum
102	Corn 10	)6 H	Rice	109	Soybeans
103	Cotton 10	)7 F	Rye	110	Wheat
104	Millet				

#### Category B – Animal Science Component – Twenty-Five Points

Part One – Identification of Cattle and Sheep Breeds Students will be asked to identify a total of ten different breeds from the list below

Beef/Dairy					
151	Angus	155	Guernsey	158	Limousine
152	Ayrshire	156	Holstein	159	Polled Hereford
153	Brown Swiss	157	Jersey	160	Simmental
154	Charolais				
			Sheep		
161	Cheviot	165	Hampshire	168	Oxford
162	Columbia	166	Leichester	169	Rambouillet
163	Dorset	167	North Country Cheviot	170	Suffolk
164	Finnsheep				

Part Two – Identification of Horse and Swine Breeds Students will be asked to identify a total of ten different breeds from the list below

	Swine					
201	Berkshire	204	Hampshire	207	Poland China	
202	Chester White	205	Hereford	208	Spotted Poland China	
203	Duroc	206	Landrace	209	Yorkshire	
	Horses					
210	American Paint	214	Clydesdale	217	Standardbred	
211	Appaloosa	215	Palomino	218	Tennessee Walker	
212	Arabian	216	Quarter Horse	219	Thoroughbred	
213	Belgian					

Part Three – Identification of Dog Breeds Students will be asked to identify a total of five dog breeds from the list provided

			Dogs		
251	American Cocker Spaniel	255	Border Collie	258	German Shepherd
252	Basset Hound	256	Doberman Pinscher	259	Great Pyrenees
253	Beagle	257	English Setter	260	Welsh Corgi
254	Black and Tan Coonhound		-		-

# Category C – Ag Mech. Small Tool Identification – Twenty-Five Points

Students will identify 25 tools from the provided list below

# Ag Mech. Small Tool Identification

301 302	Adjustable wrench Ball peen hammer
303	Sliding T-Bevel
304	Bit brace
305	Bolt cutters
306	C Clamp
307	Calipers
308	Carpenter's square
309	Cold chisel
310	Combination square
311	Compass saw
312	Coping Saw
313	Crosscut saw
314	Curved claw hammer
315	Dye Set

316 Finishing Trowel 317 Flat file 318 Standard or slotted screwdriver 319 Hacksaw 320 Keyhole Saw 321 Level 322 Channel lock/groovejoint pliers 323 Long nose pliers 324 Open end wrench 325 Phillips screwdriver 326 Pipe cutter 327 Pipe wrench 328 Plum bob 329 Putty knife 330 Ratchet wrench

- 331 Ripping claw hammer
- 332 Ripping or wrecking

bar

- 333 Ripsaw
- 334 Round file
- 335 Rubber mallet
- 336 Screw Extractor
- 337 Single bit axe
- 8
- 338 Sledge hammer
- 339 Slip joint pliers
- 340 Speed Square
- 341 Tap



SCANTRON. Mark Reflex@ EM-105482-3:854321 ED04



# West Virginia 7<sup>th</sup> and 8<sup>th</sup> Grade Agriscience Knowledge Career Development Event Code Sheet

			Weeds/Pla	nts/See	eds		
001	Broadleaf plantain	00	8 Goldenr	od	01	5 Morning glory	
002	Canadian thistle	00	9 Green fo	oxtail	01	6 Pokeweed	
003	Chickory	01	0 Horse ne	ettle	01	7 Quack grass	
004	Chickweed	01	1 Ironwee	d	01	8 Ragweed	
005	Cocklebur	01	2 Jimsonv	veed	01	9 Smartweed	
006	Crabgrass	01	3 Johnson	grass	02	0 Spanish needle	
007	Dandelion	01	4 Lambsq	uarter			
051	African Violet/Saintpaul	ia ionanth	a cv.	060	Kentucky blue	egrass	
052	Alfalfa			061	Orchard grass		
053	Asparagus "Fern"/Aspar	agus setac	us	062	Perennial ryeg	grass	
054	Birdsfoot trefoil			063	Poinsettia/Eup	phorbia pulcherrima cv.	
055	Christmas Cactus/Schlu	nbergia br	idgesii	064	Serecia lespec	leze	
056	Crown vetch			065	Snake Plant/S	anseviertia trifasciata cv.	
057	"Decors" Rubber Plant/I	ficus elasti	ca	066	Spider Plant/C	Chlorophytum commosum cv.	
050	"Decora"		1	067	Tall fescue		
058	Heartleaf Phildendron/P	nilodendro	n scandens	068	Limothy Wondoring Io	w/Zahring nondula av	
050	Oxycardiulli Iodo plant/Crossula argo	ntao		009	White above		
039	Jade plant/Classula arge	inea		070	white clover		
101	Barley	10	5 Oats		10	9 Soybeans	
102	Corn	10	6 Rice		11	0 Wheat	
103	Cotton	10	7 Rye				
104	Millet	10	8 Sorghun	n			
		Ag Mecl	n. Small T	ool Ide	ntification		
301	Adjustable wrench	317	Flat file		331	Ripping claw hammer	
302	Ball peen hammer	318	Standard or	slotted	332	Ripping or wrecking bar	
303	Sliding T-Bevel		screwdriver	r	333	Ripsaw	
304	Bit brace	319	Hacksaw		334	Round file	
305	Bolt cutters	320	Keyhole Sa	ıw	335	Rubber mallet	
306	C Clamp	321	Level		336	Screw Extractor	
307	Calipers	322	Channel loo	ck/groov	e- 337	Single bit axe	
308	Carpenter's square		joint pliers		338	Sledge hammer	
309	Cold chisel	323	Long nose	pliers	339	Slip joint pliers	
310	Combination square	324	Openend w	rench	340	Speed Square	
311	Compass saw	325	Phillips scr	ewdriver	· 341	Тар	
312	Coping Saw	326	Pipe cutter	1	342	Tape measure	
313	Crosscut saw	327	Pipe wrenc	h	343	Tin snips	
314	Curved claw hammer	328	Plum bob		344	wood chisel	
315	Dye Set	329	Putty knife	1			
316	Finishing Trowel	330	Katchet wre	ench			

	Animal Science Beef/Dairy					
151	Angus	155	Guernsey	159	Polled Hereford	
152	Ayrshire	156	Holstein	160	Simmental	
153	Brown Swiss	157	Jersey			
154	Charolais	158	Limousin			
			Sheep			
161	Cheviot	165	Hampshire	168	Oxford	
162	Columbia	166	Leichester	169	Rambouillet	
163	Dorset	167	North Country Cheviot	170	Suffolk	
164	Finnsheep					
			Swine			
201	Berkshire	204	Hampshire	207	Poland China	
202	Chester White	205	Hereford	208	Spotted Poland China	
203	Duroc	206	Landrace	209	Yorkshire	
			Horses			
210	American Paint	214	Clydesdale	218	Tennessee Walker	
211	Appaloosa	215	Palomino	219	Thoroughbred	
212	Arabian	216	Quarter Horse			
213	Belgian	217	Standardbred			
Dogs						

# Dogs

251	American Cocker	254	Black and Tan	257	English Setter
	Spaniel		Coonhound	258	German Shepherd
252	Basset Hound	255	Border Collie	259	Great Pyrenees
253	Beagle	256	Doberman Pinscher	260	Welsh Corgi

revised 11/30/09

Maximum Number of Team Members	4	
Number of Team Members Scored	4	
Scantron	Ag Sales/Fb Mgmt./Ag	
	Mech –	151
	CDE# 105481	
Committee:		
Shelby Adkins		
Craig Canterbury		
Brent Ebert		
Matt Knopp		
Seth Neal		

# Agricultural Technology and Mechanical Systems

2019 West Virginia Agriculture Mechanics CDE

The 2019 agricultural mechanics contest at the State Agriculture Career Development As voted by teachers of WV events will be modeled closely on the National FFA ATMS CDE. For more information about national CDE: <u>http://faculty.missouri.edu/~schumacherl/natcon.html</u>

The yearly suggestions for emphasis are recommendations made by WV teachers at the summer meeting of the ATMS group at State FFA Convention. These will be revisited every year for conformation.

MORNING SESSION- 2019 Events – All participants will begin at 10:30 am. This will be a written test for qualification to the afternoon hands-on section. Students will need a non-programmable calculator. <u>No cell phones will be allowed in the contest. Anyone found using a cell phone at any time during the contest will be removed and scored at a 0 for all portions.</u>

Written Test 45 min	The participant will complete a 25 question multiple choice test that focuses on questions from each systems area of the event. The exam has a heavy math focus. <i>Students will need a non-programmable calculator</i> .
Compact equipment systems 45 min Identification of parts and tools will be contained in this system Four stroke 2019 – Rotor tiller 2021- Lawn mower 2023- Log splitter Two Stroke 2020- Chain saw 2022- Edger 2024- String trimmer.	The participant will complete a 25 question multiple choice test that focuses on compact equipment. Compact equipment is defined as being 30 horsepower or less. Interpreting horsepower, torque and other power measurement criteria. Comparing costs of alternative machine uses. Properly troubleshooting a compact engine to determine the cause of a failure. Select and use engine overhaul equipment pertaining to: Ignition, Cylinder, and Piston tools. Service and maintain compression system, ignition systems, and cooling and lubrication systems

AFTERNOON SESSION 2019 Events (Top 50% of Teams, maximum 10 teams) Participation will be announced at 2 pm outside the Ag Anex building. Teams must be present with gear to compete. Any team not present will forfeit and the next team will be called in.

Machinery and Equipment	The student is required to identify parts, pieces, and or usage of
Systems	machinery (either in person or from photograph). The contestants
15 minutes	will make decisions and calculations about pieces of appropriate
2019- Compact utility	machinery. This will consist of problem solving based on a
tractor	scenario, power requirements for pumps and pressures, HP
2020- Square bailer	requirements for PTO driven equipment, identification of parts,
2021- Skid Steer	repair, maintenance, processing, materials handling, adjustments,
2022- Hay Mower	reading manuals, specs, and test results.
2022 May Wower 2023 - Manure Spreader	
2024 Grain Drill	
2024- Ofalli Dilli	
2025- Sprayer, Boom type	
Electrical Systems	Students will be required to provide his/her own personal
15 minutes	protective safety equipment and clothing. Students will need
2019- DC electric motors	to provide their own basic measuring tools and protective
2020- AC 120 lighting	attire from head to toe. Students must be able to read plans.
Circuits	Use appropriate tools safely, take measurements, calculate
2021-Solar	load, voltage, amperage, resistance, wattage,
2022- DC Control circuits	
2023-AC load and	
distribution	
2024- DC low voltage	
Welding	Particinants will need to provide their own protective
Welding 30 minutes	<u>Participants will need to provide their own protective</u> welding attire
Welding 30 minutes	Participants will need to provide their own protective welding attire. Welding - May include: flat fillet lap butt &/or pipe on plate
Welding 30 minutes Even years- SMAW	Participants will need to provide their own protective welding attire. Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW or SMAW
Welding 30 minutes Even years- SMAW Odd years - GMAW	Participants will need to provide their own protective welding attire. Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAW Students will use one of the following: 6010_6011_6013_7018
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Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental	Participants will need to provide their own protective welding attire.Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAWStudents will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW. Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.Describing principles involved in appropriate conservation
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min	Participants will need to provide their own protective welding attire.Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAWStudents will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW. Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions;
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide	Participants will need to provide their own protective welding attire.Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAWStudents will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW. Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application	Participants will need to provide their own protective welding attire.Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAWStudents will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW. Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments;
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application 2020- Transit levels	Participants will need to provide their own protective welding attire.Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAWStudents will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW. Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments; calculating area, percentages, erosion levels, volume, etc
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application 2020- Transit levels 2021- Water pumps (wells.	Participants will need to provide their own protective welding attire.Welding - May include: flat, fillet, lap, butt &/or pipe on plate, either GMAW, or SMAWStudents will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW. Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments; calculating area, percentages, erosion levels, volume, etc
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application 2020- Transit levels 2021- Water pumps (wells, sump. irrigation)	<ul> <li>Participants will need to provide their own protective welding attire.</li> <li>Welding - May include: flat, fillet, lap, butt &amp;/or pipe on plate, either GMAW, or SMAW</li> <li>Students will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW.</li> <li>Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.</li> <li>Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments; calculating area, percentages, erosion levels, volume, etc</li> </ul>
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application 2020- Transit levels 2021- Water pumps (wells, sump, irrigation) 2022- Topographic	<ul> <li>Participants will need to provide their own protective welding attire.</li> <li>Welding - May include: flat, fillet, lap, butt &amp;/or pipe on plate, either GMAW, or SMAW</li> <li>Students will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW.</li> <li>Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.</li> <li>Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments; calculating area, percentages, erosion levels, volume, etc</li> </ul>
Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application 2020- Transit levels 2021- Water pumps (wells, sump, irrigation) 2022- Topographic mapping and layout	<ul> <li>Participants will need to provide their own protective welding attire.</li> <li>Welding - May include: flat, fillet, lap, butt &amp;/or pipe on plate, either GMAW, or SMAW</li> <li>Students will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW.</li> <li>Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.</li> <li>Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments; calculating area, percentages, erosion levels, volume, etc</li> </ul>
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Welding 30 minutes Even years- SMAW Odd years - GMAW Environmental 15 Min 2019 - Pesticides/herbicide application 2020- Transit levels 2021- Water pumps (wells, sump, irrigation) 2022- Topographic mapping and layout 2023- 2024	<ul> <li>Participants will need to provide their own protective welding attire.</li> <li>Welding - May include: flat, fillet, lap, butt &amp;/or pipe on plate, either GMAW, or SMAW</li> <li>Students will use one of the following; 6010, 6011, 6013, 7018 or E70S-6 electrode. Shielding gasses will be C25 if GMAW.</li> <li>Practice metal will be available for students to use to set his/her welder. Students will have to be able to set-up the machine. Students will be given a drawing with symbols and expected to complete the weld as drawn.</li> <li>Describing principles involved in appropriate conservation and/or land use planning; reading legal land descriptions; determining land area; determining the percent of slope or grade; measuring distances with tapes or instruments; calculating area, percentages, erosion levels, volume, etc</li> </ul>

TEAM ACTIVITY:	Students will be required to provide his/her own personal
1 hour	protective safety equipment and clothing. Teams will need to
	provide their own basic measuring tools and protective attire.
Team	Student will be asked to identify the source, set up materials,
2019- Machinery and	use tools to take measurements, perform necessary
equipment	calculations, trouble shoot, and compose a report. Laptops
2020- Electrical Systems	will not be needed.
2021-Compact equipment	
2022-Structural systems	Team activity will be based in the section noted for that year.
2023- Environmental	
2024-Machinery and	
equipment	

# SAFETY GLASSES ARE REQUIRED

All team members must wear safety glasses during the team and skill events. To enter the CDE area, students must wear safety glasses.

# USE OF HAND CALCULATORS

Each team member will need a calculator to complete the multiple-choice examination. Students will **<u>not</u>** be allowed to share a calculator during the examination.

Tools for Measuring:	Square Screwdriver	Argent Pencil	
pe Measure Posidrive Screwdriver		Grease Pencil	
Steel Ruler	Tamper Proof Screwdriver	Paint Marker	
Carpenter's (Framing) Square	enter's (Framing) Square Hex (Allen) Key		
Swanson Speed Square	Nut Driver	Compass	
Try Square	Screw/Bolt Extractor	Scribe	
Combination Square		Center Punch	
Inside Caliper	Tools for Impact	Steel Stamps	
Outside Caliper	Ball Peen Hammer	Steer Stamps	
Wing Divider	Curved Claw Hammer	Tools for Welding	
Carpenter's Level	Straight Claw (Rip) Hammer	SMAW Welding Machine	
Mason's Level	Sledge Hammer	GMAW Welding Machine	
Torpedo Level	Blacksmith's Hammer	GTAW Welding Machine	
String (Line) Level	Cross Peen Hammer	Plasma Torch	
Dumpy Level	Roofing Hammer	Flux Gas Cylinder	
Transit	Tack Hammer	Flux Gas Flow Meter	
Plum Bob	Warrington Hammer	Flux Gas Flow Gauge	
Torque Wrench	Body Hammer (& Dolly)	Electrode Holder	
Plasti-Gauge	Dead-Blow Mallet	Ground Clamp	
Micrometer	Soft-Faced Hammer	Wire Brush	
Protractor	Rubber Mallet	Chipping Hammer	
Depth Gauge	Rawhide Mallet	MIG Pliers (Welpers®)	
Spark Plug Gauge	Wooden Mallet	Locking Welding Clamp	
Thickness Gauge	Tire Hammer		
Feeler Gauge	Roll Pin Punch	Tools for Oxy-Fuel	
	Prick Punch	Oxygen Cylinder	
Tools for Torque	Nail Set	Acetylene Cylinder	
Open-End Wrench	Anvil (& Hardy)	Propane Cylinder	
Box-End Wrench	· · · · · ·	Torch Wrench	
Combination Wrench	Tools for Prying	Gas Pressure Regulator	
Gear Wrench	Pry Bar	Cutting Torch	
Adjustable (Crescent®) Wrench	Flat Nail Bar	Welding/Brazing Torch	
Monkey Wrench	Wrecking Bar	Acetylene Cutting Tip	
Pipe (Stilsen) Wrench	Crow Bar	Propane Cutting Tip	
Oil Filter Wrench	Cat's Paw Nail Puller	Reverse Flow Check	
		Valve	
Chain Wrench	Aligning Bar	Cylinder Cap	
Strap Wrench		Friction Lighter/Striker	
6 point standard sockets	Drift Punch	Torch Tip Cleaner	
Deep Well Sockets	Tire Spoon		
Ratchet Handle	Cheater Bar	Lumber/Wood	
Extension		2x4	
Universal-joint	Tools for Marking	2x8	
Break-Over Handle	Pencil	1x6	
Standard (Flat) Screwdriver	Soapstone	4x4 treated	
Phillips Screwdriver	Chalk-line	BC plywood	
Torx <sup>®</sup> Screwdriver	Sliding T-Bevel	OSB	

# WV ATMS CDE Tool and Materials ID

Tools for Gripping		<b>Stationary Power Tools</b>	
Slip-Joint Pliers	Jig Saw Blade	Drill Press	
Lineman's Pliers	Reciprocating Saw	Bench/Pedestal Grinder	
Groove Joint (Channel-Lock®) Pliers	Reciprocating Saw Blade	Table Saw	
Diagonal Wire Cutting Pliers	Die Grinder	Band Saw	
Bolt Cutters	Impact Driver	Scroll Saw	
End Nippers	Impact Sockets	Sliding Miter Saw	
Aviation Snips	Orbital Sander	Planer	
Tin Snips (shears)	<sup>1</sup> / <sub>4</sub> sheet Sander	Jointer	
Sheet Metal Seamer	Belt Sander	Router Table	
Needle/Long Nose Pliers	Router	Wood Lathe	
Lever Lock (Vise-Grip®) Pliers	Router Bits	Belt/Disc combo Sander	
Snap Ring Pliers	Hydraulic Jack	Iron Worker	
Hog Ring Pliers		Hydraulic Pipe Bender	
J-Clip® Pliers	Tools for Removing	Hydraulic Bearing Press	
-	Material		
Bench Vise	Rip Saw	Abrasive Cut-Off Saw	
Machinist Vise	Cross-Cut Saw	Sheet Metal Brake	
Mechanic's Vise	Hack Saw	Cold Saw	
Pipe Vise	Key-Hole Saw	Horizontal Band saw	
C-Clamp	Coping Saw		
Bar Clamp	Back (miter/dovetail) Saw	<b>Pneumatic Tools</b>	
Parallel (Block) Clamp	Manual Miter Box	Air Compressor	
Spring Clamp	Utility Knife	Dryer	
Corner Clamp	Cold Chisel	Regulator	
Flaring Tool (copper tubing)	Wood Chisel	Expansion Tank	
	Slotting Chisel	Impact Driver	
Hand Electric Power Tools	Slitting Chisel	Brad Nailer	
Drill (corded or cordless)	Cape Chisel	Framing Nailer	
Jacobs Chuck	Pipe/Tubing Cutter	Crown Stapler	
Chuck Key	PVC Cutter	Air Hammer (& chisel)	
High Speed Twist Bit	Hand Plane (bench)	Needle Scaler	
Spade Bit	Hand Plane (block)	DA Sander	
Countersink Bit	Rasp	Blower Nozzle	
Masonry Bit	Surform <sup>®</sup> Tool	Air Chuck	
Step Bit	Mill File	Quick Connectors	
Hole Saw	Bastard File	Tire Pressure Gauge	
Battery & Charger	Flat File	HVLP Paint Gun	
Disc Grinder/Sander	Half-Round File	Paint Sprayer	
Grinding Disc	Round File		
Cup Brush	Whetstone	<b>Tools for Electrical</b>	
		Work	
Sanding Disc	Тар	Wire Stripper	
Spanner Wrench	Die	Cable Stripper	
Circular Saw	Brace	Multi-Meter	
Cross Cut Blade	Auger Bit	Voltage Detector	
Plywood Blade		Soldering Iron/Gun	
Multi-purpose Blade			
Masonry/Concrete Tools	Disposable Gloves	Electrical Supplies	

Brick Trowel	Gauntlet Welding Gloves	2/1 Romex® wire	
Notched Trowel	Welders mittens	3/1 Romex® wire	
Concrete Groover	Welder's Cap	Rigid Conduit (Galv)	
Bullnose edger	Knee Pad	Rigid Conduit (PVC)	
Magnesium float	Painting Coverall	Flexible Conduit	
Finishing Float	Dust Mask	Junction Box	
Finishing Trowel	Respirator	Handy Box	
Tile Cutter	Ear Plugs	Circuit Breaker	
Caulking Gun	Ear Muffs	Cable Connector	
Adhesive/Thinset		Convenience Outlet	
Slump cone	Welding Supplies	Lighting Receptacle	
	E6011 Electrodes	GFCI Outlet	
Cleaning Tools	E7018 Electrodes	SPST Switch	
Parts Washing Station	E6010 Electrodes	3-Way Switch	
Parts Washing Brush	E6013 Electrodes	Cover Plate	
Corn head Broom	E7024 Electrodes	Wire Nut	
Push Broom	ER70S6 Electrode Wire	Insulated Staples	
Table Broom	Acid Core Solder	Electrical Tape	
Shavings Brush	Rosin Core Solder	Shrink Wrap	
Dustpan	Brazing Filler Rod w/flux	Butt connector	
Shop Vacuum	Brazing Filler Rod	"Quick" splice connector	
Dust mop	GTAW Filler Rods		
<b>^</b>	GTAW Electrodes	Fasteners	
Personal Protective Equipment	Borax Flux	Common Nail	
Clear Safety Glasses		Galvanized Nail	
Shaded Safety Glasses	Plumbing Supplies	Duplex Nail	
Clear Safety Goggles	Galvanized Steel Pipe	Finishing Nail	
Shaded Safety Goggles	Black Steel Pipe	Fence Staples	
Clear Face Shield	CPVC Pipe	Wood Screw	
Shaded Face Shield	PVC Pipe	Drywall screw	
Welding Hood/Helmet	Copper Tubing- soft	Sheet Metal Screw	
Hard Hat	Copper tubing- rigid	Machine Screw	
Shop Coat	Float Valve	Hex Head Bolt	
Welding Sleeve(leather)	Elbow	Carriage Bolt	
Welding Sleeve (cloth)	Coupling	Hex Nut	
Welding Jacket (cloth or leather)	Union	Wing Nut	
Welding Cape	Reducer	Lock Washer	
Welding Apron	"T" joint	Flat Washer	
Driver's Gloves	Nipple		
Leather Work Gloves	Сар		
Cloth gloves	Plug		
Studded Work Gloves	45° Elbow		
Cloth Roper's Gloves	Street Elbow		
Anti-Vibration Gloves			
Mechanic's Gloves			



SCANTRON, Mark Reflex@ EM-105481-3:854321 ED04

		wimen Exam A		
ABCOE	21 A B C D E	41 A B C D E	61 A B C D E	81 A B C D E
	22 A B C D E	42 A B C D E	62 A B C D E	82 A B C D E
3 A B C D E	23 A B C D E	43 A B C D E	63 A B C D E	83 A B C D E
4 A B C D E		44 A B C D E	64 A B C D E	84 A B C D E
5 A B C D E	25 A B C D E	45 A B C D E	65 A B C D E	85 A B C D E
6 A B C D E	26 A B C D E	46 A B C D E	66 A B C D E	86 A B C D E
7 A B C D E	27 A B C D E	47 A B C D E	67 A B C D E	87 A B C D E
BABCDE	28 A B C D E	48 A B C D E	68 A B C D E	88 A B C D E
9 A B C D E	29 A B C D E	49 A B C D E	69 A B C D E	89 A B C D E
OABCDE	30 A B C D E	50 A B C D E	70 A B C D E	90 A B C D E
	31 A B C D E	51 A B C D E		91 A B C D E
	32 A B C D E	52 A B C D E	72 (A) (B) (C) (D) (E)	92 (A) (B) (C) (D) (E)
	33 A B C D E	53 A B C D E	73 A B C D E	93 A B C D E
	34 A B C D E	54 A B C D E	74 A B C D E	94 A B C D E
	35 A B C D E	55 A B C D E	75 A B C D E	95 A B C D E
6 A B C D E	36 A B C D E	56 A B C D E	76 (A) (B) (C) (D) (E)	96 A B C D E
7 A B C D E	37 A B C D E	57 A B C D E		97 A B C D E
	38 A B C D E	58 A B C D E	78 (A) (B) (C) (D) (E)	98 (A) (B) (C) (D) (E)
9 A B C D E	39 A B C D E	59 A B C D E	79 A B C D E	99 A B C D E
		60 A B C D E	80 A B C D E	100 (A (B) (C) (D) (E)
	2100000	Written Exam B		
		42 0 0 0 0 0		
A A B C C U C		4000000	NABCEE	NABUUE
400000	MAD MOMENT			
				84 A B C D E
4 A B C D E 5 A B C D E	24 A B C D E 25 A B C D E 24 A B C D E	44 A B C D E 45 A B C D E	64 A B C D E 65 A B C D E	84 A B C D E 85 A B C D E
4 A B C D E 5 A B C D E 6 A B C D E	24 A B C D E 25 A B C D E 26 A B C D E 27 A B C D F	44 A B C D E 45 A B C D E 46 A B C D E 47 A B C D F	64 A B C D E 65 A B C D E 66 A B C D E	84 A B C D E 85 A B C D E 86 A B C D E
4 A B C D E 5 A B C D E 6 A B C D E 7 A B C D E 8 A B C D F	24 A B C D E 25 A B C D E 26 A B C D E 27 A B C D E 28 A B C D E	44 (A (B (C (D (E)))) 45 (A (B (C (D (E))))) 46 (A (B (C (D (E))))) 47 (A (B (C (D (E)))))) 48 (A (B (C (D (E))))))))))))))))))))))))))))))))))	64 A B C D E 65 A B C D E 66 A B C D E 67 A B C D E 68 A B C D E	84 A B C D E 85 A B C D E 86 A B C D E 87 A B C D E 88 A B C D E
4 A B C D E 5 A B C D E 6 A B C D E 7 A B C D E 8 A B C D E 9 A B C D E	24 A B C D E 25 A B C D E 26 A B C D E 27 A B C D E 28 A B C D E 28 A B C D E	44 A B C D E 45 A B C D E 46 A B C D E 47 A B C D E 48 A B C D E 48 A B C D E 49 A B C D E	64 A B C D E 65 A B C D E 66 A B C D E 67 A B C D E 68 A B C D E 68 A B C D E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         88       A       B       C       D       E
4         A         B         C         D         E           5         A         B         C         D         E           6         A         B         C         D         E           7         A         B         C         D         E           8         A         B         C         D         E           9         A         B         C         D         E           9         A         B         C         D         E	24       A       B       C       D       E         25       A       B       C       D       E         26       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         29       A       B       C       D       E         30       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         46       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         48       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         64       A       B       C       D       E         65       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         89       A       B       C       D       E         90       A       B       C       D       E
A         B         C         D         E           5         A         B         C         D         E           6         A         B         C         D         E           7         A         B         C         D         E           8         A         B         C         D         E           9         A         B         C         D         E           10         A         B         C         D         E           11         A         B         C         D         E	24 A B C D E 25 A B C D E 26 A B C D E 27 A B C D E 28 A B C D E 29 A B C D E 30 A B C D E 31 A B C D E	44       A       B       C       D       E         45       A       B       C       D       E         46       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         64       A       B       C       D       E         65       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E	84         A         B         C         D         E           85         A         B         C         D         E           86         A         B         C         D         E           87         A         B         C         D         E           88         A         B         C         D         E           89         A         B         C         D         E           90         A         B         C         D         E           91         A         B         C         D         E
4 A B C D E 5 A B C D E 6 A B C D E 7 A B C D E 8 A B C D E 9 A B C D E 0 A B C D E 1 A B C D E 1 A B C D E 1 A B C D E 2 A B C D E	24 A B C D E 25 A B C D E 26 A B C D E 27 A B C D E 28 A B C D E 29 A B C D E 30 A B C D E 31 A B C D E 32 A B C D E	44       A       B       C       D       E         45       A       B       C       D       E         46       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         66       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         89       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E
4 A B C D E 5 A B C D E 6 A B C D E 7 A B C D E 9 A B C D E 9 A B C D E 1 A B C D E 1 A B C D E 2 A B C D E 2 A B C D E 2 A B C D E	24       A       B       C       D       E         25       A       B       C       D       E         26       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         31       A       B       C       D       E         33       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         46       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         66       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E         73       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E
4       A       B       C       D       E         5       A       B       C       D       E         6       A       B       C       D       E         7       A       B       C       D       E         8       A       B       C       D       E         9       A       B       C       D       E         10       A       B       C       D       E         11       A       B       C       D       E         2       A       B       C       D       E         3       A       B       C       D       E         4       A       B       C       D       E	24       A       B       C       D       E         25       A       B       C       D       E         24       A       B       C       D       E         25       A       B       C       D       E         26       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         31       A       B       C       D       E         33       A       B       C       D       E         34       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         44       A       B       C       D       E         44       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E         54       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         66       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E         73       A       B       C       D       E         74       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E         94       A       B       C       D       E
A       B       C       D       E         5       A       B       C       D       E         6       A       B       C       D       E         7       A       B       C       D       E         8       A       B       C       D       E         9       A       B       C       D       E         10       A       B       C       D       E         11       A       B       C       D       E         12       A       B       C       D       E         13       A       B       C       D       E         4       A       B       C       D       E         14       A       B       C       D       E	24       A       B       C       D       E         25       A       B       C       D       E         24       A       B       C       D       E         25       A       B       C       D       E         26       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         31       A       B       C       D       E         33       A       B       C       D       E         34       A       B       C       D       E         35       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         44       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E         54       A       B       C       D       E         55       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         66       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E         73       A       B       C       D       E         74       A       B       C       D       E         75       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E         94       A       B       C       D       E         95       A       B       C       D       E
A       B       C       D       E         5       A       B       C       D       E         6       A       B       C       D       E         7       A       B       C       D       E         8       A       B       C       D       E         9       A       B       C       D       E         10       A       B       C       D       E         11       A       B       C       D       E         12       A       B       C       D       E         13       A       B       C       D       E         14       A       B       C       D       E         15       A       B       C       D       E	24       A       B       C       D       E         25       A       B       C       D       E         24       A       B       C       D       E         25       A       B       C       D       E         24       A       B       C       D       E         25       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         31       A       B       C       D       E         32       A       B       C       D       E         33       A       B       C       D       E         34       A       B       C       D       E         34       A       B       C       D       E         34       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         44       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E         54       A       B       C       D       E         55       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         66       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E         73       A       B       C       D       E         74       A       B       C       D       E         75       A       B       C       D       E         76       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         89       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E         94       A       B       C       D       E         95       A       B       C       D       E         96       A       B       C       D       E
A       B       C       D       E         5       A       B       C       D       E         6       A       B       C       D       E         7       A       B       C       D       E         8       A       B       C       D       E         9       A       B       C       D       E         1       A       B       C       D       E         12       A       B       C       D       E         13       A       B       C       D       E         14       A       B       C       D       E         16       A       B       C       D       E         16       A       B       C       D       E         17       A       B       C       D       E	24       A       B       C       D       E         25       A       B       C       D       E         24       A       B       C       D       E         25       A       B       C       D       E         24       A       B       C       D       E         25       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         31       A       B       C       D       E         32       A       B       C       D       E         33       A       B       C       D       E         34       A       B       C       D       E         34       A       B       C       D       E         35       A       B       C       D       E         35       A       B       C       D       E         36       A       B       C	44       A       B       C       D       E         45       A       B       C       D       E         45       A       B       C       D       E         46       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         49       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E         54       A       B       C       D       E         55       A       B       C       D       E         55       A       B       C       D       E         57       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         66       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E         73       A       B       C       D       E         74       A       B       C       D       E         76       A       B       C       D       E         76       A       B       C       D       E         77       A       B       C       D       E	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         89       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E         94       A       B       C       D       E         95       A       B       C       D       E         96       A       B       C       D       E         97       A       B       C       D       E
A       B       C       D       E         5       A       B       C       D       E         6       A       B       C       D       E         7       A       B       C       D       E         9       A       B       C       D       E         9       A       B       C       D       E         10       A       B       C       D       E         11       A       B       C       D       E         12       A       B       C       D       E         13       A       B       C       D       E         14       A       B       C       D       E         16       A       B       C       D       E         16       A       B       C       D       E         18       A       B       C       D       E         18       A       B       C       D       E         18       A       B       C       D       E	24       A       B       C       D       E         25       A       B       C       D       E         26       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         31       A       B       C       D       E         32       A       B       C       D       E         33       A       B       C       D       E         34       A       B       C       D       E         34       A       B       C       D       E         35       A       B       C       D       E         36       A       B       C       D       E         36       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E         54       A       B       C       D       E         55       A       B       C       D       E         56       A       B       C       D       E         58       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         64       A       B       C       D       E         65       A       B       C       D       E         67       A       B       C       D       E         69       A       B       C       D       E         70       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         73       A       B       C       D       E         74       A       B       C       D       E         75       A       B       C       D       E         76       A       B       C       D       E         76       A       B       C       D       E         76       A       B       C       D       E         77       A       B       C       D       E         78       A       B       C	84       A       B       C       D       E         85       A       B       C       D       E         85       A       B       C       D       E         87       A       B       C       D       E         87       A       B       C       D       E         87       A       B       C       D       E         90       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E         94       A       B       C       D       E         95       A       B       C       D       E         96       A       B       C       D       E         97       A       B       C       D       E         98       A       B       C       D       E
A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         A       B       C       D       E         B       A       B       C       D       E         B       A       B       C       D       E         B       A       B       C       D       E         B       A       B       C       D       E         B       A       B       C       D	24       A       B       C       D       E         25       A       B       C       D       E         26       A       B       C       D       E         27       A       B       C       D       E         28       A       B       C       D       E         30       A       B       C       D       E         30       A       B       C       D       E         32       A       B       C       D       E         33       A       B       C       D       E         34       A       B       C       D       E         34       A       B       C       D       E         36       A       B       C       D       E         36       A       B       C       D       E         36       A       B       C       D       E         37       A       B       C       D       E         39       A       B       C       D       E	44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         45       A       B       C       D       E         44       A       B       C       D       E         47       A       B       C       D       E         48       A       B       C       D       E         50       A       B       C       D       E         51       A       B       C       D       E         52       A       B       C       D       E         53       A       B       C       D       E         54       A       B       C       D       E         55       A       B       C       D       E         56       A       B       C       D       E         58       A       B       C       D       E         59       A       B       C       D       E	64       A       B       C       D       E         65       A       B       C       D       E         64       A       B       C       D       E         65       A       B       C       D       E         67       A       B       C       D       E         68       A       B       C       D       E         70       A       B       C       D       E         70       A       B       C       D       E         71       A       B       C       D       E         72       A       B       C       D       E         74       A       B       C       D       E         75       A       B       C       D       E         76       A       B       C       D       E         76       A       B       C       D       E         76       A       B       C       D       E         78       A       B       C       D       E         79       A       B       C	84       A       B       C       D       E         85       A       B       C       D       E         86       A       B       C       D       E         87       A       B       C       D       E         88       A       B       C       D       E         90       A       B       C       D       E         90       A       B       C       D       E         91       A       B       C       D       E         92       A       B       C       D       E         93       A       B       C       D       E         94       A       B       C       D       E         95       A       B       C       D       E         96       A       B       C       D       E         98       A       B       C       D       E         99       A       B       C       D       E

# Agronomy

		x Sub.
Maximum Number of Team Members	4	
Number of Team Members Scored	4	
Scantron	Agronomy –	
	Form #708-4	
Committee:		
Kathy Duffield		
Annie Erwin		
Ben Hays		
Charity Marstiller		
Brianne McCauley		

The Agronomy plaque will be awarded to the team making the highest score in the Agronomy Contest. The winning team will retain permanent possession of the plaque

# RULES

- 1. This contest is an attempt to find out whether the student has the fundamental information necessary to know and grow farm crops.
- 2. The contest will consist of three parts:

**Part I (30%)**. Contestants will be expected to have information in the fundamentals crop production such as:

- A. Average production of grain or forage per acre.
- B. Date, rate, and method of seeding various crops.
- C. Recommended varieties.
- D. Reasons for different crop rotations.
- E. Pasture management.
- F. Weed control
- G. Time and method of harvesting hay and grain crops.
- H. Seed certification.

This information will be called for in a 50 question written examination. **Fifty (50) minutes** will be allowed for this portion of the event.

**Part II** (15%). Grain and Seed Judging. Students will be given two classes of grain/seed to judge. **In addition they will answer questions associated with the judging factors for one or more of the classes.** Questions may be true/false and/or multiple choice and will be based upon the factors/criteria used to judge the classes. Classes may include winter wheat, winter barley, oats, shelled corn, soybeans, timothy, red alsike or sweet clover, alfalfa, and buckwheat.

The following will be considered judging factors:

**WHEAT** - Germination - Weight per bushel (under 60 pounds) - Cracked damage - Weather damage - Sprouted kernels - Presence of weak seed - Weevil damage - Presence of other crop seed. (Crop must be identified) - Presence of weed seed.

**OATS** - Evident mixture with other oat varieties - Germination - Weight per bushel (under 32 pounds) - Presence of inert material (trashy) - Weather damage - Presence of other crop grain (crop must be identified) Presence of weed seed.

**WINTER BARLEY** Weight per bushel (under 45 pounds) Germination - Weather damage - Presence of inert material - Presence of other crop seed (crop must be identified) - Presence of weed seed.

**SHELLED CORN** (Seed basis) - Germination - Evident mixture with other varieties - cracked damage - Presence of weather damage or disease - Weevil damage - Presence of inert material.

**TIMOTHY** - Germination - Weather damage - Presence of inert material - Presence of weed seed - Presence of other crop seed (crop must be identified).

ALSIKE, CRIMSON, OR RED CLOVER - Germination - Presence of inert material - Presence of weed seed - Presence of other crop seed (crop must be identified).

**ALFALFA OR SWEET CLOVER** - Germination - Presence of inert material - Immaturity - Old seed - Presence of other crop seed (crop must be identified)- Cracked damage - Weather damage - Percent of hull - Presence of weed seed.

**Part III (30%).** Crop Identification (30 samples). The student will record the common name (as it appears in the following list) of plant or seed specimens selected from the following groups. Plants will be fresh or mounted specimens. Seed will be either pure samples (in vials) or mixtures. If used in mixtures, the number of seeds will be used in about equal proportions and the number of kinds of seed indicated for each mixture. The following list contains the farm crops and weeds from which the identification samples will be chosen.

# 1. Corn (ears or seed)

White dent corn Yellow dent corn Flint corn Sweet corn Popcorn

# 2. Wheat

Common bearded wheat (plant) Common beardless wheat (plant) Common wheat (soft red winter - seed)

# 3. Oats (plant or seed)

Common white oats

# 4. Barley

Common bearded barley (plant) Hooded barley (plant) Common barley (seed)

# 5. Rye (plant or seed)

Common rye

# 6. Grasses (plant only)

- Perennial ryegrass Smooth brome grass Canada bluegrass Kentucky bluegrass Orchard grass
- Sweet vernal Redtop Reed canary grass Sudan grass
- Velvet Tall fescue Tall oat grass Timothy

# 7. Large Seeded Legumes (plant or seed)

Soybeans

# 8. Small Seeded Legumes (plants and seeds)

- Alsike clover Crimson clover Red clover White clover Alfalfa Hairy vetch
- Korean lespedeza Sweet clover Crown vetch Serecia lespedeza Birdsfoot trefoil

# 9. Buckwheat (plant or seed)

# 10. Weed

(*plant or seed*) Beggars tick Buckhorn plantain Canada thistle Cheat or Chess Corn cockle Dock

- (plant only)
- Annual fleabane Chicory Broadleaf plantain Broomsedge Chickweed Dandelion

Galinsoga Goldenrod Ground ivy Heal-all Horse Nettle Ironweed Joe Pye weed Lambs-quarters Nutsedge Peppergrass Poke weed Poverty grass Sheep or red sorrel Speedwell Three seeded mercury Yarrow Fall panicum Barnyard grass Purslane

**Part IV (25%)** One of the following categories will be selected and notification provided at least 60 days prior to the contest.

# **Equipment and Machinery Identification**

Participants will be required to identify 20 specimens from the list. Samples may appear as actual equipment, scale models, toys or pictures. Major component that are unique to a certain piece of equipment can also be used.

- 01. Air compressor/hose
- 02. Anemometer
- 03. Backpack sprayer
- 04. Bale wagon
- 05. Baler
- 06. Bean harvester head (for combine)
- 07. Bed mulcher
- 08. Bed shaper
- 09. Center pivot
- 10. Chemigation unit
- 11. Combine
- 12. Conveyor/elevator
- 13. Corn harvester head (for combine)
- 14. Cotton picker/stripper
- 15. Crop cultivator

- 16. Crop disc cultivator
- 17. Crop planter
- 18. Disc mower
- 19. Drill planter
- 20. Fertilizer broadcaster
- 21. Field shovel
- 22. Forage harvester
- 23. Gauge wheel
- 24. GPS receiver & light bar
- 25. Grain auger
- 26. Grain moisture meter
- 27. Grain storage bin/dryer
- 28. Gravity wagon
- 29. Hay rake
- 30. Hearing protection
- 31. Hitch pin

- 32. Hoe
- 33. Hydraulic hose
- 34. In-line ripper
- 35. Liquid
  - manure/fertilizer spreader
- 36. Manure spreader (dry)
- 37. Module builder
- 38. Moldboard plow
- 39. Nozzle bodies (flood vs. flat fan)
- 40. Pea harvester
- 41. Peanut digger
- 42. Plow (soil chisel)
- 43. Potato harvester
- 44. PPE (all equipment)
- 45. Press wheel

- 46. Pressure gauge
- 47. Pressure regulator
- 48. PTO shaft
- 49. Rotary hoe
- 50. Seed plate
- 51. Soil probe

# **Diagnostic Clinic**

52. Soil thermometer

- 53. Sprayer
- 54. Sugar beet harvester
- 55. Swather
- 56. Sweep net
- 57. Tensiometer

- 58. Tractor
- 59. Vegetable
- transplanter
- 60. Yield monitor

Each participant will be given two samples. Each sample will come with a field report describing the situation from the sample location. They will prepare a written recommendation to respond to the report using their agronomic knowledge. Samples will be chosen from the crop list, and the problems to be diagnosed are from the identification, pest management or soils section. One sample will require the use of a soil test report. Participants must use the report to provide a diagnosis and a corrective recommendation for soil additives (based on a soil test and recommendation tables provided).

# Pest management

# a. Disorders

Ten samples will be identified according to category, causal agent and damage location. Refer to the Agronomic Disorders Practicum Scorecard for the category, agent and damage location lists.

# b. Insect Identification

Ten samples will be identified according to insect name, life cycle, economic impact and mouth part. Refer to the Insect Identification Practicum Scorecard for additional details.

# c. Usability (Crop Quality)

Two classes of crop samples, one of a forage, fiber or grain crop and one from another crop (see plant list) will be evaluated in 30 minutes (15 minutes per sample). Each class will consist of four samples of the same crop. Participants will rank each class with a Hormel card (25 points per sample) and provide written justification (25 points per sample).




SCANTRON. Mark Reflex@ EM-299189-1:654321 QM99

# **Crop and Weed Identification Code Sheet**

Place the appropriate plant identification number (given below) in the "Team Act (Judge)" (front page-bottom section) of your answer sheet. IMPORTANT !!!! Use and blacken the preceding zeros on your answer sheet. For example: If you identify a specimen as popcorn, blacken 0 0 2 on your answer sheet. Crops and weeds are listed in alphabetical order within each group.

CORN	(ears	or	seed)
------	-------	----	-------

- 001 Flint corn 002 Pop corn 003 Sweet corn 004 White dent corn
- 005 Yellow dent corn

# **WHEAT**

006 Bearded wheat 007 Beardless wheat 008 Wheat (seed)

# **OATS**

009 Oats

### BARLEY

010	Barley (seed)
011	Hooded barley

012 Bearded barley

# RYE

013 Rye

# GRASSES

014 Canada bluegrasss 015 Kentucky bluegrass 016 Orchardgrass Perennial ryegrass 017 018 Redtop Reed canarygrass 019 020 Sudangrass 021 Sweet vernal 022 Tall fescue Tall meadow oatgrass 023 024 Timothy 025 Velvetgrass

SMA	<b>ALL SEEDED</b>
LEG	UMES
026	Alfalfa
027	Alsike clover
028	Birdsfoot trefoil
029	Crimson clover
030	Crownvetch
031	Hairy vetch
032	Korean lespedeza
033	Red clover
034	Sericea lespedeza
035	Sweetclover
036	White clover
BUC	KWHEAT
037	Buckwheat
LAR	GE SEEDED
LEG	UMES
038	Soybeans
WEE	EDS
039	Annual fleabane
040	Barnyardgrass
041	Beggers tick
042	Broadleaf plantair

- n
- 043 Broomsedge 044 Buckhorn plantain
- Canada thistle 045
- 046 Cheat or chess
- 047 Chickory
- Chickweed 048
- 049 Cocklebur
- 050 Corn cockle
- 051 Crabgrass
- Dandelion 052
- 053 Dock
- 054 Dodder
- 055 Fall panicum
- 056 Galinsoga

WEEDS (Continued) 057 Goldenrod 058 Ground ivy 059 Giant ragweed 060 Green foxtail 061 Heal-all 062 Horse nettle 063 Ironweed 064 Jimsonweed 065 Joe Pye weed 066 Johnsongrass 067 Lambsquarters 068 Morningglory 069 Nutsedge 070 Oxeye daisy 071 Peppergrass 072 Pokeweed 073 Povertygrass 074 Pigweed 075 Purslane 076 Quackgrass 077 Ragweed 078 Smartweed 079 Sorrel, sheep or red 080 Spanish nettle 081 Speedwell Three-seeded mercury 082 Velvet leaf 083 084 Wild carrot 085 Wild mustard Wild onion 086 087 Yarrow 088 Yellow foxtail

# **Equipment and Machinery Identification**

010.	Air compressor/hose
011.	Anemometer
012.	Backpack sprayer
013.	Bale wagon
014.	Baler
015.	Bean harvester head (for combine)
016.	Bed mulcher
017.	Bed shaper
018.	Center pivot
019.	Chemigation unit
020.	Combine
021.	Conveyor/elevator
022	Corn harvester head (for combine)
023	Cotton picker/stripper
024	Crop cultivator
025	Crop disc cultivator
026	Crop planter
027	Disc mower
028	Drill planter
020.	Fertilizer broadcaster
030	Field shovel
030.	Forage harvester
032	Gauge wheel
032.	GPS receiver & light har
034	Grain auger
035	Grain moisture meter
036	Grain storage hin/dryer
030.	Gravity wagon
038	Hav rake
039	Hearing protection
040	Hitch nin
041	Hoe
042	Hydraulic hose
043	In-line rinner
043.	Liquid manure/fertilizer spreader
045	Manure spreader (dry)
046	Module builder
040.	Moldboard plow
047.	Nozzle bodies (flood vs. flat fan)
040.	Pea harvester
050	Peanut digger
050.	Plow (soil chisel)
052	Potato harvester
052.	DDE (all equipment)
053.	Press wheel
055	Pressure gauge
055.	Pressure regulator
050.	PTO shaft
057.	Rotary hoe
050.	Seed plate
059.	Soil probe
000.	

061.	Soil thermometer
062.	Sprayer
063.	Sugar beet harvester
064.	Swather
065.	Sweep net
066.	Tensiometer
067.	Tractor
068.	Vegetable transplanter
069.	Yield monitor

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NATIONAL FFA CAREER AND LEADERSHIP DEVELOPMENT EVENTS

# National Insect List 2017 Offical Guide

	Insect	Economic Impact	Life Cycle	Mouth Parts		
1	Alfalfa Weevil	422 - Vegetative Part Destruction	510 - Complete	800 - Chewing		
2	aphids	423 - Removal of Plant Fluids	511 - Incomplete	803 - Piercing-Sucking		
3	armyworm larva	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
4	assassin bug	420 -Beneficial	511 - Incomplete	073 - Piercing-Sucking		
5	bean leaf beetle	Must put both 421 & 422	510 - Complete	070 - Chewing		
6	blister beetle (larvae)	420 -Beneficial	510 - Complete	070 - Chewing		
6	blister beetle	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
7	boll weevil	421 - Fruit/Flower Destruction	510 - Complete	070 - Chewing		
8	chinch bug	423 - Removal of Plant Fluids	511 - Incomplete	073 - Piercing-Sucking		
9	Colorado potato beetle	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
10	corn earworm larva	Must put both 421 & 422	510 - Complete	070 - Chewing		
11	corn rootworm larva	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
12	cricket	421 - Fruit/Flower Destruction	511 - Incomplete	070 - Chewing		
13	cutworm larva	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
14	European corn borer larva	Must put both 421 & 422	510 - Complete	070 - Chewing		
15	flea beetle	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
16	grain weevil	421 - Fruit/Flower Destruction	510 - Complete	070 - Chewing		
17	grasshopper	422 - Vegetative Part Destruction	511 - Incomplete	070 - Chewing		
18	green lacewing	420 -Beneficial	510 - Complete	070 - Chewing		
19	honeybee	420 -Beneficial	510 - Complete	071 - Chewing - lapping		
20	Japanese beetle	Must put both 421 & 422	510 - Complete	070 - Chewing		
21	lady beetle larva	420 -Beneficial	510 - Complete	070 - Chewing		
22	leaf skeletonizer	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing		
23	leafhopper	423 - Removal of Plant Fluids	511 - Incomplete	073 - Piercing-Sucking		
24	lygus	423 - Removal of Plant Fluids	511 - Incomplete	073 - Piercing-Sucking		
25	Mexican bean beetle	Must put both 421 & 422	510 - Complete	070 - Chewing		

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	Insect	Economic Impact	Life Cycle	Mouth Parts	
26	pink bollworm larva	421 - Fruit/Flower Destruction	510 - Complete	070 - Chewing	
27	salt marsh caterpiller/wooly worm	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing	
28	scale	423 - Removal of Plant Fluids	511 - Incomplete	073 - Piercing-Sucking	
29	spider mite	422 - Vegetative Part Destruction	511 - Incomplete	072 - rasping-Sucking	
30	spittlebug	ittlebug 423 - Removal of Plant Fluids		073 - Piercing-Suckin	
31	spotted cucumber/Southern Corn Rootworm beetle	422 - Vegetative Part Destruction	510 - Complete	070 - Chewing	
32	stinkbug	423 - Removal of Plant Fluids	511 - Incomplete	073 - Piercing-Sucking	
33	tobacco/tomato hornworm larva	Must put both 421 & 422	001 - Complete	070 - Chewing	
34	Western corn rootworm beetle	Must put both 421 & 422	001 - Complete	070 - Chewing	
35	Western flower thrip	422 - Vegetative Part Destruction	002 - Incomplete	072 - Rasping-sucking	
36	white grub	422 - Vegetative Part Destruction	001 - Complete	070 - Chewing	
37	whitefly	422 - Vegetative Part Destruction	001 - Complete	072 - Rasping-sucking	
38	wireworm	422 - Vegetative Part Destruction	001 - Complete	070 - Chewing	

#### National Insect List 2017 Offical Guide continued

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# Agronomic Disorders Practicum Scorecard

HAP	TER			STATE	TEAM NUMBER
		Member Answer	Possible Points	Member Score	
1.	Casual Category:	Weinber Answei	3	Member score	Possible Answers
	Agent:		4		Causal Category
	Part of Plant Displayed:		3		Biological
2.	Casual Category:		3		Cultural
	Agent:		4		Environmental
	Part of Plant Displayed:		3		
3.	Casual Category:		3		Agents
890. 1	Agent:		4		Bacteria
	Part of Plant Displayed:		3		Chemical
4.	Casual Category:		3		Compaction
	Agent:		4		Drought
	Part of Plant Displayed:		3		Frost damage
5.	Casual Category:		3		Fungus
	Agent:		4		Hail
	Part of Plant Displayed:		3		Heat
6.	Casual Category:	71	3		Insect
6.	Agent;		4		Lightning
	Part of Plant Displayed:		3		Mechanical
7.	Casual Category:		3		Moisture
	Agent:		4		Nematodes
	Part of Plant Displayed:		3		Nutritional
8.	Casual Category:		3		Pollution
	Agent:		4		Sunscald
	Part of Plant Displayed:		3		Virus
9.	Casual Category:	A	3		Wind damage
	Agent:		4		Dente - ( Direct Direct
	Part of Plant Displayed:		3		Parts of Plant Displayed
10.	Casual Category:		3		Reproductive parts
	Agent:		4		Vegetative parts
	Part of Plant Displayed:		3		Vascular bundles
		TOTAL SCORE	10.0		wore than one

NATIONAL FFA CAREER AND LEADERSHIP DEVELOPMENT EVENTS HANDBOOK 2017-2021 26

Agronomy



# **Insect Identification Rubric**

CHAP	TER			STATE	TEAM NUMBER
		Member Answer	Possible Points	Member Score	Possible Answers
1.	Identification:		4		Possible Allsweis
	Economic Impact:		2		Identificaton
	Life Cycle:		2		10. alfalfa weevil 33. Ivgus
	Mouth Part:		2		11. aphids 34. Mexican bean
2.	Identification:		4		12. armyworm beetle
	Economic Impact:		2		13. assassin bug larva
	Life Cycle:		2		14. bean leaf 36. sait marsh
	Mouth Part:		2		- beetle caterpillar/ 15 blister beetle woolv worm
3.	Identification:		4		16. bollweevil 37. scale
	Economic Impact:		2		17. chinch bug 38. spider mite
	Life Cycle:		2		potato beetle 40. spotted
	Mouth Part:		2		19. corn ear worm cucumber
4.	Identification:		4		larva beetle/
	Economic Impact:		2		larva rootworm
	Life Cycle:		2		21. cricket beetle
	Mouth Part:		2		22. cutworm larva 41. stinkbug 23. European.com 42. tobacco/
5.	Identification:		4		borer larva tomato
	Economic Impact:		2		24. flea beetle hornworm
	Life Cycle:		2		25. grain weevil larva 26. grasshopper 43. Western corn
_	Mouth Part:		2		27. green lacewing rootworm
6.	Identification:		4		28. honeybee beetle
	Economic Impact:		2		beetle thrip
	Life Cycle:		2		30. lady beetle 45. white grub
	Mouth Part:		2		larva 46. whitefly
7.	Identification:		4		skeletonizer
	Economic Impact:		2		32. leafhopper
	Life Cycle:		2		Economic Impact
	Mouth Part:		2		None or predatory: NP
8.	Identification:		4		Fruit/Flower destruction: F
	Economic Impact		2		Removal of plant fluids: R
	Life Cycle:		2		Life Cucle
	Mouth Part:		2		Complete: C
9.	Identification:		4		Incomplete: I
	Economic Impact:		2		None: N
	Life Cycle:		2		Mouth Part
	Mouth Part:		2		Chewing: CH
10.	Identification:		4		Chewing-lapping: CL Rasping-sucking: RS
	Economic Impact:		2		Piercing-sucking PS
	Life Cycle:		2		Sponging: SP
	Mouth Part:		2		Siphoning: Sl

Maximum Number of Team Members	4	
Number of Team Members Scored	4	
Scantron	Dairy Cattle –	
	CDE# 105477	A Contraction
Committee:		
Annie Erwin		
Tyler Butts		
Hattie DeBolt		
Jeremy Greene		
Chris VanDyne		

# Dairy Cattle Management and Evaluation

Contest results will be announced immediately following the tabulation activities. This is approximately 30-60 minutes following the time the last student presents his/her oral reasons.

# Schools must provide a "bag" lunch for the contestants. It will handed to the students at the time they leave the arena to participate in the team activity and reasons.

The Dairy contest will consist of:

A. Materials student must provide: Each participant must have:

- 1. A clean, free of notes clipboard
- 2. Two sharpened No. 2 pencils
- 3. An electronic calculator. Calculators used in this event should be battery operated, nonprogrammable and silent with large keys and displays. Calculators should only have these functions: addition, subtraction, multiplication, division, equals, percent, square root, +/- key and one memory register. No other calculators are allowed to be used during the event.
- B. Team Activity Dairy Management Activity 600 points
- 1. Each team will be provided with a dairy farm management scenario to identify problems and determine possible improvements. All necessary information will be provided. Teams should assume the role of a hired consultant advising a producer (judges). Teams will be given 40 minutes to prepare their recommendations to be presented to a panel of judges. It is not necessary to describe the scenario to the judges since they are the producer. Teams will be allowed 10 minutes to present their recommendations, followed by 5 minutes of clarifying questions from the judges.
- 2. The scenario will be based on the following rotating topic areas:
  - 2017: Feeds/Nutrition

- 2018: Housing/Facilities
- 2019: Health/Diseases
- 2020: Genetics/Reproduction
- 2021: Young Stock Management
- 3. Each scenario may include animal welfare, biosecurity, business management, current issues, environmental management, and safety concerns related to the topic area.
- C. Individual Activities
  - 1. General Knowledge Exam 150 points
    - 1. The exam will consist of a 50 question exam involving dairy management practices and DHI records.
    - 2. Forty questions will cover various dairy management and industry related topics.
    - 3. Ten questions will be answered using a dairy herd record evaluation data sheet to analyze individual cows.
    - 4. Appropriate information necessary to answer the DHI questions will be provided.
    - 5. Participants will have 30 minutes to complete the exam.
  - 2. Evaluation and Selection 300 points
    - 1. Six classes of four dairy animals will each be placed on type. Classes will be selected from the recognized breeds of dairy cattle. The class selection committee, however, shall give priority to selecting quality cattle in the breeds available and not be obligated to having all breeds represented in the evaluation classes. Classes will consist of heifers, young cows or mature cows.
    - 2. Participants will be permitted to view the animals from all angles but will not be permitted to handle them.
    - 3. The handlers/cattle will wear numbers which identify the animals.
    - 4. Each class is worth 50 points maximum for a correct placing.
    - 5. Participants will have 12 minutes to place each class. For classes on which oral reasons will be given, participants will be given 15 minutes.
  - 3. Oral Reasons 100 points
    - 1. Oral reasons will be required on two classes. These classes will be designated by the event superintendent prior to the actual evaluation of the class.
    - 2. Oral reasons will be given in another location immediately following the evaluation classes.
    - 3. Participants may not use notes during delivery of reasons. Points will be deducted for the use of notes.
    - 4. Each class is worth 50 points maximum for each set of reasons.
    - 5. Participants will have 12 minutes to prepare each set of oral reasons.

**NOTE:** All team activity answers must be placed on the scantron of team member #1.





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Maximum Number of Team Members	4	3
Number of Team Members Scored	3	The second
Scantron	Horticulture –	
	CDE# 105482	
Committee:		
Kelsey Flinn		
Mary Phillips		
Jason Miihlbach		
Steve Tennant		
John Workman		

# Entomology

The contests will consist of identifying correctly from specimens, **twenty-five (25) to thirty (30)** common economic insects or insect relatives which will be selected from the following list. Specimens will be numbered and contestants will identify the common name, host, scientific order and ONE control measure for each insect. Students will select the appropriate corresponding number for each insect, host, scientific order and control measure from the lists provided and enter those appropriate numbers on the scantron sheet provided.

# THE SCORE WILL BE DETERMINED AS FOLLOWS:

- 1. Each correctly identified **insect** or **insect relative** will count **2 points**.
- 2. Each correctly identified order will count 2 point.
- 3. Each correctly identified **host** will count **2 point**
- 4. Correctly identifying one of the **control measures** for each will count **2 points**

Tie Breaker: Tie breakers will consist of the following:

• Judges will compare answers starting with specimen 1 and proceed through the contest until a contestant/team gains an advantage

Bulletins illustrating and describing economic insects or their relatives are occasionally issued by the Agricultural Experiment Stations of various states-- usually the supply of these bulletins is so quickly exhausted that their listing here is not worthwhile.

Host:	Insect:	Order:		• Control:
Alfalfa	Alfalfa Weevil	Coleoptera	•	Parasitoids and/or pathogens
			•	Early harvest
			•	Pyrethroids
	Leafhopper	Homoptera	•	Resistant plant varieties
			•	Early harvest

# List of Insects

Host:	Insect:	Order:	Control:
			• Pyrethroids
Apple	Apple Maggot	Diptera	• Sticky balls
			• Kaolin clay (Surround)
			• Carbaryl (Sevin)
	Codling Moth	Lepidoptera	Pheromone traps
			• CM granulovirus (Cyd-X)
			• Spinetoram (Delegate)
			• Acetamiprid (Assail)
	San Jose Scale	Homoptera	• Prune and destroy infested plant
			parts
			• Dormant horticultural oil
			• Pyriproxyfen (Esteem)
			Pyrethroids
Bean	Mexican Bean Beetle	Coleoptera	• Plant early and/or fall plantings
			• Acephate (Orthene)
	<u> </u>		Pyrethroids
	Spider Mites	Acarı	• Predators
			• Dormant horticultural oil
			Abamectin
			Bifenthrin
Beneficial Incosts	Dragon Fly and Damsel	Odanata	Insect predator
msects	Symbid Fly	Diptera	<ul> <li>Insect predator</li> </ul>
	Honey Bee	Hymenoptera	Plant pollination
			Useful product
	Bumble Bee	Hymenoptera	Plant pollination
	Lady Bug	Coleoptera	• Insect predator
	Lace Wing	Neuroptera	Insect predator
	Praying Mantis	Mantodea	Insect predator
Corn	Corn Earworm	Lepidoptera	Resistant plant varieties
			• Plant early
			• Bt (Bacillus thuringiensis)
			• Carbaryl (Sevin)
			• Pyrethroids
	Flea Beetles	Coleoptera	Carbaryl (Sevin)
			• Pyrethroids
	European Corn Borer	Lepidoptera	Resistant plant varieties
			• Plant early
			• Bt (Bacillus thuringiensis)
			• Carbaryl (Sevin)
			• Pyrethroids
	Corn Seed Maggot	Diptera	Insecticidal seed treatment or soil
			insecticide at planting

Host:	Insect:	Order:	Control:
	Wireworm	Coleoptera	Crop rotation
			• Soil insecticide at planting
	Armyworm	Lepidoptera	• Bt (Bacillus thuringiensis)
			• Carbaryl (Sevin)
			• Pyrethroids
	Corn Leaf Aphid	Homoptera	• Predators and/or parasitoids
			• Pyrethroids
	Corn Rootworm	Coleoptera	Crop rotation
			• Pyrethroids
Crucifers	Cabbage Maggot	Diptera	Row covers
			• Insecticidal seed treatment or soil
			insecticide at planting
	Cabbage Looper	Lepidoptera	Parasitoids
			• Bt (Bacillus thuringiensis)
			Pyrethroids
Cucurbits	Striped Cucumber Beetle	Coleoptera	Kaolin clay (Surround)
			Imidacloprid
	Squash Vine Borer	Lepidoptera	Kaolin clay (Surround)
			Pyrethroids
	Squash Bug	Hemiptera	Hand removal and destruction
			• Removal of plant debris after
			harvest
			Imidacloprid
	Cutworm	Lepidoptera	Collars placed around plants
			• Carbaryl (Sevin)
			Pyrethroids
Domestic Animals	Face Fly	Diptera	Insecticide impregnated ear tags
			• Self-treatment dust bags and oilers
			• Feed additive insecticides
			Animal sprays
	Horse and Deer Fly	Diptera	• CO2 baited traps
			Animal sprays
	Stable Fly	Diptera	• Sanitization around stable or corral
			Residual surface sprays
	Horn Fly	Diptera	Walk-through trap
			• Insecticide impregnated ear tags
			• Self-treatment dust bags and oilers
			• Feed additive insecticides
			Pour-on insecticides
			Animal sprays
	Cattle Grub (Dairy)	Diptera	Pour-on insecticides for non- lactating cattle

Host:	Insect:	Order:	Control:
			• Injectible insecticides for non-
		D	lactating cattle
	Cattle Grub (Beef)	Diptera	Pour-on insecticides
		D	Injectible insecticides
	Sheep Ked	Diotera	• Spring sheering
			Pour-on insecticides
			Animal sprays and dusts
	Chewing Lice (Dairy)	Phthiraptera (suborder	• Check and treat new animals before adding to herd
		Mallophaga)	
			• Self treatment dust bags and oilers
			Pour-on insecticides
			Animal sprays and dusts
	Chewing Lice (Beef)	Phthiraptera (suborder Mallophaga)	• Check and treat new animals before adding to herd
		initianopitugu)	• Self treatment dust bags and oilers
			<ul> <li>Pour-on insecticides</li> </ul>
			• Animal sprays and dusts
	Sucking Lice	Phthiraptera	Check and treat new animals
	U U	(suborder Anoplura)	before adding to herd
		I and	• Self treatment dust bags and oilers
			Pour-on insecticides
			• Animal sprays and dusts
	Bot Fly	Diptera	Bath with warm H20
			• Feed additive insecticides
	Tick	Acari	• Check and remove by hand
			Animal sprays
	Flea	Siphonaptera	Insecticide treated collars
			• Animal sprays and dusts
	Northern Fowl Mite (Poultry)	Acari	Animal sprays and dusts
Forest and Shade Tree	Tent Caterpillar	Lepidoptera	Remove and destroy egg cases
			• Remove nests from branches
			• Bt (Bacillus thuringiensis)
			Carbaryl (Sevin)
	Locust Borer	Coleoptera	Promote tree vitality
			• Prune and destroy infested plant
			parts
			Carbaryl (Sevin)
	Poplar leaf weevil	Coleoptera	Imidacloprid
			Carbaryl (Sevin)
			• Acephate (Orthene)

Host:	Insect:	Order:	Control:
	Gypsy Moth	Lepidoptera	• Remove and destroy egg cases
			Pheromone traps
			• Bt (Bacillus thuringiensis)
			• Nucleopolyhedrosis virus (NPV)
			• Carbaryl (Sevin)
	Bark Beetles	Coleoptera	Promote tree vitality
			• Prune and destroy infested plant
			parts
	Periodical Cicada	Homoptera	• Cover young trees with netting or
			other materials
			• Remove flagging damage and
	Elm Loof Dootlo	Calcortors	destroy clippings
	Emi Lear Deette	Coleoptera	• Imidacioprid
TTerrebald	Indian Mart Made	Tanidantana	• Carbaryl (Sevin)
Housenoid	Indian Meal Moth	Lepidoptera	• Discard infested materials
			• Store dry foods in tightly sealed
			Sanitation/Clean_up
	Clothes Moth	Lenidontera	Periodic dry cleaning or laundering
	Ciotics Would	Lepidopiera	I avandin oil
			Naphthalana
			<ul> <li>Napitilalene</li> <li>Paradichlorobanzana</li> </ul>
	Saw toothed grain beetle	Coleontera	Paradicinorobenizene     Discord infested materials
	Saw-toothed grain beene	Coleoptera	<ul> <li>Discald infested materials</li> <li>Store dry foods in tightly seeled</li> </ul>
			• Store dry roods in tightry seared
			Sanitation/Clean-up
	Millipede	Julida	Removal of plant refuse/debris
	L		Seal cracks and other openings
			Hand removal and destruction
	Silverfish	Thysanura	Keep infested areas clean and dry
		1115001010	Boric acid
			Pyrethroids
	Moth Drain Fly	Diptera	Clean drain pipes and traps
			<ul> <li>Pyrethroids</li> </ul>
	Termites	Isoptera	Contact a reliable pest control
		1.50pteru	operator
	Clover Mite	Acari	Remove grass growing next to
			foundation of homes
			• Perimeter spray with miticide
			• Vacuum/wipe up with damp cloth
	Carpet Beetle	Coleoptera	Sanitation/Clean-up
			• Periodic dry cleaning or laundering
			• Store dry foods, woolens, furs in
			tightly sealed containers
			Pyrethroids

Host:	Insect:	Order:	Control:
	Carpenter Ant	Hymenoptera	• Eliminate high moisture conditions
			Replace moisture-damaged wood
			• Baits
			Pyrethroids
	Cockroach	Blattaria	• Sanitation/Clean-up
			Boric Acid
			Baits/Gels
	Sowbug	Isopoda	• Removal of plant refuse/debris
			• Seal cracks and other openings
			Hand removal and destruction
	Carpenter Bee	Hymenoptera	• Paint exposed wood surfaces
			• Plug entrance holes
			• Carbaryl (Sevin)
			Pyrethroids
	Powder Post Beetle	Coleoptera	• Use properly stored and dried wood
			• Paint, seal, or varnish exposed wood surfaces
			• Removal and destruction of
			infested items
			Fumigation
	Boxelder Bug	Hemiptera	• Remove seed bearing boxelder
			• Seal cracks and other openings
			• Maintain tight fitting screens
			• Carbaryl (Sevin)
	Cluster Fly	Diptera	• Seal cracks and other openings
			• Maintain tight fitting screens
			• Fly swatter
			Aerosol sprays
Insects of Annoyance and Public Health	Mosquito	Diptera	Eliminate breeding sites
			• Limit exposure during dawn and
			uusk Insect repellants
	Tick (Deer and	Acari	Insect repellants
	American Dog)	1 10011	- insect rependits
			• Avoid walking through tall grass and weeds
			• Check and remove by hand
	Buffalo Gnat	Diptera	Insect repellants
	Bed Bug	Hemiptera	Sanitation/Clean-up

Host:	Insect:	Order:	Control:
			• Wash and dry clothes and bed
			linens at high temperature
			• Pyrethroids
			• Contact a reliable pest control operator
_	Lice (Human)	Phthiraptera	• Use nit combs to remove lice and
		(suborder	their eggs
		Anoplura)	
			• Wash and dry clothes and bed
			linens at high temperature
			Insecticidal shampoos and lotions
	House Fly	Diptera	• Sanitation/Clean-up
			• Fly swatter
			Aerosol sprays
	Wasp, Hornet, Yellow Jacket	Hymenoptera	• Fly swatter
			• Aerosol sprays (treatment of nest)
	Spider	Araneae	• Seal cracks and other openings
			Maintain tight fitting screens
			• Remove sheltering sites adjacent to
			the home
_			Aerosol sprays
Lawn	Chinch Bug	Hemiptera	• Keep thatch to a minimum
			• Predators
			• Carbaryl (Sevin)
			Imidacloprid (Merit)
	White Grub	Coleoptera	• Establish tall fescue turf
			Insect parasitic nematodes
			Milky spore disease
	<u>a</u> 1997 1	· · · ·	Imidacloprid (Merit)
	Sod Webworm	Lepidoptera	• Establish tall fescue turf
			Insect parasitic nematodes
			• Bt (Bacillus thuringiensis)
			• Carbaryl (Sevin)
Oats	Cereal Leaf Beetle	Coleoptera	• Predators and/or parasitoids
			• Carbaryl (Sevin)
			Pyrethroids
Ornamental	Bagworm	Lepidoptera	• Remove and destroy bags
			• Bt (Bacillus thuringiensis)
			Carbaryl (Sevin)
	Lace Bug	Hemiptera	• Promote tree vitality
			Insecticidal soap
			Horticultural oil
			• Carbaryl (Sevin)

Host:	Insect:	Order:	Control:
	Scale Insects	Homoptera	Prune and destroy infested plant
			parts
			• Dormant horticultural oil
			Imidacloprid
	Black Vine Weevil	Coleoptera	Insect parasitic nematodes
			Imidacloprid
			Pyrethroids
	Thrips	Thysanoptera	• Predators
			• Spinosad
			Imidacloprid
			• Pyrethroids
	Japanese Beetle	Coleoptera	Milky spore disease
			• Carbaryl (Sevin)
			Pyrethroids
	Spider Mites	Acari	Predators
			Dormant horticultural oil
			Insecticidal soap
			• Abamectin
Peach	Plum Curculio	Coleoptera	• Thiamethoxam (Actara, Endigo)
			• Phosmet (Imidan)
	Peach Tree Borer	Lepidoptera	Pheromone traps
			Organophosphates
			• Pyrethroids
	Oriental Fruit Moth	Lepidoptera	Pheromone traps
			OFM sprayable pheromone
			• Spinetoram (Delegate)
			• Pyrethroids
Potato	Potato Leafhopper	Homoptera	Promote plant vitality
		-	Neonicotinoids
			• Pyrethroids
	Colorado Potato Beetle	Coleoptera	Crop rotation
		•	• Spinosad (Entrust)
			Neonicotinoids
	Potato Aphid	Homoptera	Predators and/or parasitoids
	1	L.	Neonicotinoids
Tobacco	Tobacco Hornworm	Lepidoptera	Hand removal and destruction
			• Predators and/or parasitoids
			<ul> <li>Bt (Bacillus thuringiensis)</li> </ul>
			Bifenthrin
	Tobacco Budworm	Lepidoptera	Predators and/or parasitoids
		.I	Spinosad (Tracer)
			Imidacloprid
Tomato	Tomato Hornworm	Lepidoptera	Hand removal and destruction

Host:	Insect:	Order:	Control:
			Predators and/or parasitoids
			• Bt (Bacillus thuringiensis)
			• Bifenthrin
	Tomato Fruitworm	Lepidoptera	Parasitoids
			• Bt (Bacillus thuringiensis)
			• Spinosad (Entrust)
			• Bifenthrin
	Flea Beetle	Coleoptera	Carbaryl (Sevin)
			• Pyrethroids



SCANTRON. Mark Reflex@ EM-105482-3:854321 ED04



# Entomology CDE Code Sheet

Revised 4/25/2019

### Host

001.	Alfalfa
002.	Apple
003.	Bean
004.	Beneficial Insects
005.	Corn
006.	Crucifers
007.	Cucurbits

001.	Alfalfa Weevil
002.	Apple Maggot
003.	Armyworm
004.	Bagworm
005.	Bark Beetles
006.	Bed Bug
007.	Black Vine Weevil
008.	Bot Fly
009.	Boxelder Bug
010.	Buffalo Gnat
011.	Bumble Bee
012.	Cabbage Looper
013.	Cabbage Maggot
014.	Carpenter Ant
015.	Carpenter Bee
016.	Carpet Beetle
017.	Cattle Grub (Beef)
018.	Cattle Grub (Dairy)
019.	Cereal Leaf Beetle
020.	Chewing Lice (Beef
021.	Chewing Lice (Dairy
022.	Chinch Bug
023.	Clothes Moth
024.	Clover Mite
025.	Cluster Fly
026.	Cockroach
027.	Codling Moth
028.	Colorado Potato Bee
029.	Corn Earworm
030.	Corn Leaf Aphid
031.	Corn Rootworm
032.	Corn Seed Maggot
033.	Cutworm

03.	Armyworm
04.	Bagworm
05.	Bark Beetles
06.	Bed Bug
07.	Black Vine Weevil
08.	Bot Fly
09.	Boxelder Bug
10.	Buffalo Gnat
11.	Bumble Bee
12.	Cabbage Looper
13.	Cabbage Maggot
14.	Carpenter Ant
15.	Carpenter Bee
16.	Carpet Beetle
17.	Cattle Grub (Beef)
18.	Cattle Grub (Dairy)
19.	Cereal Leaf Beetle
20.	Chewing Lice (Beef)
21.	Chewing Lice (Dairy)
22.	Chinch Bug
23.	Clothes Moth
24.	Clover Mite
25.	Cluster Fly
26.	Cockroach
27.	Codling Moth
28.	Colorado Potato Beetle
29.	Corn Earworm
30	Corn Leaf Aphid

- 008. Domestic Animals
- 009. Forest and Shade Tree
- 010. Household
- 011. Insects of Annoyance and Public Health
- 012. Lawn
- 013. Oats

# Insect

034.	Dragon Fly and Damsel Fly
035.	Elm Leaf Beetle
036.	European Corn Borer
037.	Face Fly
038.	Flea
039.	Flea Beetle
040.	Flea Beetles
041.	Gypsy Moth
042.	Honey Bee
043.	Horn Fly
044.	Horse and Deer Fly
045.	House Fly
046.	Indian Meal Moth
047.	Japanese Beetle
048.	Lace Bug
049.	Lace Wing
050.	Lady Bug
051.	Leafhopper
052.	Lice (Human)
053.	Locust Borer
054.	Mexican Bean Beetle
055.	Millipede
056.	Mosquito
057.	Moth Drain Fly
058.	Northern Fowl Mite
	(Poultry)
059.	Oriental Fruit Moth
060.	Peach Tree Borer
061.	Periodical Cicada
062.	Plum Curculio
063.	Poplar leaf weevil
064.	Potato Aphid
065.	Potato Leafhopper
	0.1

### Order

001.	Acari
002.	Araneae
003.	Blattaria
004.	Coleoptera
005.	Diotera
006.	Diptera
007.	Hemiptera

- 008. Homoptera 009. Hymenoptera 010. Isopoda 011. Isoptera 012. Julida 013. Lepidoptera
- 014. Mantodea

015.	Neuroptera
016.	Odanata
017.	Phthiraptera (suborder
	Anoplura)
018.	Phthiraptera (suborder
	Mallophaga)

019. Siphonaptera

- 014. Ornamental
- 015. Peach
- 016. Potato
- 017. Tobacco
- 018. Tomato

066.	Powder Post Beetle
067.	Praying Mantis
068.	San Jose Scale
069.	Saw-toothed grain beetle
070.	Scale Insects
071.	Sheep Ked
072.	Silverfish
073.	Sod Webworm
074.	Sowbug
075.	Spider
076.	Spider Mites
077.	Spider Mites
078.	Squash Bug
079.	Squash Vine Borer
080.	Stable Fly
081.	Striped Cucumber Beetle
082.	Sucking Lice
083.	Syrphid Fly
084.	Tent Caterpillar
085.	Termites
086.	Thrips
087.	Tick
088.	Tick (Deer and American
	Dog)
089.	Tobacco Budworm
090.	Tobacco Hornworm
091.	Tomato Fruitworm
092.	Tomato Hornworm
093.	Wasp, Hornet, Yellow
	Jacket
094.	White Grub
095.	Wireworm

020. Thysanoptera

021. Thysanura

# Controls

098. Seal cracks and other openings

Soil insecticide at planting

Spinetoram (Delegate)

099.

100.

101.

105.

106.

107.

109.

102. Spinosad

103. Spinosad (Entrust)

104. Spinosad (Tracer)

Sticky balls

containers

their eggs

112. Useful product

114. Walk-through trap

Spring sheering

Self treatment dust bags and oilers

Store dry foods in tightly sealed

Thiamethoxam (Actara, Endigo)

108. Store dry foods, woolens, furs in

110. Use nit combs to remove lice and

111. Use properly stored and dried wood

113. Vacuum/wipe up with damp cloth

115. Wash and dry clothes and bed

116. NONE CURRENTLY

**AVAILABLE** 

linens at high temperature

tightly sealed containers

- 001. Abamectin
- 002. Acephate (Orthene)
- 003. Acetamiprid (Assail)
- 004. Aerosol sprays
- 005. Aerosol sprays (treatment of nest)
- 006. Animal sprays
- 007. Animal sprays and dusts
- 008. Avoid walking through tall grass and weeds
- 009. Baits
- 010. Baits/Gels
- 011. Bath with warm H20
- 012. Bifenthrin
- 013. Boric acid
- 014. Bt (Bacillus thuringiensis)
- 015. Carbaryl (Sevin)
- 016. Check and remove by hand
- 017. Check and treat new animals before adding to herd
- 018. Clean drain pipes and traps
- 019. CM granulovirus (Cyd-X)
- 020. CO2 baited traps
- 021. Collars placed around plants
- 022. Contact a reliable pest control operator
- 023. Cover young trees with netting or other materials
- 024. Crop rotation
- 025. Discard infested materials
- 026. Dormant horticultural oil
- 027. Early harvest
- 028. Eliminate breeding sites
- 029. Eliminate high moisture conditions
- 030. Establish tall fescue turf
- 031. Feed additive insecticides
- 032. Fly swatter
- 033. Fumigation
- 034. Hand removal and destruction
- 035. Horticultural oil
- 036. Imidacloprid
- 037. Imidacloprid (Merit)
- 038. Injectible insecticides
- 039. Injectible insecticides for nonlactating cattle
- 040. Insect parasitic nematodes
- 041. Insect predator
- 042. Insect repellants
- 043. Insecticidal seed treatment or soil insecticide at planting
- 044. Insecticidal shampoos and lotions
- 045. Insecticidal soap
- 046. Insecticide impregnated ear tags
- 047. Insecticide treated collars
- 048. Kaolin clay (Surround)
- 049. Keep infested areas clean and dry
- 050. Keep thatch to a minimum

- 051. Lavandin oil
- 052. Limit exposure during dawn and dusk
- 053. Maintain tight fitting screens
- 054. Milky spore disease
- 055. Naphthalene
- 056. Neonicotinoids
- 057. Nucleopolyhedrosis virus (NPV)
- 058. OFM sprayable pheromone
- 059. Organophosphates
- 060. Paint exposed wood surfaces
- 061. Paint, seal, or varnish exposed wood surfaces
- 062. Paradichlorobenzene
- 063. Parasitoids
- 064. Parasitoids and/or pathogens
- 065. Perimeter spray with miticide
- 066. Periodic dry cleaning or laundering
- 067. Pheromone traps
- 068. Phosmet (Imidan)
- 069. Plant early
- 070. Plant early and/or fall plantings
- 071. Plant pollination
- 072. Plug entrance holes
- 073. Pour-on insecticides
- 074. Pour-on insecticides for nonlactating cattle
- 075. Predators
- 076. Predators and/or parasitoids
- 077. Promote plant vitality
- 078. Promote tree vitality
- 079. Prune and destroy infested plant parts
- 080. Pyrethroids
- Pyriproxyfen (Esteem) 081.
- 082. Removal and destruction of infested items
- 083. Removal of plant debris after harvest
- 084. Removal of plant refuse/debris
- 085. Remove and destroy bags
- 086. Remove and destroy egg cases
- 087. Remove flagging damage and destroy clippings
- 088. Remove grass growing next to foundation of homes
- 089. Remove nests from branches
- 090. Remove seed bearing boxelder
- 091. Remove sheltering sites adjacent to the home
- 092. Replace moisture-damaged wood
- 093. Residual surface sprays
- 094. Resistant plant varieties
- 095. Row covers
- 096. Sanitation/Clean-up
- 097. Sanitization around stable or corral

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		~
Maximum Number of Team Members	4	
Number of Team Members Scored	4	
Scantron	Ag Sales/FB Mgmt./Ag.	
	Mech –	-
	CDE# 105481	
Committee:		
Craig Canterbury		
Tim Cunnien		
Charity Marstiller		
Brianne McCauley		
John Workman		

# Farm Business Management

### Purpose

The Agribusiness Management Career Development Event provides competition that fosters information assimilation, critical thinking and problem-solving skills necessary to successfully manage a farm or pursue farm business management careers. The Agribusiness Management Career Development Event enhances and encourages opportunities for all participants to receive instruction that develops farm business management skills.

# **Event Objectives**

The event objectives are for participants to demonstrate their ability to:

- analyze farm/ranch business management information.
- apply economic principles and concepts of farm business management to the decision making process.
- evaluate farm business management decisions.
- work together cooperatively as a group.

The Farm Business Management portion of the CDE is expected to take from two to three hours. Specifically, for this year's event:

- 1. The computer exercise that was a part of previous WV Farm Business Management CDEs has been eliminated.
- 2. Similar to previous WV Farm Business Management CDEs, this year the WV Farm Business Management CDE will have a multiple choice question exercise consisting of 30 to 60 questions covering basic microeconomic and financial concepts.
- 3. A section that requires the ability to interpret, understand, and use **enterprise budgets** has been added to this year's WV Farm Business Management CDE. The enterprise budget could be for a crop, crop rotation (e.g., corn-soybean), cattle operation, dairy operation, or any other farm operation. Enterprise budgets vary slightly depending upon the institution that

generates them, but the basic information in all enterprise budgets is the same. For the Farm Business Management portion of the CDE at West Virginia University, enterprise budgets from Penn State University (<u>http://extension.psu.edu/</u>,

<u>http://agguide.agronomy.psu.edu/cm/sec12/sec12toc.cfm</u>) The Ohio State University (<u>http://aede.osu.edu/Programs/FarmManagement/Budgets/</u>), the University of Wisconsin (<u>http://cdp.wisc.edu/crop%20enterprise.htm</u>), and/or past National FFA Farm Business Management CDEs may be used.

- 4. Another addition to the WV Farm Business Management CDE is a section for participants to assess alternative farm operations using **partial budgeting** techniques. Participants will be given a minimum of two scenarios in which they will be required to determine whether or not a new operation, management system, or other change to an enterprise should be adopted.
- 5. Finally, a portion of the event requires the participant's ability to interpret, analyze, and use **cash flow statements**.
- 6. Each of the Farm Business Management CDE sections may require students to define terms (either multiple choice questions or matching terms and definitions).



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		Written Exam A		
	21 A B C D E		61 A B C D E	81 A B C D E
ABCDE	22 A B C D E	42 A B C D E	62 A B C D E	82 A B C D E
ABCDE	23 A B C D E	43 A B C D E	63 A B C D E	83 A B C D E
ABCDE	24 A B C D E	44 A B C D E	64 A B C D E	84 A B C D E
ABCDE	25 A B C D E	45 A B C D E	65 A B C D E	85 A B C D E
ABCDE	26 A B C D E	46 A B C D E	66 A B C D E	86 A B C D E
ABCDE	27 A B C D E	47 A B C D E	67 A B C D E	87 A B C D E
ABCDE	28 A B C D E	48 A B C D E	68 A B C D E	88 A B C D E
ABCDE	29 A B C D E	49 A B C D E	69 A B C D E	89 A B C D E
	30 A B C D F	50 A B C D E		90 A B C D E
	NABODE			
		53 6 8 0 0 5		
			74 0 0 0 0 0	
	34 A B C D E			
	36 A B C D E	55 A B C D E		Y6 A B C D E
	JO A B C D E	SO A B C D E	70 A B C D E	YO A B C D E
	37 A B C D E	57 A B C D E		YABCDE
	38 (A) (B) (C) (D) (E)	58 A B C D E	78 (A) (B) (C) (D) (E)	98 (A) (B) (C) (D) (E)
9 A B C D E	39 A B C D E	59 A B C D E	79 A B C D E	99 A B C D E
		60 A B C D E	80 A B C D E	
ABCDE	21 A B C D E		61 A B C D E	81 A B C D E
	22 A B C D F	42 A B C D F	62 A B C D F	82 A B C D F
ABCDE	23 A B C D E	43 A B C D E	63 A B C D E	83 A B C D E
ABCDE	24 A B C D E	44 A B C D E	64 A B C D E	84 A B C D E
ABCDE	25 A B C D E	45 A B C D E	65 A B C D E	85 A B C D E
ABCDE	26 A B C D E	46 A B C D E	66 A B C D E	86 A B C D E
ABCDE	27 A B C D E	47 A B C D E	67 A B C D E	87 A B C D E
ABCDE	28 A B C D E	48 A B C D E	68 A B C D E	88 A B C D E
ABCOE	29 A B C D E	49 8 8 6 0 6	69 A B C D E	87 A B C D E
ABCOD	30 (A (B (C) (D) (E)	50 A B C D C	70 (A (B (C) (D) (E)	90
				91 & B C D E
	37 & B C D E		72 8 8 6 8 6	92
	35 6 8 0 8 5	55 A B O D C	75 0 0 0 0 0	95
			74 0 0 0 0 0	
WUCDE	JABCDE	5/ABCDE	ABCDE	WABCDE
(The state s	38 A B C D E	58 A B C D E	78 A B C D E	96 A B C D E
ABCDE	39 A B C D E	59 A B C D E	79 A B C D E	99 A B C D E
A B C D E A B C D E	10 00 00 00 00 00			the second se

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Maximum Number of Team Members	4	100 March 100
Number of Team Members Scored	4	4.34
Scantron	Horticulture –	and the second second
	CDE# 105482	
Committee:		
Leon Ammons		
Ben Hays		
John Kessel		
Mary Phillips		
John Workman		

# Floriculture

# An \$40 fee will be assessed per team to cover supplies required for the contest. This is in addition to the traditional fee assessed to cover Scantron supplies.

# **Purpose of the Contest**

To stimulate the study of and interest in production and retailing of flowers, plants, foliage and vegetables through the agriculture education curriculum.

### **Objectives of the Contest**

- 1. Identify floriculture, vegetables and bedding plant materials.
- 2. Identify and treat unhealthy plants due to pest, nutritional, mechanical or chemical injury.
- 3. Understand the biological and scientific principles and develop the skills underlying propagation, growth requirements, growing techniques, harvesting, marketing and maintenance of established floriculture and vegetable plants.
- 4. Understand principles and develop skills of floral design.
- 5. Identify and select appropriate supplies and equipment for flower shop and greenhouse.
- 6. Understand and demonstrate the use of safety procedures and practices in floriculture operations.
- 7. Operate and maintain appropriate equipment for floriculture operations.
- 8. Understand and demonstrate interpersonal skills prerequisite to successful employment in floriculture industry.
- 9. Understand and demonstrate proper sales and service skills.
- 10. Maintain records and proper reports that are accurate and legible.

# **Contest Rules and Procedures**

- 1. The contest will have four phases: Identification of plant materials, general knowledge examination, problem-solving, and practicums.
- 2. Under no circumstances will any contestant be allowed to touch or handle plant material during the contest except during the practicums.
- 3. Observers will not be permitted in the contest area while that contest is in progress.

- 4. Any communications between contestants from the same team during the contest will be sufficient cause to eliminate the team from the contest.
- 5. To facilitate the holding of scantron score sheets during the contest, all contestants must also bring their own pencils and clipboard (a minimum of two No. 2 pencils).

# Phase 1 - IDENTIFICATION OF PLANT MATERIALS (200 points)

Fifty specimens from the floriculture plant and equipment identification list will be displayed for participants to identify by technical and common names. A number will designate each specimen. Four points will be awarded for each specimen that is correctly identified. Each participant will be allowed 25 minutes to complete this phase of the event.

# Phase 2 - GENERAL KNOWLEDGE EXAMINATION (200 points)

Participants will answer 50 multiple choice questions that cover all areas of the floriculture industry as reflected in the event objectives. This phase of the event will test participants' knowledge and understanding of basic biological and scientific principles of producing and marketing flowers, plants and foliage. Each participant will be allowed 50 minutes to complete the exam. Each answer has a value of four points.

Test questions will come from the past ten years of the National Floriculture CDE Tests. Each year the latest test will be added and the oldest test removed from the question pool.

# Phase 3 - PROBLEM-SOLVING/DECISION-MAKING (200 points)

Each participant will solve ten problems related to the various aspects of the floriculture industry identified in the event objectives. Each problem will describe the situation or create the problem and list four possible solutions to the problem. The participant must decide on the best possible solution to the problem. All materials and information necessary to solve the problem will be available to the participant as he/she solves the problem. Each participant will be allowed 50 minutes to complete this phase of the event. Each correct solution has a value of 20 points.

# Phase 4 – Annual PRACTICUM (300 POINTS)

Each participant will complete **two annual practicums**:

- 1. FLORAL ARRANGEMENT
- 2. GROWING PROCEDURES

# FLORAL ARRANGEMENT (100 POINTS)

Make a \$55 floral arrangement (The \$55 cost will include both labor and tax and be within fifty cents either way of the \$55). The event superintendent will announce the type of arrangement during the team orientation meeting. Using the materials provided, participants will be allowed 20 minutes to complete their arrangements and itemized bills. The event assistant at the beginning of the practicum will provide participants the retail price of the flowers and foliage

that they will use in their arrangements. The markup will be built into the retail price. When the participant has determined the total arrangement cost, he or she has included the markup. Retail cost of flowers and foliage given to the participant will be determined after polling florists to determine their current retail prices on the flowers and foliage used in the event. Scoring criteria are presented on the floral arrangement practicum scorecard which will be recorded by a judge.

Explanation of Floral Arrangement Terms

- Design: Category Interpretation: Design follows objective/scenario given
- Balance: Physical and visual
- Creativity: Artistic inventiveness
- Depth: Placement of materials at different levels throughout the arrangement
- Focal Emphasis: Design has one area of design that attracts the eye to it
- Line: Movement
- Mechanics: Professional techniques and application
- Scale: Proportion
- Unity: Cohesiveness of design

### **GROWING PROCEDURES (100 POINTS)**

**One of the three** below will be demonstrated on an annual basis. Twenty minutes will be allowed for this section including questions from the judges.

Potting of Young Plants (Plugs or Liners)

- Participants will be asked to plant young plants in the pots provided. Each participant will be given a group of young plants from which to select their transplants from; an appropriate pot or pots; potting medium at the correct moisture level, ID stake and a marking pencil.
- Scoring criteria are presented on the plant potting practicum scorecard which will be recorded by a judge.

Asexual Propagation of Plants

- Each participant will be provided the parent plant materials and all other materials needed to propagate plants asexually. Using the available materials, participants will take cuttings from the plant before them and stick them in rooting media labeled correctly. Participants should sanitize all equipment and use appropriately in a safe manner.
- Scoring criteria are presented on the asexual plant propagation scorecard which will be recorded by a judge.

# **Pinching Plants**

- A plant will be placed before each participant. The participant will be given instructions as to what they are to do to the plant by the event assistant in charge of the practicum. Participants will be judged on the procedures they follow in pinching the plant.
- Scoring criteria are presented on the pinching plant scorecard which will be recorded by a judge.

### **Phase 5 - Rotating Practicum (75 points)**

In addition to the two annual practicums, one rotating practicum will be selected from the list below for each noted year. The three to be used will be identified by the event superintendent in the annual team orientation packet that is available during the summer prior to convention on the CDE webpage.

### MAKE AND PACKAGE A CORSAGE (75 POINTS)

Each participant will make and package a \$25 corsage. The type of corsage and information about the corsage will be announced by the event assistant in charge at the beginning of the practicum. All plant and non-plant materials needed to construct and package the corsage will be provided. Each participant will be allowed 20 minutes to complete the construction of the corsage and complete an itemized listing of costs for the corsage constructed. Scoring criteria are presented on the making and packing a corsage scorecard which will be recorded by a judge.

### IDENTIFYING AND CONTROLLING PLANT DISORDERS (75 POINTS)

Pest and disorder items may be presented as an intact specimen, photograph or preserved specimen (herbarium sheet, insect mount, etc.). Each specimen will be designated by a station number. The participant must identify the item and its classification (nutritional/ environmental, insect/ pest, or disease). The participant then must determine the damage location as well as chemical and culture controls for the disorder. Each participEach participant will identify 15 specimens total for this event. No specimens or items may be touched or handled in any way. Fifteen minutes will be allowed for this event. Refer to the Disorder Practicum Scorecard for additional details.

Nutritional and Environmental Disorders				
• Cold temperature (freeze)	• Ethylene damage	Nitrogen deficiency		
• Cold water damage	• Insufficient water damage	Phosphorus deficiency		
	<ul> <li>Iron deficiency</li> </ul>			
	Diseases	-		
• Botrytis – Gray mold	• Leaf spot (Black)	• Rust		
• Damping-off	• Powdery mildew	• Stem rot		
• Downy mildew	• Root rot	• Tospovirus (INSV and TSWV)		
Insects and Pests				
• Aphids	• Mealybugs	• Spider mites		
• Fungus gnats	• Scale	• Thrips		
• Leaf miner	• Shore flies	• Whiteflies		
• Leafhopper	• Snails/ Slugs			

The plant disorders will come from the following list of disorders.

# HANDLING A HAZARDOUS SITUATION (75 POINTS)

Each participant will be presented with a hazardous situation that could develop in a floriculture business. The participant will be asked to explain how to resolve the problem. The participant will be evaluated on their understanding of the problem and procedures and practices followed in resolving the problem. Ten minutes will be allowed for this practicum.

Scoring criteria are presented on the hazardous situation scorecard which will be recorded by a judge.

PHASE	Individual Points	Team Points
Identification of Plant	200	800
Material and Equipment		
General Knowledge	200	800
Problem Solving	200	800
Annual Practicums	200	800
Rotational Practicums	75	300
Total	875	3,500

# Scoring

# TIEBREAKERS

If ties occur the following events will be used in order to determine award recipients:

- 1. Written Exam
- 2. Plant and Equipment Identification
- 3. Floral Arrangement Practicum
- 4. Growing Procedures


SCANTRON. Mark Reflex@ EM-105482-3:854321 ED04



### WV Floriculture Plant Identification List

4.0.4	A 1 6 4 4	011 1/ 0 1/ 1
101	Aechmea tasciata cv.	Silver Vase Bromeliad
102	Ageratum houstonianum	Ageratum
103	Alstroemeria hybrid cv.	Peruvian Lily
104	Anemone coronaria	Anemone
105	Anethum graveolens cv.	Dill
106	Angelonia hybrid cv.	Angelonia
107	Anthurium x andraeanum cv.	Flamingo Plant
108	Antirrhinum majus cv.	Snapdragon
109	Aphelandra squarrosa cv.	Zebra Plant
110	Araucaria heterophylla	Norfolk Island Pine
111	Asparagus densiflorus	Sprengeri Fern
112	Aster pringlei	Monte Cassino Aster
113	Astilbe hybrid cv.	Astilbe
114	Begonia x semperflorens –cultorum	Wax Begonia
115	Begonia x tuberhybrida cv.	Tuberous Begonia
116	Caladium x hortulanum cv.	Caladium
117	Calibrachoa hybrid cv.	Million Bells
118	Callistephus chinensis cv.	China Aster
119	Campanula hybrid cv.	Campanula
120	Canna x generalis cv.	Garden Canna
121	Capsicum annuum	Ornamental Pepper Plant
122	Catharanthus roseus	Vinca
123	Celosia argentea cv.	Cockscomb
124	Chamaedorea elegans	Parlor Palm
125	Chamelaucium uncinatum	Waxflower
126	Cholorophytum comosum cv.	Spider Plant
127	Chrysanthemum x morifolium	Florist's Chrysanthemum
128	Clematis hybrid cv.	Clematis
129	Codiaeum variegatum pictum	Croton
130	Crassula argentea	Jade Plant
131	Cycas revoluta cv.	Sago Palm
132	Cyclamen x persicum cv.	Florist's Cyclamen
133	Cymbidium cv.	Cymbidium Orchid

134	Cymbopogon cv.	Lemongrass (herb)
135	Dahlia hybrid cv.	Dahlia
136	Delphinium consolida cv.	Larkspur
137	Dendrobium cv.	Dendrobium Orchid
138	Dianthus caryophyllus cv.	Carnation
139	Dracaena cincta	Red Edge Dracaena
140	Echinocactus cv.	Barrel Cactus
141	Epipremnum aureum cv.	Golden Pothos
142	Erica carnea cv.	Spring Heather
143	Eucalyptus polyanthemos	Silver Dollar Eucalyptus
144	Euphorbia pulcherrima cv.	Poinsettia
145	Eustoma grandiflorum	Lisianthus
146	Exacum affine	Persian Violet
147	Ficus benjamina cv	Benjamin Fig
148	Ficus elastica cv	Rubber Plant
149	Fragaria x ananassa cv.	Strawberry Plant
150	Freesia x hybrida	Freesia
151	Gardenia jasminoides	Gardenia
152	Gerbera jamesonii	Gerbera Daisy
153	Gladiolus x hortulanus cv.	Garden Gladiolus
154	Gomphrena hybrid cv.	Globe Amaranths
155	Gypsophila elegans cv.	Baby's Breath
156	Hedera helix cv.	English Ivy
157	Helianthus annuus	Sunflower
158	Hemerocallis cv.	Daylily
159	Hippeastrum hybrid cv.	Amaryllis
160	Hosta cv.	Hosta
161	Hoya carnosa	Wax Plant
162	Hyacinthus orientalis cv.	Hyacinth
163	Hydrangea macrophylla	Big Leaf Hydrangea
164	Impatiens hybrid cv.	Impatiens
165	Impomoea batatas cv.	Ornamental Sweet Potato
166	lris x xiphium cv.	Dutch Iris
167	Senecio cineraria	Dusty Miller
168	Justica brandegeana	Shrimp Plant

#### Floriculture Plant Identification List continued

169	Kalanchoe x blossfeldiana cv.	Kalanchoe
170	Leucanthemum x superbum	Shasta Daisy
171	Leucospermum hybrid cv.	Pin Cushion Protea
172	Liatris spicata	Liatris
173	Lilium hybrid cv.	Asiatic or Oriental Lily
174	Limonium sinuatum	Statice
175	Lobularia maritima	Alyssum
176	Maranta leuconeura	Prayer Plant
177	Matthiola incana cv.	Stock
178	Monstera deliciosa	Split Leaf Philodendron
179	Narcissus hybrid cv.	Daffodil or Narcissus
180	Nephrolepis exaltata cv.	Boston Fern
181	Ocimum basilicum cv.	Basil
182	Opuntia cv.	Cactus
183	Paeonia cv.	Peony
184	Paphiopedilum hybrid cv.	Ladyslipper Orchid
185	Pelargonium x hortorum cv.	Zonal Geranium
186	Pelargonium peltatum cv.	lvy Geranium
187	Pentas hybrid cv.	Pentas
188	Petroselinum crispum cv.	Parsley
189	Petunia x hybrida cv.	Petunia
190	Phalaenopsis cv.	Moth Orchid
191	Philodendron scandens oxycardium	Heartleaf Philodendron
192	Pilea cadierei	Aluminum Plant
193	Portulaca oleracea cv.	Portulaca
194	Primula malacoides cv.	Primrose

195	Ranunculus hybrid cv.	Ranunculus
196	Rhododendron simsii cv.	Florist Azalea
197	Rosa hybrid cv	Hybrid Tea Rose
198	Rumohra adiantiformis	Leatherleaf Fern
199	Saintpaulia ionantha cv.	African Violet
200	Salvia splendens cv.	Salvia
201	Sansevieria trifasciata cv.	Snake Plant
202	Schefflera arboricola	Dwarf Schefflera
203	Schlumbergera bridgesii	Christmas Cactus
204	Sempervivum hybrid cv.	Hens and Chicks
205	Senecio x hybridus cv.	Cineraria
206	Sinningia speciosa Fyfiana Group cv.	Florist Gloxinia
207	Solidago hybrid cv	Solidago
208	Solenostemon scutellarioides	Coleus
209	Spathiphyllum	Peace Lily
210	Stephanotis floribunda	Stephanotis
211	Strelitzia reginae	Bird of Paradise
212	Syngonium podophyllum	Nephthytis
213	Tagetes species cv.	Marigold
214	Tradescantia zebrine	Wandering Jew
215	Tulipa cv.	Tulip
216	Verbena hybrid cv.	Verbena
217	Viola x wittrockiana cv.	Pansy
218	Zantedeschia hybrid cv.	Calla Lily
219	Zinnia cy.	Zinnia

## Floriculture equipment and supply identification list

301	#100 Ribbon (satin, sheer, wired)
302	#3 Ribbon (satin, sheer, wired)
303	#40 Ribbon (satin, sheer, wired)
304	#9 Ribbon (satin, sheer, wired)
305	18 Gauge floral wire
306	28 Gauge floral wire
307	Anvil-and-blade pruner
308	Backflow preventer
309	Bouquet sleeve
310	Bulb planter
311	Cardette
312	Cell pack containers
313	Ceramic container
314	Chemical resistant gloves
315	Chenille stem
316	Coconut coir
317	Compressed air sprayer
318	Corsage box
319	Corsage pin
320	Corsage snips
321	Drip emitter, irrigation
322	Dry foam
323	Dust mask
324	Duster
325	Ellepot propagation cubes
326	Enclosure card
327	Fern greening pins
328	Fertilizer injectors
329	Floral adhesive
330	Floral foam
331	Floral knife
332	Floral preservate
333	Floral stem tape
334	Fogger

335	Gas mask
336	Glass vase
337	Glue gun
338	Glue pan
339	Glue sticks
340	Goggles
341	Granular fertilizer
342	Greenhouse thermostat
343	Hanging basket
344	Hearing protection
345	Hook-and-blade pruners (bypass pruners)
346	Hose punch
347	Hose repair coupling
348	Hose-end repair fitting
349	Hose-end sprayer
350	Hose-end washer
351	Impulse sprinkler
352	Irrigation tape
353	Irrigation timer
354	Mist nozzle (mist bed)
355	Nosegay holder
356	Nursery container
357	Oscillating sprinkler
358	Peat moss
359	Peat pots
360	Pest strips
361	pH testing meter
362	Polyethylene film
363	Polyethylene pipe
364	Pot covers
365	Propagation mat
366	Propagation trays
367	PVC (polyvinylchloride) pipe

368	PVC pipe cutter
369	Resin-coated fertilizer
370	Respirator
371	Ribbon shears
372	Rice hulls
373	Rockwool propagation cubes
374	Rose and stem flower stripper
375	Safety goggles
376	Sand
377	Scoop shovel
378	Shade fabric
379	Sharpening stone
380	Sheet moss
381	Siphon injector
382	Soil moisture meter
383	Solenoid valve
384	Spaghetti tubing (1/4" diameter or less)
385	Spanish moss
386	Sphagnum moss
387	Spray suit
388	Square point (flat) shovel
389	Styrofoam
390	Surestik cling
391	Tulle
392	Vermiculite
393	Water breaker
394	Water picks
395	Water soluble fertilizer
396	Water tubes
397	Waterproof container tape
398	Wire cutter
399	Wooden pick
400	Wrist corsage holder

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### Floral Arrangement Practicum Rubric

100 points

CHAPTER		STAT	E TEAN	A NUMBER
POSSIBLE SCORE	Excellent	Good	Needs Improvement	Membe Score
Arrangement 85			de la constante	
Category Interpretation	7-15 points	6-10 points	0-5 points	
Balance	7-10 points	4-6 points	0-3 points	
Creativity	7-10 points	4-6 points	0-3 points	
Depth	7-10 points	4-6 points	0-3 points	
Focal Emphasis.	7-10 points	4-6 points	0-3 points	
Line	7-10 points	4-6 points	0-3 points	
Mechanics	7-10 points	4-6 points	0-3 points	
Scale	4-5 points	2-3 points	0-1 points	
Unity	4-5 points	2-3 points	0-1 points	
Itemized List of Costs 15				
Price Range	4-5 points	2-3 points	0-1 points	
Identification and Accuracy	7-10 points	4-6 points	0-3 points	

#### **EXPLANATION OF FLORAL ARRANGEMENT TERMS**

Category Interpretation: Design follows objective scenario given Balance: Physical and Visual Creativity: Artistic inventiveness Depth: Placement of materials at different levels throughout the arrangement Focal Emphasis: Design has one area of design that attracts the eye to it Line: Movement Mechanics: Professional techniques and application Scale: Proportion Unity: Cohesiveness of design

JUDGE'S SIGNATURE

2019	Career	Devel	opment	Event	<b>Rules</b>	and	Regulations

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## Floral Arrangement Itemized List of Costs

TER		STATE	TEAM NUM	<b>MBER</b>
Quantity	FLOWER/FOLIAGE		Unit Cost	Total

Quantity	MATERIAL USED	Unit Cost	Total
	TOTAL HARD G	GOODS COST	

TOTAL ARRANGEMENT COST\*

\* Participants will be provided the retail price of flowers and foliage that they will use in their arrangement by the event official at the beginning of the practicum. The markup is built into the retail price of the flowers and the foliage used in the arrangement.

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## Potting of Young Plants Practicum Rubric

50 points

NAME		MEMBER NUMBER
CHAPTER	STATE	TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Potting Process				
Selection of plugs or liners	5-6 points	3-4 points	0-2 points	
Proper planting depth	6-8 points	3-6 points	0-2 points	
Labeling of plant/pot	5-6 points	3-4 points	0-2 points	
Correct growing medium level in pot	5-6 points	3-4 points	0-2 points	
Plug or liner arrangement and angle	5-6 points	3-4 points	0-2 points	
Firmness of growing medium	5-6 points	3-4 points	0-2 points	
General appearance (free from handling damage)	5-6 points	3-4 points	0-2 points	
Response to questions	5-6 points	3-4 points	0-2 points	
		Total Po	scibles 50	

Total Possible:

JUDGE'S NAME

JUDGE'S SIGNATURE

Floriculture

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## Floriculture Making and Packing a Corsage Rubric

75 points

NAME		MEMBER NUMBER
CHAPTER	\$TATE	TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Wiring,taping, and/or gluing	11-15 points	6-10 points	0-5 points	
Use of ribbon	7-10 points	4-6 points	0-3 points	
Design	11-15 points	6-10 points	0-3 points	
Wear-ability	7-10 points	4-6 points	0-3 points	
Packaging	4-5 points	2-3 points	0-1 points	
Pricing (accuracy of pricing identification)	7-10 points	5-8 points	0-4 points	
Pricing	7-10 points	4-6 points	0-3 points	

JUDGE'S NAME

JUDGE'S SIGNATURE

2019 Career Development Event Rules and Regulations	
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## **Corsage Itemized List of Costs**

NAME		MEMBER NUMBER
CHAPTER	STATE	TEAM NUMBER

FLOWER/FOLIAGE USED	Unit Cost	Total
	FLOWER/FOLIAGE USED         Image: State Stat	FLOWER/FOLIAGE USED       Unit Cost         Image: Control of the second sec

TOTAL FLOWER/FOLIAGE MATERIAL COST

Quantity	MATERIAL USED	Unit Cost	Total
		TOTAL HARD GOODS COST	

Total Plant Material Cost

Total Hard Goods Cost

TOTAL CORSAGE COST

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## **Asexual Plant Propagation Rubric**

50 points

NAME		MEMBER NUMBER
CHAPTER	\$TATE	TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Proper sanitation and equipment use	4-5 points	2-3 points	0-1 points	
Selection of cuttings	4-5 points	2-3 points	0-1 points	
Making cuttings	5-6 points	3-4 points	0-2 points	
Preparation of cuttings for sticking in growing media	5-6 points	3-4 points	0-2 points	
Use of rooting hormone	4-5 points	2-3 points	0-1 points	
Selection of growing media	5-6 points	3-4 points	0-2 points	
Sticking of cuttings in growing media	5-6 points	3-4 points	0-2 points	
Cuttings labeled correctly	4-5 points	2-3 points	0-1 points	
Response to questions	5-6 points	3-4 points	0-2 points	
		TO	TAL SCORE: 50	

JUDGE'S NAME

JUDGE'S SIGNATURE

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### **Disorder Practicum Scorecard**

NA	ME									MEMBER NUMBER
СН	APTER						STAT	E		TEAM NUMBER
		Member Answer	Possible Points	Member Score			Member	Possible	Member Score	CLASSIFICATION: 100 Diseases 101 Insects/Pests / Mites 102 Nutritional/Environmental
1.	Classification #:		1		9.	Classification #:		1		
	Identification #:		2			Identification #:		2		200 Aphids
	Chemical Control #:		1			Chemical Control #:		1		201 Black Leaf Spot
	Cultural/ Biological Control #:		1			Cultural/Biological Control #	<i>t</i> :	1		202 Botrytis – Grey Mold
2.	Classification #:		1		10	Classification #:		1	<u> </u>	204 Downy Mildew
	Identification #:		2			Identification #:		2		205 Ethylene Damage
	Chemical Control #:		1			Chemical Control #:		1		206 Fungus Gnats 207 Insufficient Watering
	Cultural/ Biological Control #:		1			Cultural/Biological Control #	ŧ:	1		208 Iron Deficiency
3.	Classification #	_	1		11.	Classification #:	-	1	-	209 Leaf Miner
	Identification #:		2			Identification #:		2		210 Learnopper 211 Mealybugs
1	Chemical Control #:		1			Chemical Control #:	1	1		212 Nitrogen Deficiency
	Cultural/ Biological Control #:		1			Cultural/Biological Control #	<i>t</i> :	1		213 Phosphorus Deficiency 214 Powdery Mildew
4.	Classification #:		1		12.	Classification #:		1	<u> </u>	215 Root Rot
	Identification #:		2			Identification #:		2		216 Rust
	Chemical Control #:		1			Chemical Control #:		1		217 Scale 218 Shore Flies
	Cultural/ Biological Control #:		1			Cultural/Biological Control #	<i>‡</i> :	1		219 Snails/ Slugs
5.	Classification #:	_	1		13	Classification #:	-	1	<u> </u>	220 Spider Mites
	Identification #:		2			Identification #:		2		222 Thrips
	Chemical Control #:		1			Chemical Control #:	-	1		223 Tospovirus (INSV and
1	Cultural/ Biological Control #:		1			Cultural/Biological Control #	ŧ:	1		TSWV) 224 Whiteflugs
6.	Classification #:		1		14	Classification #:	-	1	-	CHEMICAL CONTROLS
	Identification #:		2			Identification #:	-	2		400 Fungicide
	Chemical Control #:		1			Chemical Control #:		1		401 Insecticide
	Cultural/ Biological Control #:		1			Cultural/Biological Control #	<i>t</i> :	1		402 Miticide 403 Mulluscicide
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	Cultural/ Biological Control #:		1			Cultural/ Biological Control #	<i>t</i> :	1		502 Correct/ Adjust Temperatu
8.	Classification #:		1		L	TOTAL PO	INT	75		503 Ladybird Beetles
-	Identification #:		2			TOTALFO	11913	13		504 Nematodes 505 Parasitic Maso
	Chemical Control #:		1							506 Predatory Mites
	Cultural/Biological Control #		1							507 Reduce Relative Humidity

NATIONAL FFA CAREER AND LEADERSHIP DEVELOPMENT EVENTS HANDBOOK 2017–2021

Floriculture

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## **Pinching Plants Rubric**

IAME			MEMBE	R NUMBER	
CHAPTER		STATE	TEAM	TEAM NUMBER	
	Excellent	Good	Needs Improvement	Member Score	
Selection of plant part to pinch	8-10	4-7	0-3		
Use of proper procedures in making pinches	8-10	4-7	0-3		
Made proper pinches	8-10	4-7	0-3		
Overall effect of making pinches	8-10	4-7	0-3		
A new and an actions accurately	8-10	4-7	O-3		

JUDGE'S NAME

JUDGE'S SIGNATURE

Floriculture

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## **Hazardous Situation Rubric**

IAME	MEMBER	MEMBER NUMBER			
CHAPTER			STATE	TEAM NU	MBER
	Excellent	Good	Needs Improvement		Member Score
Utilize proper personal safety precautions	4-5	2-3	0-1	X 4	
Utilize proper safety procedures in clearing up the situation	4-5	2-3	0-1	X 5	
Proper disposal of problem materials	4-5	2-3	0-1	X 4	
I Itilize proper follow-up procedures	8-10	4-7	0-3		

JUDGE'S NAME

JUDGE'S SIGNATURE

		and the second
Maximum Number of Team	4	
Members		
Number of Team Members	4	
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Maximum Number of Team	4	
Members (middle school)		
Number of Team Members	4	
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Scantron	Horticulture –	
	CDE# 105482	
Committee:		
Kelsey Flinn		
Charity Marstiller		
John Kessel		
Mary Phillips		
Carol Webb		

### Food Science

#### Purpose

The food science and technology career development event is designed to promote learning activities in food science and technology related to the food industry and to assist students in developing practical knowledge of principles used in a team decision-making process.

#### Objectives

- a. To encourage FFA members to gain an awareness of career and professional opportunities in the field of food science and technology.
- b. To provide FFA members with the opportunity to experience group participation and leader ship responsibilities in a competitive food science and technology program.
- c. To help FFA members develop technical competence and personal initiative in a food science and technology occupation.

#### **Event Rules**

a. Team make-up- The team will consist of four members with all four members' scores being totaled for the team score.

#### **Event Format**

- A. The food science and technology career development event will consist of three activities: an objective test, a food safety and quality practicum and a sensory evaluation practicum.
- B. All team members will participate in all of the activities.
- C. Allergy Information: Food products used in this event may contain or come in contact with potential allergens. Advisors must submit a special needs request form for participants with any allergies with certification. The event committee will make all reasonable efforts to accommodate students with food allergies.
- D. Each participant must provide:
  - i. A clipboard that is clean and free of notes.

- ii. Two sharpened No. 2 pencils.
- iii. Electronic calculator- Calculators used in this event should be non-programmable and non-graphing. Calculators should have only basic functions such as addition, subtraction, multiplication, division, equals, percent, square root, +/- key. No other calculators are allowed to be used during the event including cell phones.
- 2. Individual Activities
  - a. Objective Test

The objective questions administered during the food science and technology examination will be designed to determine each team member's understanding of the basic principles of food science and technology. The test will be primarily based on the list of references at the end of this chapter.

- ii. Team members will work individually to answer each of the 50 questions. Each person will have 60 minutes to complete the examination. Each question will be worth 3 points, for a total of 150 points.
- iii. Middle school team members will work individually to answer each of the 25 questions. Each person will have 60 minutes to complete the examination. Each question will be worth 3 point, for a total of 75 points.
- 3. Practicums—Each team member will complete all parts of both practicums.
  - a. Food Safety and Quality Practicum- 50 points
    - i. Customer Inquiry- Each participant will be given five scenarios representing general consumer inquiries. Participants must determine if the consumer inquiry reflects a quality or safety issue and determine if it is a biological, chemical or physical concern or hazard. (25 points)
    - ii. Food Safety/Sanitation- Each participant will be given ten situations (e.g., photos, videos, written scenarios, live demonstrations or a combination). A numbered list of problems will be provided at the beginning of this practicum segment. The list will contain concepts such as good manufacturing practices (GMP), sanitation, food handling/storage and other pre-requisite programs. Participants will identify if there is a violation presented in the situation. If participants decide that there is a violation, they will indicate the number of the violation from the list of problems provided. (25 points)
- 4. Sensory Evaluation Practicum- 50 points
  - a. Triangle Tests- Three different triangle tests will be conducted. Participants are expected to identify the different samples through flavor, aroma, visual cues and/or textural differences. Answers will be given on the sheet provided. No list will be provided for this segment of the practicum. Each test is worth 5 points. (15 points)
  - b. Aromas- Each participant will be asked to identify four different aromas from vials provided at each station and record the answer on the sheet provided. A list of potential aromas will be provided to each person. Each sample is worth 5 points. (20 points)

#### Aromas

Cinnamon	Orange	Menthol	Molasses
Chocolate	Vanilla	Grape	Wintergreen
Maple	Smoke (liquid)	Garlic	Banana
Oregano	Cherry	Peppermint	Coconut
Basil	Pine	Clove	Lilac
Lemon	Onion	Nutmeg	Raspberry
Lime	Butter	Ginger	Strawberry
			Licorice (anise)

VI. Scoring			
Section	Time Allowed	Section Points	Total Points
Individual Activities			
Objective Test	60 minutes		150
Food Safety and Quality Practicum		50	
Customer Inquiry		25	
Food Safety/Sanitation		25	
Sensory Evaluation			35
Triangle Tests		15	
Aromas		20	
Total Individual Points			235
Individual Points (150 pts x 4 members)	)		940

#### Tiebreakers

- A. Team: Should a tie occur in the overall team placing, the tie will be broken by the highest number of total points earned from the objective test (adding all four team member scores) will break the tie. If a second tiebreaker is needed, the total points earned by the team in the food safety and quality practicum will be used.
- B. Individual: To identify the high individual for this event in case of a tie, the highest objective test score will be used as the first tiebreaker, followed by the highest food safety and quality practicum score as the second tiebreaker.

#### References

This list of references is not intended to be all-inclusive. Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.

National FFA Core Catalog—CDE Questions and Answers <u>http://shop.ffa.org/cde-qasc1413.aspx</u>

Mehas and Rodgers, 5th Edition, 2006. Kay Yockey Mehas and Sharon Lesley Rodgers, Glencoe/McGraw, New York.

Food Science and Safety, 2nd Edition, 2004, George J. Seperich, Pearson Publishers Principles of Food Sanitation, 5th Edition, 2006, Norman G. Marriott and Robert B. Gravani, Springer Science + Business Media, Inc.

Institute of Food Technology website, http://www.ift.org

USDA Food Safety and Inspection Service website, http://www.fsis.usda.gov

Penn State Kitchen Chemistry: Experiments, resources and materials for educators and students, http://foodscience.psu.edu/public/kitchen-chemistry

Food Safety Education, <u>http://www.fsis.usda.gov/food\_safety\_education/for\_kids\_&\_teens/</u> index.asp

Partnership for Food Safety Education, <u>http://www.fightbac.org</u>

FoodSafety.gov, http://www.foodsafety.gov

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Food Science and Technology CDE- Customer Inquiry Scorecard

 Name:
 Participant #:

		Dointa	Dointa
		Possible	Earned
Scenario # 1 This issue represented in this scenario is a: Food Quality Issue Food Safety Issue	(Check only one)	2	
Is the concern or hazard primarily: Biological Chemical Physical	(Check only one)	3	
Scenario # 2 This issue represented in this scenario is a: Food Quality Issue Food Safety Issue	(Check only one)	2	
Is the concern or hazard primarily: Biological Chemical Physical	(Check only one)	3	
Scenario # 3 This issue represented in this scenario is a: Food Quality Issue Food Safety Issue	(Check only one)	2	
Is the concern or hazard primarily: Biological Chemical Physical	(Check only one)	3	
Scenario # 4 This issue represented in this scenario is a: Food Quality Issue Food Safety Issue	(Check only one)	2	
Is the concern or hazard primarily: Biological Chemical Physical	(Check only one)	3	
Scenario # 5 This issue represented in this scenario is a: Food Quality Issue Food Safety Issue	(Check only one)	2	
Is the concern or hazard primarily: (Check only one) Biological Chemical Physical	(Check only one)	- 3	
TOTAL		25	

### Food Science and Technology CDE Food Safety and Sanitation Scorecard

Name:Participant #:	
Situation # 1 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). (a) Yes 1b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 1c)	
Situation # 2 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). 2a) Yes 2b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 2c)	
Situation # 3 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). Ba) Yes 3b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 3c)	
Situation # 4 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). 4a) Yes 4b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 4c)	
Situation # 5 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). 5a) Yes 5b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 5c)	
Situation # 6 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). 5a) Yes 6b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 6c)	
Situation # 7 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). 7a) Yes 7b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 7c)	
Situation # 8 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). Sa) Yes 8b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 8c)	
Situation # 9 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point).	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 9c)	
Situation # 10 – The situation depicts a violation of GMP, sanitation and/or food handling/storage (1 point). 10a) Yes 10b) No	
f yes, list the item number that would best apply from the list of guidelines provided (1.5 points): 10c)	-
[OTAL:        / 25 Possible	

### Forestry

		A CREW TO BE 112 MILL BY STREET AND THE PARTY OF
Maximum Number of Team Members		
Number of Team Members Scored	4	
Scantron	Forestry –	
	Form # 530-3	
Committee:		
Nick Cox		
Scott Garber		
Ben Hays		
Jason Miihlbach		
Zach Tennant		

All participants in the Forestry CDE must wear a hard hat at all times. Participants may use "simple" calculators.

#### **Contest Format:**

#### Phase 1: General Knowledge/Management (100 points).

Fifty (50) objective-type multiple choice or true/false questions will be selected from the areas of the forest industry and forest management. This phase of the contest will test the contestant's knowledge and understanding of basic principles of forestry.

<u>Time</u>: Each contestant will be allowed 30 minutes to complete this phase of the contest. <u>Scoring</u>: Each answer has a value of 2 points for a total maximum score of 100 points.

#### Phase 2: Tree Identification (90 points)

Fifteen (15) specimens from the following list will numbered for contestants to identify by common names. Numbered specimens can be live trees or live branches.

<u>Time</u>: Each contestant will be allowed 30 minutes to complete this phase of the contest. <u>Scoring</u>: Six points will be given for each specimen that is correctly identified for a maximum of 90 points.

Alder, Red (Alnus rubra) Ash (Fraxinus sp.) Aspen, Bigtooth (Populus grandidentata) Aspen, Quaking (Populus tremuloides) Baldcypress (Taxodium distichum) Beech, American (Fagus grandifolia) Birch, Black (Betula lenta) Birch, White (Betula papyrifera) Cherry, Black (Prunus serotina) Cottonwood, Eastern (Populus deltoides) Elm (Ulmus sp.) Fir, Balsam (Abies balsamea)

Fir, Douglas (Pseudotsuga menziesii) Hemlock, Eastern (Tsuga canadensis) Hemlock, Western (Tsuga heterophylla) Hickory (Carya sp.) Maple, Red (Acer rubrum) Maple, Sugar (Acer saccharum) Oak, Black (Quercus velutina) Oak, Chestnut (Quercus velutina) Oak, Chestnut (Quercus Montana) Oak, Northern Red (Quercus rubra) Oak, Scarlet (Quercus coccinea) Oak, Southern Red (Quercus falcata) Oak, Southern Red (Quercus falcata) Oak, White (Quercus alba) Pecan (Carya illinoinensis) Pine, Eastern White (Pinus strobus) Pine, Loblolly (Pinus taeda) Pine, Lodgepole (Pinus contorta)
Pine, Longleaf (Pinus palustris)
Pine, Pitch (Pinus rigida)
Pine, Ponderosa (Pinus ponderosa)
Pine, Red (Pinus resinosa)
Pine, Shortleaf (Pinus echinata)
Poplar, Yellow (Liriodendron tulipifera)
Red Cedar, Western (Thuja plicata)
Redcedar, Eastern (Juniperus virginiana)
Spruce, Red (Picea rubens)
Spruce, Sitka (Picea sitchensis)
Spruce, White (Picea glauca)
Sweetgum (Liquidambar styraciflua)
Sycamore (Platanus sp.)
Walnut, Black (Juglans nigra)

#### **Phase 3: Equipment Identification (60 points)**

Twenty (20) pieces of equipment from the following list will be displayed for the contestants to identify by technical names. Each piece of equipment will be designated by a number.

<u>Time</u>: Each contestant will be allowed 30 minutes to complete this phase. <u>Scoring</u>: Three (3) points will be given for each piece of equipment identified correctly for a total of 60 points. No partial credit will be given.

Altimeter	Endloader	Log Rule
Angle guage	Feller Buncher	Logger's Tape
Ascender	Felling Wedge	Maul
Automatic Level	Fiberglass Measuring	Peavy
Back-pack Fire Pump	Таре	pH Meter
Bark Gauge	Fire Rake	Planimeter
Bulldozer	Fire shelter	Plant Press
Canthook	Fire Weather Kit	Plastic Flagging
Carabiner	Fire-Swatter	Pole saw
Chainsaw	First aid kit	Pruning Saw
Chainsaw Chaps	Flow/current Meter	Pulaski Axe
Clinometer	GPS Receiver	Relaskop
Combination tool	Hand Compass	Safety Glasses
Data Recorder	Hand Lens/Field	Safety Hard Hat
Densiometer	Microscope	Scale Stick
Diameter Tape	Hip Chain	Secchi Disc
Dot Grid	Hypo-Hatchet	Soil Sampler
Drip Torch	Increment Borer	Soil Test Kit
Ear Protection	Jacob Staff	Staff Compass

Stereoscope Tally Book Tally Meter Timber Tongs Tree Caliper Tree Harvester Tree Marking Gun Tree Planting Hoe or Bar Tree Skidder Water Sampler Water Test Kit Wedge Prism

#### **Phase 4: Forestry Applications (300 points)**

The event superintendent will designate **three** practicums to be completed by the participant (individually) from the following list. The specific practicums for the year will be announced on or before September 1. Each practicum has a score of 100 points and a time period of 30 minutes.

**1. Sawtimber Cruising:** Each contestant will use the Biltmore Tree Stick to measure the DBH and merchantable height in 8-foot half-logs or 16-foot logs for ten (10) designated sawtimber trees. Using the provided volume table the contestant will calculate the total volume of the 10 trees.

Diameter measurement criteria:

- Diameter breast height (DBH) must be 11.0 inches or greater.
- Record all trees in 1-inch diameter classes.

**Note**: Any tree diameter measured at the exact half-inch point will become the next highest full inch. For example, 11.5 becomes 12 inches, 13.5 becomes 14 inches, etc.

#### Height measurement criteria:

- Merchantable sawtimber height is measured from a 1-foot stump to a 10-inch top diameter (inside bark).
- Hollow trees or curved trunks (sweep) are not considered as a defect for this contest. Measure to the nearest half-log by interpolating between the full log markings on the tree stick.

<u>Time</u>: 30 minutes

#### Scoring: 100 points

Three points will be given for the correct DBH and three points for the correct height. Forty (40) points will be given for the correct volume per acre. Five points will be deducted for each five percent plus or minus from the correct measured volume.

**2. Pulpwood Cruising:** Each contestant will use the Biltmore Tree Stick to measure the DBH and merchantable height in 8-foot bolts of ten (10) designated pulpwood-sized trees and calculate the standard cord volume of the 10 trees.

Contestants will calculate the volume using the volume table provided by the contest coordinator.

Diameter measurement criteria:

- Diameter breast height (DBH) must be five (5) inches or greater.
- Tally all trees in 1-inch classes.

Note: Any tree measured at the exact half-inch point will become the next highest full inch

(See sawtimber above).

*Height measurement criteria*:

- Merchantable pulpwood height is measured from a 1-foot stump to a 4-inch top diameter (inside bark).
- Measure to the nearest 8-foot bolt (stick) by interpolating between the 16-foot "log" markings on your tree stick.

<u>Time</u>: 30 minutes

Scoring: See sawtimber scoring above.

**3. Compass and Pacing**: The contestant will use a hand compass and pacing to the nearest **full foot** to simulate determination of the property lines on a timber tract or locating timber cruise transect lines. The compass course will consist of five (5) separate lines. The participant can start at any of the 5 starting points and will record the **azimuth** bearing (to the **nearest full degree).** Participants can bring their own compass or use Silva Ranger type compasses provided by the contest coordinator. Hand held compasses with sighting devices cannot be used. Participants will also pace each of the 5 lines and convert their paces to feet that indicates the length of each line.

#### Time: 30 minutes

Scoring: 100 points (20 maximum points/line – 10 per bearing & 10 per distance)

- Deduction of 1 point/2 degrees of bearing or 2 feet of distance from the correct answer.
- Maximum of 20 points will be deducted on any line.

**Note**: A laminated sheet of conversions of quadrant readings to azimuth readings will be available at each of the 5 starting points.

#### 4. Forest Management Evaluation - Timber Stand Improvements (TSI) and/or Thinning

A. The trees selected and designated for use in this part of the event may be all of one species or a mixture of species.

B. An area will be selected and identified by ribbons, paint, rope, etc. It will contain at least 15, and not more than 30 marked trees within a timber stand that needs thinning or some TSI work. All trees in the selected area will be considered as a forest management site, and the participants using one of the following options will score each marked tree:

a. Harvest (utilize the tree)

b. Leave - (the tree should remain in stand for a good reason)

c. Deaden - (Undesirable tree, not merchantable or beneficial to wildlife, should be deadened or cut down and left in woods)

C. The participants will be given a "situation" concerning the forest management objectives of the stand selected. Information that will be needed to help participants in their decisions will include:

- a. Markets available (including hardwood)
- b. Wildlife habitat considerations (scope, etc.)
- c. Present condition of stand
- d. Final goal of the management plan

This information will be given to participants at the site before they start evaluation of the stand either orally, by poster or a "handout" sheet.

D. Time: Participants will be given 30 minutes to make their decisions.

E Scoring: Four points will be given for each correct decision up to a maximum total of 100 points, depending on the number of trees. (The possible score for this phase of the event will vary.)

#### 5. Map Interpretation

A. Participants will be furnished a United States Geological Survey topographic map with specific points marked for the participant to identify. The participant shall know legal description, recognize topographic map symbols, understand the meaning of map symbols and size and location of 40 acres or more in a section.

B. Ten points on the map will be clearly marked with a number or arrow pointing to the section, symbol or area on the map to be identified.

C. Examples:

a. What is the legal description of the area boxed?

b. What is the item located at this point?

c. What is the acreage of the area enclosed?

d. In what section is the city of Marshall located?

D. Legal descriptions will be written or described according to the following: NW Northwest T Township SE Southeast R Range S Section (640 acres) 1/4 Quarter of a section (160 acres) 5. Scoring: Ten questions or problems will be completed. Ten points will awarded for each correct answer.

#### 6. Chainsaw Part Identification, Troubleshooting, and Safety

This practicum is divided into three parts:

Part 1 - Chainsaw part identification- Each participant will identify parts of a chainsaw. These parts will be labeled on a saw or will be removed from the saw.

Part 2 - Troubleshooting - The participant will identify "problems" or "troubles." Each station will have a part, component, saw or written situation with problem areas clearly marked. The participant may pick up parts or touch the saw.

Part 3 - Safety - The participant will observe photos, actual parts, written situations and/or problems to identify the safety hazard or unsafe practice.

Scoring: A total of 100 points are possible for this section.

#### 7. Tree/Forest Disorders

A. Symptoms of at least ten (10) and not more than twenty (20) disorders from the following list will be displayed for participants to identify by common names. The symptoms will be presented in one or more of the following forms:

- a. Actual sample
- b. Picture(s)/Slides
- c. Written description

#### d. Written case history

A number will designate each set of symptoms representing a disorder.

B. Scoring: Five points will be given for each disorder that is correctly identified for a total of up to 100 points, depending on the number of disorders. (The possible score for this practicum will vary).

Ipps Engraver Beetle Landscape equipment damage Lightning damage Mechanical damage Mistletoe Mountain Pine Beetle Nematode Rust Sawfly Scale Spruce budworm Sunscald Tent caterpillar Wetwood or slime flux Wildlife/Livestock damage

#### 8. Forest Products Practicum

A. Ten to twenty wood products/samples will be displayed for participants to evaluate and identify its tree species source from the approved tree specimen list. The wood products/samples will be presented in one or more of the following forms:

a. Actual Sample

- b. Picture(s)/Slides
- c. Written description

A number will designate each sample representing a species.

B. Scoring: This will be a multiple choice practicum. Five points will be given for each wood product or sample that is correctly identified for a total of up to 100 points, depending on the number of products/samples. (The possible score for this practicum will vary).

#### 9. Forest Business Management Problem

A. This section is designed to determine the participant's ability to apply economic principles and concepts of management to the decision making process by actual problem analysis and to defend the decisions made. This will involve a model forest operation with possible calculation on profit/loss, cost of operation, taxes, depreciation, marketing product, stumpage cost, record keeping, etc. The exact problem may or may not be in a listed reference. A maximum of ten problems or questions will be used.

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Tree Identification Specimen List

- 01. Alder, Red (Alnus rubra)
- 02. Ash (Fraxinus sp.)
- 03. Aspen, Bigtooth (Populus grandidentata)
- 04. Aspen, Quaking (Populus tremuloides)
- 05. Baldcypress (Taxodium distichum)
- 06. Beech, American (Fagus grandifolia)
- 07. Birch, Black (Betula lenta)
- 08. Birch, White (Betula papyrifera)
- 09. Cherry, Black (Prunus serotina)
- 10. Cottonwood, Eastern (Populus deltoides)
- 11. Elm (Ulmus sp.)
- 12. Fir, Balsam (Abies balsamea)
- 13. Fir, Douglas (Pseudotsuga menziesii)
- 14. Hemlock, Eastern (Tsuga canadensis)
- 15. Hemlock, Western (Tsuga heterophylla)
- 16. Hickory (Carya sp.)
- 17. Maple, Red (Acer rubrum)
- 18. Maple, Sugar (Acer saccharum)
- 19. Oak, Black (Quercus velutina)
- 20. Oak, Chestnut (Quercus Montana)
- 21. Oak, Northern Red (Quercus rubra)

- 22. Oak, Scarlet (Quercus coccinea)
- 23. Oak, Southern Red (Quercus falcata)
- 24. Oak, White (Quercus alba)
- 25. Pecan (Carya illinoinensis)
- 26. Pine, Eastern White (Pinus strobus)
- 27. Pine, Loblolly (Pinus taeda)
- 28. Pine, Lodgepole (Pinus contorta)
- 29. Pine, Longleaf (Pinus palustris)
- 30. Pine, Pitch (Pinus rigida)
- 31. Pine, Ponderosa (Pinus ponderosa)
- 32. Pine, Red (Pinus resinosa)
- 33. Pine, Shortleaf (Pinus echinata)
- 34. Poplar, Yellow (Liriodendron tulipifera)
- 35. Red Cedar, Western (Thuja plicata)
- 36. Redcedar, Eastern (Juniperus virginiana)
- 37. Spruce, Red (Picea rubens)
- 38. Spruce, Sitka (Picea sitchensis)
- 39. Spruce, White (Picea glauca)
- 40. Sweetgum (Liquidambar styraciflua)
- 41. Sycamore (Platanus sp.)
- 42. Walnut, Black (Juglans nigra)

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#### Equipment Identification List

- 01. Altimeter
- 02. Angle guage
- 03. Ascender
- 04. Automatic Level
- 05. Back-pack Fire Pump
- 06. Bark Gauge
- 07. Bulldozer
- 08. Canthook
- 09. Carabiner
- 10. Chainsaw
- 11. Chainsaw Chaps
- 12. Clinometer
- 13. Combination tool
- 14. Data Recorder
- 15. Densiometer
- 16. Diameter Tape
- 17. Dot Grid
- 18. Drip Torch
- 19. Ear Protection
- 20. Endloader
- 21. Feller Buncher
- 22. Felling Wedge
- 23. Fiberglass Measuring Tape

- 24. Fire Rake
- 25. Fire shelter
- 26. Fire Weather Kit
- 27. Fire-Swatter
- 28. First aid kit
- 29. Flow/current Meter
- 30. GPS Receiver
- 31. Hand Compass
- 32. Hand Lens/Field Microscope
- 33. Hip Chain
- 34. Hypo-Hatchet
- 35. Increment Borer
- 36. Jacob Staff
- 37. Log Rule
- 38. Logger's Tape
- 39. Maul
- 40. Peavy
- 41. pH Meter
- 42. Planimeter
- 43. Plant Press
- 44. Plastic Flagging45. Pole saw
  - Pole saw Page 106

- 46. Pruning Saw
- 47. Pulaski Axe
- 48. Relaskop
- 49. Safety Glasses
- 50. Safety Hard Hat
- 51. Scale Stick
- 52. Secchi Disc
- 53. Soil Sampler
- 54. Soil Test Kit
- 55. Staff Compass

Stereoscope

Tally Book

Tally Meter

**Timber Tongs** 

Tree Harvester

Tree Skidder

Water Sampler

Water Test Kit

Wedge Prism

Tree Marking Gun

Tree Planting Hoe or Bar

Tree Caliper

#### TREE DISORDERS

- 01. Aphid
- 02. Asian Longhorn Beetle
- 03. Butt or Heart Rot
- 04. Canker
- 05. Chemical damage
- 06. Cicada
- 07. Climatic injury: snow, wind, frost, drought, hail
- 08. Damping off
- 09. Douglas fir tussock moth
- 10. Emerald ash borer
- 11. Fir Engraver Beetle
- 12. Fire damage
- 13. Gypsy moth
- 14. Hemlock woolly adelgid

- 15. Ipps Engraver Beetle
- 16. Landscape equipment damage
- 17. Lightning damage
- 18. Mechanical damage
- 19. Mistletoe
- 20. Mountain Pine Beetle
- 21. Nematode
- 22. Rust
- 23. Sawfly
- 24. Scale
- 25. Spruce budworm
- 26. Sunscald
- 27. Tent caterpillar
- 28. Wetwood or slime flux
- 29. Wildlife/Livestock damage

Maximum Number of Team Members		
Number of Team Members Scored	4	La la
Scantron	Livestock –	
	Form #: 476-3	STATE ALL AND STATE
Committee:		
Erwin Berry		
Annie Erwin		
Jeremy Greene		
Mary Phillips		
Carol Webb		

### Horse Evaluation

Registration deadline	April 12, 2019, 4:00 p.m.
Contest	April 27, 2019, 8:15 a.m.

# Contest results will be announced immediately following the tabulation activities. This is approximately 30-60 following the time the last student presents his/her oral reasons.

**Note:** The contest will possibly include 2-4 halter classes and 2-4 performance classes. There is a possibility that the contest will begin with the performance classes. All details will be announced at the opening orientation. Notes will not be allowed when presenting oral reasons.

The 2019 State 4-H & FFA Horse Judging Contest is scheduled for **Saturday, April 27, 2019 at Potomac State College of WVU, Keyser, WV** 

#### **Directions:**

Directions to Potomac State College of WVU are as follows:

From Morgantown, take I-68 East to Cumberland, MD. At Cumberland, take Exit 42 (Greene Street) to Route 220 South. Route 220 South will bring you into Keyser, WV, (approximately 20 miles from Cumberland, MD). Once in Keyser, turn right on to State Street (5<sup>th</sup> street on your right) follow the street to the top of the hill at Church McKee. Parking will be available in the parking lot to the left of the building.

For your information, the address and phone number for Potomac State College of WVU is 101 Fort Ave., Keyser, WV 26726; phone 1-304-788-6800. Contact information: Jared Miller, Visiting Instructor, Jared.Miller@mail.wvu.edu, phone 304-788-6898 or cell 304-668-5326.
### **Rules:**

- 1. Classes: All classes will consist of four horses. Halter classes will be numbered 1, 2, 3, and 4. Riders of performance classes will have an exhibitor number (1, 2, 3, and 4). At least fifteen minutes will be allowed to place halter classes and ten minutes to place performance classes.
- 2. Performance horses will be shown both directions of the arena at a walk, trot, canter, and at a hand gallop in the case of English Pleasure. The horses will also be asked to back and stand quietly.
- 3. The four animals in each class will be of the same breed type, sex, and appropriate age.
- 4. The contest officials will attempt to select only horses that are serviceably sound. All halter classes will be judged as sound of limb, eye, wind, and mouth. Performance horses will be judged as seen (unsoundness to be penalized accordingly). All tack and attire is considered legal.
- 5. Potential classes in the contest include the following:
  - a. Halter Stock Type Horses (Quarter Horse, Paint, Appaloosa), Fine Breeds (Arabian, Saddlebred), Hunter-Type, Draft Breeds and Miniature Horses.
  - b. Performance Western Pleasure, Hunter Under Saddle, English Pleasure (Saddleseat).
  - c. If a pattern class will be included in the contest (Western Horsemanship, Hunt Seat Equitation, Saddle Seat Equitation), the pattern will be handed out at registration.
- 6. Contest results as announced are final.
- Individuals requesting an accommodation because of disability should complete the appropriate form and send it to Harry Boone, 2054 Agricultural Sciences Building, PO Box 6108, Morgantown, WV 26506-6108. Telephone: (304) 293-5451; or Fax: (304) 293-3752 by the registration deadline date of April 1, 2015.

### **Tentative Schedule**:

Judges Orientation & Records Room Prep (Church McKee)
Registration – Church McKee Lobby
Orientation – Church McKee Auditorium
Proceed to Equine Arena and Begin Placing Class
Lunch – Under Tent at Arena
Once Contestants have picked up their lunch they will be taken to Church
McKee for Oral Reasons. Seniors will be served lunch first.
Tentative Program for Junior Contestants and Adults
Campus and Facilities Tour
Equine Demonstration
Awards Ceremony - Church McKee Auditorium (Time is approximate -
Results will be announced immediately following the tabulation
activities.)
Homeward Bound

### NOTE TO COACHES:

Notes will not be allowed when presenting oral reasons.

Upon completion of the judging activities, participants must report to the reasons area for lunch and reasons preparation. Participants will pick up their lunch first in a group and then be transported to Academy Hall to eat and prepare for oral reasons. Once participants have finished eating Oral Reasons will begin.

**Scoring:** We will implement the same scoring computer program for the State 4-H and FFA Contest. A link to the scoresheet is provided below. <u>Please note: Important</u>!! Contestants must possess two #2 pencils and clipboard for marking scantron scoring sheets. Make certain that contestants darken the correct placing for the class they are evaluating. Don't mark Class 1 if you are starting with Class 2.

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	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           S         I         Animal No.           1         2         3           4         5	W       W	W       W	W     W     W       W     W     W       V     X     X       X     X     X       Z     Z     Z       Srade     Sility)       0     3.5     4.0       4.5     5.0	4312           C           Written           1         A           2         A           2         A           2         A           2         A           2         A           2         A           3         A           0         3           4         A           0         3           4         A           0         0           4         A           0         0           4         A           0         0           8         A           0         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0           1         0	Iass 13         Examination         E       26       A       B       C       D       E         E       27       A       B       C       D       E         E       28       A       B       C       D       E         E       29       A       B       C       D       E         E       30       A       B       C       D       E         E       30       A       B       C       D       E         E       31       A       B       C       D       E         E       31       A       B       C       D       E         E       32       A       B       C       D       E         E       33       A       B       C       D       E         E       34       A       B       C       D       E         E       34       A       B       C       D       E         E       36       A       B       C       D       E         E       38       A       B       C       D       E	4321       Reasons       16     17       0     0       1     1       2     2       3     3       4     4       5     5       6     6       7     7       8     9       18     19
	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           S         I         Animal No.           1         2         3           4         5	W       W	W       W	Y     Y     Y     Y       Y     Y     Y     Y       Y     Y     Y     Y       Z     Z     Z     Z	4321         24       4321         C         Written         1       A       C       D         2       A       B       C       D         3       A       B       C       D         4       A       B       C       D         4       A       B       C       D         4       A       B       C       D         6       A       B       C       D         9       A       B       C       D         9       A       B       C       D         11       A       B       C       D         12       A       B       C       D         13       A       B       C       D         14       A       B       C       D	Iass 13         Examination         E       26       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       28       A       B       C       D       E         E       29       A       B       C       D       E         E       30       A       B       C       D       E         E       31       A       B       C       D       E         E       33       A       B       C       D       E         E       33       A       B       C       D       E         E       34       A       B       C       D       E         E       34       A       B       C       D       E         E       34       A       B       C       D       E         E       38       A       B       C       D       E         E       39       A       B       C       D       E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       5         6       6       6         7       8       9         9       18       19
	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           S         I         Animal No.           1         2         3           4         5           adding         Muscle	····································	W       W	Image: system     Image: system	I         A         B         C           Vitten         I         A         B         C           I         A         B         C         D           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           4         A         B         C         D           4         A         B         C         D           4         A         B         C         D           4         A         B         C         D           6         A         B         C         D           8         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           13         A         B         C         D           15         A         B         C         D           16         A         B         C         D  <	Iass 13         Examination         E       26       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       28       A       B       C       D       E         E       30       A       B       C       D       E         E       31       A       B       C       D       E         E       33       A       B       C       D       E         E       33       A       B       C       D       E         E       34       A       B       C       D       E         E       39       A       B       C       D       E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         6       6       6         7       0       9         18       19       0
	W W W W X X X X X Y Y Y Y Z Z Z Z Z S Animal No. 1 2 3 4 5 8 Muscle hickness	W       W	Image: Second state sta	Y       Y       Y       Y         Y       Y       Y       Y         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         Srade       Image: Comparison of the state of the	4312         24       4321         C         Written         1       A       C       D         2       A       B       C       D         2       A       B       C       D         3       A       B       C       D         4       A       B       C       D         4       A       B       C       D         4       A       B       C       D         4       A       B       C       D         4       A       B       C       D         6       A       B       C       D         8       A       B       C       D         10       A       B       C       D         11       A       B       C       D         12       A       B       C       D         13       A       B       C       D         14       A       B       C       D         15       A       B       C       D         16       A       B       C	Iass 13         Examination         E       26       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       28       A       B       C       D       E         E       30       A       B       C       D       E         E       31       A       B       C       D       E         E       33       A       B       C       D       E         E       33       A       B       C       D       E         E       34       A       B       C       D       E         E       34       A       B       C       D       E         E       35       A       B       C       D       E         E       37       A       B       C       D       E         E       39       A       B       C       D       E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         6       6       6         7       7       9         9       9       9         18       19         0       0       0         1       1       1         7       7       7
	W W W W X X X X Y Y Y Y Z Z Z Z Z S Animal No. 1 2 3 4 5 Wuscle nickness	W       W	W       W	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Y       Y       Y         V       Z       Z       Z         Srade       Image: State of the stat	4321         24       4321         C         Written         1       A       C       D         2       A       B       C       D         3       A       B       C       D         4       A       B       C       D         4       A       B       C       D         4       A       B       C       D         5       A       B       C       D         6       A       B       C       D         7       A       B       C       D         8       A       B       C       D         10       A       B       C       D         11       A       B       C       D         12       A       B       C       D         13       A       B       C       D         14       A       B       C       D         16       A       B       C       D         18       A       B       C       D	Iass 13         Examination         E       26       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       28       A       B       C       D       E         E       30       A       B       C       D       E         E       31       A       B       C       D       E         E       33       A       B       C       D       E         E       33       A       B       C       D       E         E       34       A       B       C       D       E         E       35       A       B       C       D       E         E       34       A       B       C       D       E         E       39       A       B       C       D       E         E       40       A       B       C       D       E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       6         6       6       6         7       7       7         8       9       9         18       19       9         0       0       0       0         1       1       1       1         2       2       2       2         3       4       4       4         6       6       6       6         7       9       9         18       19       9         0       0       0       0         2       2       2       2         3       4       4       4
	W W W W X X X X Y Y Y Y Z Z Z Z Z S Animal No. 1 2 3 4 5 Wuscle nickness	W       W	Image: standard s	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Y       Y       Y         V       Z       Z       Z       Z         Srade       Image: State of the	4321         24       4321         C         Written         1       A       C       D         2       A       B       C       D         3       A       B       C       D         4       A       B       C       D         4       A       B       C       D         4       A       B       C       D         5       A       B       C       D         6       A       B       C       D         7       A       B       C       D         10       A       B       C       D         11       A       B       C       D         12       A       B       C       D         13       A       B       C       D         18       A       B       C       D         19       A       B       C       D         20       A       B       C       D	Iass 13         Examination         E       26       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       27       A       B       C       D       E         E       29       A       B       C       D       E         E       30       A       B       C       D       E         E       31       A       B       C       D       E         E       33       A       B       C       D       E         E       33       A       B       C       D       E         E       34       A       B       C       D       E         E       35       A       B       C       D       E         E       34       A       B       C       D       E         E       38       A       B       C       D       E         E       39       A       B       C       D       E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       7       8         9       0       0       0         18       19       0       0         1       1       1       2         3       3       3       3         4       4       4       4
	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           S         I         Animal No.         I           1         2         3         4           5         Muscle nickness         2         3	W       W       W       W       W         W       W       W       W       W       W         X       X       X       X       X       X         Y       Y       Y       Y       Y       Y         Z       Z       Z       Z       Z       Z         Cuality Grade       Pnme       Choice       Select         S       S       S       S       S         S       S       S       S       S         O       O       O       O       O         S       S       S       S       S         I       1       2       3       4         3       1       2       3       4         S       1       2       3       4	W       W	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Y       Y       Y         V       Z       Z       Z       Z         Srade       Image: State of the	4321         24       4321         1       A         2       A         3       A         6       A         5       A         6       A         7       A         8       A         9       A         11       A         12       A         13       A         14       A         15       A         16       A         17       A         18       A         19       A         12       A         14       B       C         17       A       B       C         18       A       B       C         19       A       B       C         20       A       B       C         21       A       B       C	Iass 13         E zamination         E 26 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         S 0 A B C D E         S 0 A B C D E         S 0 A B C D E         S 0 A B C D E         S 0 A B C D E         S 0 A B C D E         S 3 A B C D E         E 35 A B C D E         S 4 A B C D E         S 3 A B C D E         S 3 A B C D E         E 38 A B C D E         E 39 A B C D E         E 40 A B C D E         E 43 A B C D E         E 43 A B C D E         E 44 A B C D E         E 43 A B C D E         E 44 A B C D E         E 43 A B C D E         E 43 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       5         6       6       7         7       7       9         9       18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6
	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           S         I         I         I           Lul         I         I         I           3         4         5         I           Muscle         Nickness         I         I           2         3         4         5	W       W	W       W	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Z       Z       Z         State       Z       Z       Z         Swine       Z       Z       Z         Z       Z       Z       Z         Z       Z       Z       Z         Z       Z       Z       Z	4312         4321         Vitten         1 A B C D         2 A B C D         3 A B C D         4 A B C D         3 A B C D         6 A B C D         6 A B C D         7 A B C D         8 A B C D         9 A B C D         10 A B C D         11 A B C D         12 A B C D         13 A B C D         16 A B C D         17 A B C D         18 A B C D         19 A B C D         19 A B C D         20 A B C D         20 A B C D         21 A B C D         21 A B C D         22 A B C D	Iass 13         E xamination         E 28 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 40 A B C D E         E 41 A B C D E         E 43 A B C D E         E 44 A B C D E         E 46 A B C D E         E 47 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       5         6       6       7         7       7       8         9       8       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       6         5       5       6         6       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       5         6       5       6
	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           S         I         I         I           Lul         I         I         I           3         4         5         I           Muscle         I         I         I           2         3         4         5           Adding         Muscle         I         I           1         2         3         I           I         2         3         I         I	W       W	W       W	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Z       Z       Z         Swine       Z       3       4         Z       3       4       Z       3         Z       3       4       Z       3	4321         4321         Viitten         1 A B C D         2 A B C D         3 A B C D         4 A B C D         5 A B C D         6 A B C D         7 A B C D         8 A B C D         9 A B C D         10 A B C D         11 A B C D         12 A B C D         13 A B C D         14 A B C D         15 A B C D         16 A B C D         17 A B C D         18 A B C D         19 A B C D         20 A B C D         21 A B C D         22 A B C D         23 A B C D	Iass 13         E xamination         E 28 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 30 A B C D E         E 34 A B C D E         E 41 A B C D E         E 43 A B C D E         E 44 A B C D E         E 45 A B C D E         E 46 A B C D E         E 47 A B C D E         E 48 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         6       7       7         8       3       3         4       4       4         5       5       6         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       7       7         8       9       9         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       7       7
	W W W W X X X X Y Y Y Y Z Z Z Z S Animal No. 1 2 3 4 5 Animal No. 2 3 4 5	W       W	W       W	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Z       Z       Z         Swine       Z       S       4         Z       S       4       Z       S         Z       S       4       Z       S         Z       S       4       Z       S	4321         4321         Viitten         1 A B C D         2 A B C D         3 A B C D         4 A B C D         5 A B C D         6 A B C D         8 A B C D         9 A B C D         10 A B C D         11 A B C D         12 A B C D         13 A B C D         14 A B C D         15 A B C D         16 A B C D         17 A B C D         18 A B C D         19 A B C D         20 A B C D         21 A B C D         22 A B C D         23 A B C D         23 A B C D         24 A B C D	Iass 13         E zamination         E 28 A B C D E         E 29 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 39 A B C D E         E 40 A B C D E         E 41 A B C D E         E 43 A B C D E         E 44 A B C D E         E 45 A B C D E         E 46 A B C D E         E 47 A B C D E         E 48 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       7       8         9       8       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         6       7       7         8       8       6         6       6       7         7       7       8
Image: system     Image: system     Image: system       Animal     9     10     1'       No.     dep Cul Kep. Cul Kep.     0       1     0     0       2     0     0       3     0     0       4     0     0       5     0     0       6     0     0       7     0     0       8     0     0       7     0     0       8     0     0       7     0     0       8     0     0       9     10     0       1     0     0       9     1     0       1     0     0       3     0     0       4     0     0	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         S       Interview       Interview       Interview         1       2       3       4         5       Interview       Interview       Interview         adding       Muscle       Interview       Interview         1       2       3       4       5         adding       Muscle       Interview       Interview       Interview         2       3       4       Interview       Interview       Interview	W       W	W       W	V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       V       V       V         V       Y       Y       Y         Z       Z       Z       Z         Swine       Z       3       4         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3         Z       3       4       Z       3	4321         4321         Vitten         1 A B C D         2 A B C D         3 A B C D         4 A B C D         5 A B C D         6 A B C D         8 A B C D         9 A B C D         10 A B C D         11 A B C D         12 A B C D         13 A B C D         14 A B C D         15 A B C D         16 A B C D         17 A B C D         18 A B C D         19 A B C D         20 A B C D         21 A B C D         22 A B C D         23 A B C D         24 A B C D         25 A B C D	Iass 13         E zamination         E 26 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 31 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 40 A B C D E         E 41 A B C D E         E 43 A B C D E         E 43 A B C D E         E 44 A B C D E         E 47 A B C D E         E 48 A B C D E         E 49 A B C D E         E 49 A B C D E         E 49 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       6         5       6       6         7       8       9         9       8       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       8       6         8       9       8
Image: system     Image: system       Image: system     I	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         S       Animal       No.       1         1       2       3       4         5       S       S       S         adding       Muscle       S       S         nickness       2       3       4	W       W	W       W	v       v       v       v         v       <	4321         4321         Vitten         1       A         2       A         3       A         0       3         4       B         2       A         3       A         4       A         5       A         6       A         6       A         7       A         9       A         9       A         11       A         12       A         13       A         14       A         15       A         A       B         13       A         14       A         15       A         A       B         16       A         17       A         18       A         19       A         20       A         21       A         22       A         23       A         24       A         25       A         25       A         20       A <th>Iass 13         E zamination         E 28 A B C D E         E 29 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 31 A B C D E         E 32 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 39 A B C D E         E 38 A B C D E         E 40 A B C D E         E 41 A B C D E         E 43 A B C D E         E 44 A B C D E         E 47 A B C D E         E 48 A B C D E         E 49 A B C D E</th> <th>4321         Reasons         16       17         0       0       0         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         6       6       6         7       7       8         9       9       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       8       9         0       0       0       0         1       1       1       2         2       2       2       3         3       3       4       4         5       6       6       7         8       9       9       9</th>	Iass 13         E zamination         E 28 A B C D E         E 29 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 31 A B C D E         E 32 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 39 A B C D E         E 38 A B C D E         E 40 A B C D E         E 41 A B C D E         E 43 A B C D E         E 44 A B C D E         E 47 A B C D E         E 48 A B C D E         E 49 A B C D E	4321         Reasons         16       17         0       0       0         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         6       6       6         7       7       8         9       9       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       8       9         0       0       0       0         1       1       1       2         2       2       2       3         3       3       4       4         5       6       6       7         8       9       9       9

Maximum Number of Team Members	4	
Number of Team Members Scored	4	
Scantron	Livestock –	
	Form #: 476-3	2 T.M.
Committee:		
Hattie DeBolt		
Eric Frederick		
Joe Hymes		
Beth Massey		
Josh Porto		

### Livestock Evaluation

### **Individual Activities**

- 1. Livestock classes: A maximum of eight classes (8) of four animals each will be placed using a computerized scorecard. Classes may be breeding or market animals from beef, swine, sheep or meat goat species. One class may include the use of production/performance data. (50 points/class)
- 2. Oral reasons: Two sets of oral reasons will be designated by the event superintendent at the beginning of the event. One set of reasons will be given on the production data class. Reasons will be given after all classes have been placed. Participants will be provided paper to take notes on each reason class for preparation. Use of notes during the reason presentation is strongly discouraged. (50 points/class)
- 3. Keep/cull classes: There will be one selection classes that may be beef, swine, sheep or meat goats; each made up of eight breeding animals. Participants will be required to select the four best animals from the eight, using visual appraisal and performance data. Performance data will be provided. Production/performance data (including EPD's) may be used in the keep/cull classes of beef, swine, sheep or meat goats. Performance criteria, when used, shall be based on current industry standards. (50 points/class)
- 4. Questions Class: Contestants will be required to answer five questions on one judging class (50 points).

### RULES

- 1. Each class of livestock will consist of four individuals, except the Keep-Cull class which will consist of eight animals.
- 2. Every team must be prepared to judge every class or ring of livestock listed.
- 3. **Scantron sheets** and/or Placing cards will be supplied by the Animal and Veterinary Science personnel. The same scantron sheet/ placing card will be used for all livestock classes. See sample card.

- 4. Coaches must prepare their teams to use the **Scantron Sheets**. From the time of entering the contest until all cards have been handed to the person in charge, there will be absolutely no communications among contestants, or between coaches and contestants.
- 5. Twelve minutes will be allowed for placing non-reason classes and fifteen minutes for placing of reason classes.
- 6. Contestants will be required to give oral reasons on two classes (worth 50 points each) and answer five questions on one class (worth 50 points). Each contestant will be allowed a maximum of two minutes per class to present his/her reasons. <u>Cards will not be returned at oral reason presentation</u>.
- 7. **Sheep** (Animals may or may not be handled, depending upon the availability of farm help to shear the animals.)

### Sample Questions:

- Which breeding gilt in the class was a Duroc? (Answer = #3)
- Which breeding gilt in the class had erect ears? (Answer = #2)
- Which breeding gilt was lame? (Answer = #3)
- 8. Stock will be judged at the Livestock Farm. Scoring will be based on the Hormel Computing System with 50 points being a perfect score on a class placing or on a set or oral reasons. A perfect score for the Keep-Cull class is 50.
- 9. After all classes have been placed, cards handed in, and reasons given, the judges in charge will give the placings and reasons for each class to contestants and coaches if time permits.
- 10. Only those participating in the contest shall be permitted on the farm, unless his/her assistance is required to facilitate the contest, serve as a holder or group leader, or is in some way helping with the contest.

### Keep-Cull Class (50 points) SAMPLE INFORMATION

You will <u>CULL</u> 4 heifers - Place the numbers of the heifer you <u>CULL</u> on the judging card in any order you wish.

		EPD's				
		DOB	BW	WW	YW	Milk
Ear Tag/	Brand					
No						
1	051	2/01/00	1.1	31	61	13
2	055	2/24/00	1.4	33	73	17
3	059	3/05/00	2.2	36	66	21
4	063	3/10/00	1.8	30	59	17
5	071	3/16/00	3.8	38	72	23
6	073	3/19/00	2.5	39	67	21
7	077	3/23/00	3.4	38	65	20
8	079	3/27/00	2.1	39	67	21
Breed Ave	erage		2.7	33	61	16

**Scenario:** Evaluate these heifers as potential replacements for a purebred operation whose goal is to produce moderate framed, functional cattle that have a balance in EPD's. Bulls are sold annually in a bull sale that targets commercial producers. Feed and labor resources are moderate.

### Tiebreakers

If ties occur, the following events will be used in order to determine award recipients:

- 1. Total of oral reasons.
- 2. Scores for the reasons class(es)
- 3. Total of keep/cull class(es).

	Livesteck			lear	n Name		
		LIVESTOCK		This sheet	is for demo	nstration and prac	tice
F # 170.0			only Your	must use a r	eal scan sheet for	actual	
		Form #: 476-3		only. Tour	must use a r	ear scarr sheet for	actual
	Carried and			competitio	n.		
Team #	State	Last Name	First	Name		Placing Classes	
						Class Number	
					Place	12345678	Place
				0000	1 1234		1234
	AAAA		AAAA	AAAA	2 1243		1243
2222	BBBB		BBBB	BBBB	3 1324		1324
3333	CCCC		CCCC	CCCC	4 1342	000000000	1342
444	DDDC		DDDD	DDDD	5 1423		1423
6666	EEE	EEEEEEEEE	EEE	EEEE	6 1432		1432
6666	EFFF	FFFFFFFFFFF	FFFF	FFFF	7 2134		2134
TTTT	GGGG	SCCCCCCCCC	GGGG	GGGG	8 2143		2143
8888	HHHH	ннннннн	HHHH	HHHH	9 2314		2314
9999					10 2341		2341
	JJJJ		JJJJ	JJJJ	11 2413		2413
Code	KKK	<b>KKKKKKKKK</b>	KKKK	KKKK	12 2431		2431
	0000		0000		13 3124		3124
	MMM		MMM	MMMM	14 3142		3142
00	NNNN		NNNN	NNNN	15 3214		3214
00	0000			0000	16 3241		3241
22	PPPP		PPPP	PPPP	17 3412		3/12
99					18 2421		3412
					19 41 22		4100
					19 4123		4123
00	3 3 3 3		3333	3333	20 4132		4132
00					4213		4213
					4231		4231
8 8					4312		4312
			0000		74 4004		1001
99	w w w v	<b></b>	w w w w	w w w w	24 4321		4321
99	W W W V X X X X	v w w w w w w w w w w w w w w	W W W W X X X X	W W W W X X X X	24 4321		4321
99		v         w	W W W W X X X X Y Y Y Y	W W W W X X X X Y Y Y Y	24 4321 C	lass 13	4321 Reasons
99	W     W     W     Y       X     X     X     X       Y     Y     Y     Y       Z     Z     Z     Z	W         X         X	W     W     W       X     X     X       Y     Y     Y       Z     Z     Z	W     W     W       X     X     X       Y     Y     Y       Z     Z     Z	24 4321 C Written	lass 13 Examination	4321 Reasons 16 17
99	W     W     W     Y       X     X     X     X       Y     Y     Y     Y       Z     Z     Z     Z	W         X         X	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z	W     W     W       X     X     X       Y     Y     Y       Z     Z     Z	24 4321 C Written 1 A B C D	lass 13 Examination	4321 Reasons 16 17
99	w         w	v         w	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z	W     W     W       X     X     X       Y     Y     Y       Z     Z     Z	24 4321 C Written 1 A B C D 2 A B C D	lass 13 Examination E 26 A B C D E E 27 A B C D E	4321 Reasons 16 17
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Female Select Animal 9 10 No. deep Cut Keep C	W W W W X X X X Y Y Y Y Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	w         w	W         W         W           X         X         X           Y         Y         Y           Z         Z         Z           Z         Z         Z           Z         Z         Z           Y         Y         Y           Y         Y         Y           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Z         Z         Z           Wield Gr         Cutabit	W         W         W           X         X         X           Y         Y         Y           Z         Z         Z	24 4321 C Written 1 A B C D 2 A B C D 3 A B C D 4 A B C D 5 A B C D	Iass 13         Examination           E         26 A B C D E           E         27 A B C D E           E         28 A B C D E           E         29 A B C D E           E         30 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 2 2 2 2
Pemale Select     Class No     Animal     9     10     No.     Greep Cull Meen C     1	W         W         W         Y           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           ctions         Innber         Innber         Innber           11         Innber         Innber         Innber	wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           4         Grading         Yield G           Yield G         Cutabi         Cutabi	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z	24 4321 C Written 1 A B C D 2 A B C D 3 A B C D 4 A B C D 5 A B C D 6 A B C D 8 A B C D	Iass 13         Examination         E       26 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 1 2 2 2 2 8 3 3 3
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Permale Select     Animal     No.     Class No.     Clas No.     Class No.     Class No.     Clas No.     Clas No.     Clas	W         W         W         Y           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           Interpretation         11         A	N         W         Y	W         W         W         W           X         X         X         X           Y         Y         Y         Y           Z         Z         Z         Z           4         Grading (Cutabi         Yield Gr           1         5         20         25         30	W         W         W           X         X         X           Y         Y         Y           Z         Z         Z           rade         IIII           135         4.0         4.5         5.0	24         4321           C         Written           1         A B C D           2         A B C D           3         A B C D           4         A B C D           5         A B C D           6         A B C D           7         A B C D           8         A B C D           8         A B C D	Iass 13         Examination           E 28 A B C D E         27 A B C D E           E 29 A B C D E         28 A B C D E           E 30 A B C D E         31 A B C D E           E 32 A B C D E         53 A B C D E           E 33 A B C D E         53 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 1 2 2 2 2 8 3 8 3 4 4 4 5 5 5 5
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Permale Select     Class No     Animal     9     1     Class No     reep Cull Rec      1     Class     No.     reep Cull Rec      Class     No     reep Cull Rec      reep     Class     No     reep     ree     ree     reep     reep	W         W         W         Y           X         X         X         X           Y         Y         Y         Z         Z         Z           Ctions         Imber         <	W         X         X	W         W         W           X         X         X           Y         Y         Y           Z         Z         Z         Z           Z         Z         Z         Z         Z           4         Grading (cutabil)         Yield Grading         Yield Grading           15         20         25         30         O	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         ade       Image: Additional state of the state	24         4321           C           Written           1         A         B         C           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           4         A         B         C         D           5         A         B         C         D           7         A         B         C         D           8         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           12         A         C         D         D	Iass 13         Examination         E       26 A B C D E         E       27 A B C D E         E       28 A B C D E         E       29 A B C D E         E       30 A B C D E         E       31 A B C D E         E       32 A B C D E         E       33 A B C D E         E       33 A B C D E         E       34 A B C D E         E       35 A B C D E         E       36 A B C D E         E       36 A B C D E         E       37 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 2 2 2 2 3 3 3 4 4 4 5 5 5 6 6 7 7 8 9 9 9
Permale         Selection           Animal         9         10           No.         cepp Cull Keep Cull         cep Cull Keep Cull           1         0         0           2         0         0           4         0         0           5         0         0           6         0         0           7         0         0           8         0         0	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         Ctions       I1       A         Interse cut       Interse cut       Interse cut         Interse cut       Interse cut       Intersecut	V         W	W         W         W           X         X         X           Y         Y         Y           Z         Z         Z         Z           Z         Z         Z         Z         Z           4         Grading         Yield Gr         Cutabit           15         20         25         30           O         O         O         O	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         ade       Image: Additional systems of the system of the syste	24         4321           C           Written           1         A         B         C           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           4         A         B         C         D           5         A         B         C         D           7         A         B         C         D           8         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           13         A         C         D	Iass 13         Examination         E       26 A B C D E         E       27 A B C D E         E       28 A B C D E         E       28 A B C D E         E       28 A B C D E         E       20 A B C D E         E       30 A B C D E         E       31 A B C D E         E       33 A B C D E         E       34 A B C D E         E       35 A B C D E         E       36 A B C D E         E       37 A B C D E         E       38 A B C D E         E       38 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 2 2 2 2 3 3 3 3 4 4 4 4 5 6 6 6 6 7 7 8 9 18 19
Permale Select     Animal     No.     reep Cull Veep     1     Class Ni     9     10     Class Ni     4     0     0     1     0     0     1     0     0     1     0     0     1     0     0     1     0     0     1     0     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1     0     1	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         Interpolation       Interpolation       Interpolation       Interpolation         Interepolation       Interepolation <th>No.         Prime         Choice         Select         Standard           1         0<th>W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         4       Grading       Yield Gr         15       20       25       30         0       0       0       0         0       0       0       0</th><th>W       W       W 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D E         E 28 A B C D E         E 29 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 39 A B C D E         E 39 A B C D E</th><th>4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         6       6       6         7       8       9         18       19</th></th>	No.         Prime         Choice         Select         Standard           1         0 <th>W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         4       Grading       Yield Gr         15       20       25       30         0       0       0       0         0       0       0       0</th> <th>W       W       W       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        E 28 A B C D E         E 29 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 39 A B C D E         E 39 A B C D E</th> <th>4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         6       6       6         7       8       9         18       19</th>	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         4       Grading       Yield Gr         15       20       25       30         0       0       0       0         0       0       0       0	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         rade       IIII       IIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	24         4321           C           Written           1         A         B         C         D           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           8         A         B         C         D           9         A         C         D         D           10         A         B         C         D           11         A         B         C         D           12         A         B         C         D           13         A         C         C         D	Iass 13         Examination         E 28 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 39 A B C D E         E 39 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         6       6       6         7       8       9         18       19
Permale Select     Class N     Animal     No.     cep Cull Mergo     1     Class     Class	W       W       W       W       W         X       X       X       X       Y         Y       Y       Y       Y       Y         Z       Z       Z       Z       Z         D       11       A       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M       M       A         W       M <t< th=""><th>W       W</th><th>W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         4       Grading       Cutabi         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         &lt;</th><th>W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         rade       IIII       IIII       IIIII         35       4.0       4.5       5.0         IIII       IIIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</th><th>24         4321           C           Written           1         A B C D           2         A B C D           3         A B C D           5         A B C D           5         A B C D           8         A B C D           9         A B C D           10         A B C D           11         A B C D           12         A B C D           13         A B C D           14         A B C D           15         A B C D</th><th>Iass 13         Examination         E 28 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 30 A B C D E</th><th>4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       8       9         18       19</th></t<>	W       W	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         4       Grading       Cutabi         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         <	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         rade       IIII       IIII       IIIII         35       4.0       4.5       5.0         IIII       IIIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	24         4321           C           Written           1         A B C D           2         A B C D           3         A B C D           5         A B C D           5         A B C D           8         A B C D           9         A B C D           10         A B C D           11         A B C D           12         A B C D           13         A B C D           14         A B C D           15         A B C D	Iass 13         Examination         E 28 A B C D E         E 27 A B C D E         E 28 A B C D E         E 29 A B C D E         E 30 A B C D E         E 31 A B C D E         E 32 A B C D E         E 33 A B C D E         E 34 A B C D E         E 35 A B C D E         E 36 A B C D E         E 37 A B C D E         E 38 A B C D E         E 39 A B C D E         E 30 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       8       9         18       19
Permale Select     Class N     Animal     No.     Gep Cut Vergo     1     Class     Class     Class     Class     Feeder Catt	W       W	v       w	W         W         W           X         X         X           Y         Y         Y           Z         Z         Z           4         Grading         (Cutability)           15         20         25         30           0         0         0         0         0           0         0         0         0         0         0           Question         S         S         S         S         S	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         rade       Image: Comparison of the second secon	24         4321           C           Written           1         A B C D           2         A B C D           3         A B C D           4         A B C D           5         A B C D           6         A B C D           7         A B C D           8         A B C D           9         A B C D           10         A B C D           11         A B C D           12         A B C D           13         A B C D           14         A B C D           15         A B C D           16         A B C D	Iass 13         Examination         E 28       8 C D E         E 27       8 C D E         E 28       8 C D E         29       8 C D E         20       8 C D E         31       8 C D E         53       8 C D E         6       34       8 C D E         6       36 A B C D E         53       A B C D E         6       8 A B C D E         6       36 A B C D E         8       8 C D E         9       A B C D E         9       A B C D E         10       A B C D E         11       A B C D E         12       40         14       B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       7       9         9       18       19         0       0       0       0
Permale Select     Class No.     Animal     P     Class No.     Class No.     Class No.     Class     Clas     Clas     Clas     Class     Class     Clas     Class     Cla	Ctions Imber 11 Ctions Imber 12 Ctions Ctions Imber Imbe	v       w	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         4       Grading (Cutabi       Yield G (Cutabi       O         1       5       20       25       30         0       0       0       0       0         0       0       0       0       0         Question       0       0       0       0         3       4       1       1       1	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         rade       Image: Comparison of the second secon	24         4321           C           Written           1         A B C D           2         A B C D           3         A B C D           4         A B C D           5         A B C D           6         A B C D           7         A B C D           9         A B C D           10         A B C D           11         A B C D           12         A B C D           13         A B C D           14         A B C D           15         A B C D           16         A B C D           17         A B C D	Iass 13         Examination         E       26       6       0       0         E       27       A       6       0       0         E       27       A       6       0       0         E       28       A       6       0       0         E       29       A       6       0       0         E       30       A       6       0       0         E       30       A       6       0       0         E       31       A       6       0       0         E       33       A       6       0       0         E       33       A       6       0       0         E       33       A       6       0       0         E       34       A       6       0       0         E       33       A       6       0       0         E       34       A       6       0       0         E       36       A       0       0       0         E       38       A       0       0       0	4321 Reasons 16 17 0 0 0 0 0 1 1 1 1 2 2 2 2 8 3 3 2 4 4 4 4 5 5 5 6 6 6 7 7 9 9 18 19 0 0 0 0 1 1 1 1 9 0 1 1 1 1 9 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 1 2 2 2 1 2 2 2 2 1 1 1 1 2 2 2 2 2 1 2 2 2 2 1 2 2 2 2 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1
Permate Selection     Animal 9 10     Animal 9 10     Class No.     Class No.     Class No.     Class No.     Class     Clas     Class     Class     Class     Clas     Clas     Clas     Clas	vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv	v       w	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         4       Grading (Cutabi       Yield Grading (Cutabi       Yield Grading         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         ade       Image: Comparison of the second	24         4321           C           Written           1         A         B         C         D           2         A         B         C         D           3         A         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           12         A         B         C         D           13         A         C         D         D           14         A         B         C         D           16         A         B         C         D           18         A         B         C         D	Iass 13         Examination         E       26 A B C D E         E       27 A B C D E         E       28 A B C D E         E       29 A B C D E         E       30 A B C D E         E       31 A B C D E         E       32 A B C D E         E       33 A B C D E         E       33 A B C D E         E       33 A B C D E         E       38 A B C D E         E       38 A B C D E         E       38 A B C D E         E       39 A B C D E         E       40 A B C D E         E       40 A B C D E         E       41 A B C D E         E       42 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       5         6       7       7         8       9       9         18       19         0       0       0         1       1       1         2       2       2
	vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv	N       W       Y	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         4       Graduation       Yield Graduation       Graduation         15       20       25       30         0       15       20       25       30         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         35       40       4.5       50         O       O       O       O         Wine       Z       3       4         2       3       4       Z       3	24         4321           C           Written           1         A         B         C         D           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           8         A         B         C         D           10         A         B         C         D           11         A         B         C         D           12         A         B         C         D           13         A         C         D         D           14         A         C         D         D           16         A         B         C         D           19         A         C         D         D	Iass 13         Examination         E       26       A       C       D       E         E       27       A       C       D       E         E       29       A       C       D       E         E       30       A       C       D       E         E       31       A       C       D       E         E       33       A       C       D       E         E       34       A       C       D       E         E       33       A       C       D       E         E       36       A       B       D       D	4321 Reasons 16 17 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 5 5 5 5 6 6 7 7 8 8 9 9 18 19 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 3 3
Permale Select     Class No.     Permanent     Animal     Permanent     Permanent	Ctions Imber 11 Imber Imbe	N       W       Y	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         4       S       S       S         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         ade       Image: Comparison of the second of the	24         4321           C           Written           1         A         B         C           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           8         A         B         C         D           9         A         C         D         B         C         D           10         A         B         C         D         D         B         C         D           11         A         B         C         D         D         B         C         D           12         A         B         C         D         D         B         A         C         D           13         A         B         C         D         D         D         D         D         D         D         D	Iass 13         Examination         E       26 A B C D E         E       27 A B C D E         E       28 A B C D E         E       29 A B C D E         E       30 A B C D E         E       31 A B C D E         E       32 A B C D E         E       33 A B C D E         E       34 A B C D E         E       35 A B C D E         E       36 A B C D E         E       38 A B C D E         E       39 A B C D E         E       30 A B C D E         E       40 A B C D E         E       41 A B C D E         E       42 A B C D E         E       43 A B C D E         E       44 A B C D E         E       44 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 4 5 5 5 6 6 7 7 8 9 9 18 19 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 4
Permale Select     Class Ni     Animal     No.     eep Cul Veep     1     Class     1     Class     Class     Class     Freeder Cattl     Animal     No.     Frame     No.     Un you     Out     Class     Clas     Class     Clas     Clas     Class     Clas     Clas     Cl	W       Y       Y	v       w	W       W       W         W       W       W         X       X       X         Y       Y       Y         Z       Z       Z       Z         4       Grading       Yield Grading         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       1       1         0       0       1       1      0	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         35       4.0       4.5       5.0         35       4.0       4.5       5.0         Wine       2       3       4         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3	24         4321           C           Written           1         A         B         C           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           12         A         B         C         D           13         A         C         D         D           16         A         C         D         D           18         A         C         D         D           20         A         C         D         D           21         A         C         D         D	Iass 13         Examination         E       28 A B C D E         E       27 A B C D E         E       28 A B C D E         E       29 A B C D E         E       29 A B C D E         E       29 A B C D E         E       30 A B C D E         E       31 A B C D E         E       33 A B C D E         E       33 A B C D E         E       34 A B C D E         E       35 A B C D E         E       36 A B C D E         E       37 A B C D E         E       38 A B C D E         E       39 A B C D E         E       41 A B C D E         E       42 A B C D E         E       43 A B C D E         E       44 A B C D E         E       43 A B C D E         E       44 A B C D E         E       44 A B C D E         E       44 A B C D E         E       45 A B C D E         E       46 A B C D E	4321 Reasons 16 17 0 0 0 0 1 1 1 2 2 2 2 3 3 3 3 4 4 4 4 6 6 6 6 7 8 8 9 18 19 0 0 0 0 1 1 1 2 2 2 2 3 3 3 4 8 4 6 5 5 5 6 5
Permale Select     Class Ni     Animal     P     10     Class Ni     Class     Clas     Class     Class     Clas     Clas     Clas	W       W       W       W       W         X       X       X       X       X       X         Y <th>N       W       Y</th> <th>W       W       W         W       W       W         X       X       X         Y       Y       Y         Z       Z       Z       Z         4       Grading       Yield Grading         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       1       1         0       0       1       1      0</th> <th>W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         rade lity)       35       40       45       50         35       40       45       50         0       0       0       0         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3</th> <th>24         4321           Written         1         A         C           2         A         B         C         D           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           8         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           12         A         B         C         D           13         A         C         D         D           14         A         C         D         D           19         A         C         D         D           20         A         B         C         D           21         A</th> <th>Iass 13         Examination         E 28 A B C D E         27 A B C D E         28 A B C D E         29 A B C D E         30 A B C D E         53 A B C D E         63 A B C D E         64 A B C D E</th> <th>4321 Reasons 16 17 0 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 6 6 6 7 7 8 9 18 19 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 6 6 6 6 6 7 7 8 9 9 18 19 0 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 4 6 6 6 6 6 6 6 7 7 8 9 9 18 19 0 0 0 0 0 1 1 1 1 2 2 2 2 3 3 5 6 6 6 6 6 7 7 8 8 9 18 19 0 0 0 0 0 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 1 1 1</th>	N       W       Y	W       W       W         W       W       W         X       X       X         Y       Y       Y         Z       Z       Z       Z         4       Grading       Yield Grading         15       20       25       30         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       1       1         0       0       1       1      0	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         rade lity)       35       40       45       50         35       40       45       50         0       0       0       0         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3	24         4321           Written         1         A         C           2         A         B         C         D           2         A         B         C         D           3         A         B         C         D           4         A         B         C         D           5         A         B         C         D           6         A         B         C         D           7         A         B         C         D           8         A         B         C         D           9         A         B         C         D           10         A         B         C         D           11         A         B         C         D           12         A         B         C         D           13         A         C         D         D           14         A         C         D         D           19         A         C         D         D           20         A         B         C         D           21         A	Iass 13         Examination         E 28 A B C D E         27 A B C D E         28 A B C D E         29 A B C D E         30 A B C D E         53 A B C D E         63 A B C D E         64 A B C D E	4321 Reasons 16 17 0 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 6 6 6 7 7 8 9 18 19 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 6 6 6 6 6 7 7 8 9 9 18 19 0 0 0 0 0 1 1 1 1 2 2 2 2 3 3 3 4 4 4 4 6 6 6 6 6 6 6 7 7 8 9 9 18 19 0 0 0 0 0 1 1 1 1 2 2 2 2 3 3 5 6 6 6 6 6 7 7 8 8 9 18 19 0 0 0 0 0 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 1 1 1 2 2 2 2 1 3 3 1 1 1 1 1 1 1 1
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Permale Select     Class N     Animal     No.     Gep Cul Vergo     1     Class N     Class     Clas     Class     Class	W       Y       Y	N       W       Y	W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z         4       Grading (Cutability)       Cutability)       Cutability         1       5       20       25       30         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0       0         0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0         0       0	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         rade       Z       Z         ility)       35       4.0       4.5       5.0         35       4.0       4.5       5.0         V       Y       Y       Y       Y         35       4.0       4.5       5.0         Vine       Z       Z       4         Z       S       4       2       S         Z       S       4       2       S         Z       S       4       2       S         Z       S       4       2       S         Z       S       4       2       S	24         4321           Written         1         A B C D           2         A B C D         2           3         A B C D         2           4         A B C D         2           5         A B C D         2           6         A B C D         2           7         A B C D         2           8         A B C D         2           9         A B C D         1           10         A B C D         1           12         A B C D         1           13         A B C D         1           14         A B C D         1           18         A B C D         1           19         A B C D         1           20         A B C D         2           21         A B C D         2           22         A B C D         2           23         A B C D         2           24         A B C D         2	Iass 13         Examination         E       28       A       C       D       E         E       27       A       C       D       E         E       28       A       C       D       E         29       A       C       D       E       E         29       A       C       D       E       E         30       A       C       D       E       E         31       A       C       D       E       E         33       A       C       D       E       E         33       A       C       D       E       E         34       A       C       D       E       E         33       A       C       D       E       E         33       A       C       D       E       E       E         34       A       C       D       E </th <th>4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       9       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       8       6         8       5       5         9       8       7         1       1       1         2       2       2         3       3       5         6       6       7         8       5       5         9</th>	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       6       6         7       9       9         18       19         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       1       1         2       2       2         3       3       3         4       4       4         5       5       6         7       8       6         8       5       5         9       8       7         1       1       1         2       2       2         3       3       5         6       6       7         8       5       5         9
Permate Selection     Animal     P     Class No.     Class     Clas     Class     Clas     Class     Clas     Class     Class     C	W       W	N       W       Y	W       W       W       W         W       W       W       W         X       X       X       X         Y       Y       Y       Y         Z       Z       Z       Z       Z         4       Grading       Yield Grading       Cutabi         1       5       20       25       30         1       5       20       25       30         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0	W       W       W         X       X       X         Y       Y       Y         Z       Z       Z         35       4.0       4.5       5.0         35       4.0       4.5       5.0         0       0       0       0         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3         2       3       4       2       3	24         4321           Written         1         A B C D           2         A B C D         2           3         A B C D         2           4         A B C D         2           5         A B C D         2           6         A B C D         2           7         A B C D         2           8         A B C D         2           9         A B C D         1           10         A B C D         1           12         A B C D         1           13         A B C D         1           14         A B C D         1           15         A B C D         1           16         A B C D         1           18         A B C D         1           20         A B C D         2           21         A B C D         2           22         A B C D         2           23         A B C D         2           24         A B C D         2           25         A B C D         2	Iass 13         Examination         E       26 A B C D E         E       27 A B C D E         E       28 A B C D E         E       29 A B C D E         E       30 A B C D E         E       30 A B C D E         E       31 A B C D E         E       32 A B C D E         E       33 A B C D E         E       34 A B C D E         E       36 A B C D E         E       36 A B C D E         E       38 A B C D E         E       39 A B C D E         E       40 A B C D E         E       41 A B C D E         E       42 A B C D E         E       43 A B C D E         E       44 A B C D E         E       45 A B C D E         E       48 A B C D E         E       49 A B C D E	4321         Reasons         16       17         0       0       0         1       1       1         2       2       2         3       3       3         4       4       4         5       5       5         6       6       7       7         9       9       9       9         18       19       9       9         1       1       1       1         2       2       2       3       3         4       4       4       4       6         5       5       5       5       7         8       8       8       8       8

Maximum Number of Team Members	3	
Number of Team Members Scored	3	
Scantron	Meats –	
	Form Number – 480-4	
Committee:		
Scott Ash		
Tim Cunnien		
Annie Erwin		
John Kessell		
Carol Webb		

# Meats Evaluation and Technology

# An \$30 fee will be assessed per team to cover supplies required for the contest. This is in addition to the traditional fee assessed to cover Scantron supplies.

### RULES

- 1. Every team must be prepared to participate in every class as listed below.
- 2. Each placing class (50 points each) will consist of four (4) entities, the retail identification classes will consist of thirty (30) entities each, and the grading classes may contain <u>up to</u> 10 entities each (Ten points are allowed for the correct grading of each carcass. A deduction of one point for a one-third grade above or below the official grade; three points will be deducted for two-thirds grade above or below the official grade; six points will be deducted for one full grade above or below the official grade. The score will be zero for a grade more than one full grade above or below the official grade. Perfect score will be 100 points).
- 3. The Meats Contest Classes will include:

### Beef:

- Beef Carcass Placing
- Beef Ribs Placing, Rounds Placing, or Chucks Placing
- Beef Yield Grading
- Beef Quality Grading

### Pork:

- Pork Carcass Placing
- Pork Hams Placing
- Pork Retail Placing

### Lamb:

Lamb Carcass Placing

### **Retail Identification\* (I.D.)**:

- Class I (Beef, Pork, Lamb, Variety Meats)
- Class II (Beef, Pork, Lamb, Variety Meats)
- Class III (Beef, Pork, Lamb, Variety Meats)

\* **NOTE:** Each of the 30 retail cuts in the contest will be worth 6 points (specie=1 point, primal=1 points, retail=3 points, cookery=1 point) for a grand total of 180 points. The retail identification scoring is located on the back of the Meats Scantron Sheet.

- 1. The official Scantron scoring sheet for placing, grading and retail I.D. is included.
- 2. No oral or written reasons will be given.
- 3. Each team must be prepared to use the Scantron Scoring Sheets. No precontest explanations will be necessary except for new administrative changes.
- 4. No contestant will be allowed to leave and/or enter the contest after the contest has started.
- 5. Contestants should come prepared to work in cold rooms (e.g. coolers). Such articles as heavy sweaters and/or coats, protective footwear, and suitable head covers are recommended.
- 6. After initiation of the contest, no communication will be permitted between or among the contestants unless it is directed toward the group leader.
- 7. Scoring will be as indicated in the Appendix.
- 8. Contestants will be allowed ten (10) minutes for each placing class, ten (10) minutes for every four carcasses. That is, if 8 carcasses are used, twenty (20) minutes will be allowed.
- 9. Contestants will not be allowed to handle any carcasses or cuts to arrive at a final placing.
- 10. Contestants will not be allowed to use any mechanical aids, notes, etc. during the contest. All information available to the contestant will either be given by the official or must be stored in the contestant's mind.
- 11. After the contest the classes will be reviewed with all interested coaches by the official if time permits.
- 12. Team ties will be broken on the team scores of the combined retail I.D. classes.

### SUGGESTED REFERENCES FOR COACHING/INSTRUCTING:

Meat Evaluation Handbook Plastic Bound, 8 1/2 x 11", 70 pages. Source: American Meat Science Association 1111 North Dunlap Avenue Savoy, IL 61874 http://www.meatscience.org Uniform Retail Meat Identity Standards Plastic 3-ring binder bound, 8 1/2 x 11", 120 pages. Source: American Meat Science Association Meat Identification Slide Set 136 full color slides Source: American Meat Science Association No. A-53 "U.S. Grades for Beef Carcasses" and Mkt. Bul. No. 45 "U.S.D.A. Yield Grades for Beef" Source: Livestock Division Consumer and Marketing Service U.S.D.A. Washington, D.C. 20250

Ribeye Grid - I.D. No. AS-34 Source: Art Services, Inc. 3015 Earl Place, N. E. Washington, D.C. 20018 (202) 526-5607



ID#	Species	Primal	Meat Identification Retail First Digit	on - Retail Cuts Retail Second Digit	Cookery	Species
1	BPL		01234	01234	D (M) 0/M	8 Beef P Pork L Lamb
2	BPL	ABCDEFG	01234	01234	O M 0/M	Primal Cuts
2	BPC	(H) (I) (J) (K) (L) (M) (N) (A) (B) (C) (D) (E) (F) (G)	(5)(6)(7)(8)(9) (0)(1)(2)(3)(4)	(5)(5)(7)(8)(9) (0)(1)(2)(3)(4)	(D) (M) (M)	A Breast H Rib or Rack
3	RRDD	HIJKLMN	56789	56789	(D) (M) (M)	C Chuck J Shoulder
4	000	HIJKLMN	56789	56789	0/0/09	E Ham or Leg L Spareribs
5	BPC	A B C D E F G (H T J K L M N	01234	01234	(D) (M) (M)	F Loin M Variety Meats G Plate N Various Meats
6	BPD	ABCDEFG	01234	01234	(D) (M) (M)	Datall Outa
7	BPL		01234	01234	(D) (M) (D/M)	Boasts/Pot Boasts Chops
0	BPD		<u>56789</u> 01234	5 6 7 8 9 0 1 2 3 4	(D) (M) 0/M	01 American Style 65 Arm Chop
8	(5)(5)(1)	H I J K L M N	66789	5 6 7 8 9	(D) (D) (D) (D)	02 Arm Pichic 86 Blade Chop 03 Arm Roast 67 Blade Chop (Bhis)
9	BOU		56789	56789		04 Arm Roast (Brils) 66 Butterfiled Chop (B 05 Back Ribs 69 Country Style Ribs
10	BPL	ABCDEFG	01234	01234	(D) (M) (M)	06 Blade Roast 70 Loin Chop 07 Blade Boston 71 Rib Chop
11	BPD	ABCDEFG	01234	01234	(D) (M) (M)	08 Bottom Round 72 Rib Chop (Frencher Boast (Bols) 73 Sirloin Chop
10	BPC	(A) B) C) E) F) G)	01234	01234	D M 0/M	09 Bottom Round 74 Top Loin Chop Bottom Round 75 Top Loin Chop (Bri
12	BRD		56789	56789	(D) (M) 0/M	10 Brisket, Whole (Bhis) Variety Meats
13	B B B B	HOJKOMN	66789	56789		11 Genter Loin Roast 12 Genter Rib Roast 76 Heart
14	BPC		01234	01234	(D) (M) (M)	13 Eye Roast (Brils) 77 Kidney 14 Eye Round Roast 78 Liver
15	BPL		01234	01230	(D) (M) 0/M	15 Rat Half (Bnis) 79 Oxtail 16 Exercised Style 80 Tongue
16	BPD	ABCDEFG	01234	OD Q Q D	D M OM	17 Fresh Side 81 Tripe
17	BPD	H J K L M N A B C D E F G	56789			19 Loin Roast S2 Beef for Stew
17	-	HIJKUMN	56000	56789		21 Petite Tender Roast 83 Cubed Steak
18		BOJCORG	Leedeel.	L DOTES		22 Rib Roast 64 Ground Beer 23 Rib Roast (Frenched) 85 Ground Pork
19	BPL	ABCOEFG			D M DM	24 Ribs (Denver Style) 86 Hocks 25 Rump Portion 87 Sausage Link/Pattle
20	BPD	ABCDEFG	00000	00234	D M M	26 Seven (7) Bone Roast 88 Shank 27 Shank Portion
21	BPL		00234	01234	D (M) 0/M	28 Short Ribs Smoked/Cured 29 Shoulder Roast (Bris) 89 Brisket,Corned
21	BPD	HIJRLINN ABODERG	5 6 7 8 9	56789	0000	30 Sirloin Roast 90 Center Slice 31 Sirloin Hait 91 Ham (Brils)
22	-	HOJK DMN	56789	56789		32 Spareribs 92 Hocks 93 Loin Chop
23	BOO		56789	56789	D (M) OM	33 Square Cut (Whole) 34 Tenderioin (Whole) 94 Picnic (Whole) 95 Bib Chop
24	BPL	ABCDEFG	01234	01234	D (M) 0/M	36 Tip Roast (Brils) 96 Rump Portion 36 Tip, Cap Off Roast 96 Rump Portion
25	BPC	ABCDEFG	01234	01234	(D) (M) 0/M	37 Top Loin Roast (Brils) 97 Shahk Portion 38 Top Roast (Brils) 98 Slab Bacon
20	BPD		01234	01234	D M M	39 Top Round Roast 99 Sliced Bacon 40 Tri-Tip Roast
20	BOD		56789	56789	(D) (M) 0/M	Steaks
27	0.00	HIJKLMN	56789	56789		41 Arm Steak 42 Blade Steak
28	BPL		01234 56789	0 1 2 3 4 5 6 7 8 9	(D) (M) (M)	43 Bottom Round Steak
29	BPC		01234	01234	(D) (M) (M)	45 Eye Steak (Bris)
30	BPD		01234	01234	D (M) 0/M	47 Flank Steak
04	BPC	(H) (J) (K) (M) (N) (A) (B) (C) (D) (E) (F) (G)	(5) (6) (7) (8) (9) (0) (1) (2) (3) (4)	56789 01234	(D) (M) 0/M	46 Mock Tender Steak 49 Porterhouse Steak
31		(H) (T) (J) (K) (L) (M) (N)	(5)(6)(7)(8)(9)	(5) (6) (7) (8) (9)	(7) (1) 614	50 Ribeye, Lip-On Steak 51 Round Steak
32	BBC		56789		0.000	52 Round Steak (Brils) 53 Sirloin Cutlets
33	BPL		01234 56789	0 1 2 3 4 5 6 7 8 9	(D) (M) 0/M	54 Skirt Steak (Bris) 55 T-Bone Steak
34	BPD	ABCOEFG	01234	01234	(D) (M) (M)	56 Tenderioin Steak
25	BPD		01234	01234	(D) (M) 0/M	56 Top Blade (Bnis) Flat Iron Steak
00	BDD		56789 01234	(5)(6)(7)(8)(9) (0)(1)(2)(3)(4)	(D) (M) 6/H	60 Top Loin Steak
36	0.000	HUJKLMN	66789	56789		61 Top Round Steak 62 Top Sirioin Steak (Bnis)
37	(B)(P)(C)		(0)(1)(2)(3)(4) (5)(6)(7)(8)(9)	(0) (1) (2) (3) (4) (5) (6) (7) (8) (9)	(D) (M) (M)	63 Top Sirioin Cap Off Steak (Brils) 64 Top Sirioin Cap Steak (Brils)
38	BPU	ABCDEFG	01234	01234	D (M) 0/M	Cookery Methode
30	BPL			01234	(D) (M) 0/M	D Dry Heat
40	BPL	(H) $(I)$ $(J)$ $(K)$ $(L)$ $(M)$ $(N)(A)$ $(B)$ $(C)$ $(D)$ $(E)$ $(F)$ $(G)$	() () () () () () () () () () () () () (	5 6 7 8 9	(D) (M) 6/M	M Molst Heat D/M Dry or Molst Heat
40	Ser starter	(H)(J)(K)(D)(M)(N)	56789	56789		and a second state of the second s

		-
Maximum Number of Team Members	4	1500
Number of Team Members Scored	4	1000
Scantron	Dairy Foods –	
	Form Number – 479-6	9
Committee:		
Leon Ammons		
Ben Hays		
Steve Tennant		
Zack Tennant		
John Workman		

## Milk Quality and Products

### **Purpose of the Contest:**

- To enhance learning activities relative to the production, processing, distribution and consumption of dairy products.
- To assist students to develop a sound perspective for utilizing the decision-making process.

### **Objectives:**

I. Develop abilities to utilize knowledge of high-quality milk, its production and marketing

- A. Milk Production
  - 1. Regulations
  - 2. Grades and classes of milk
- B. Cleaning and Sanitizing
  - 1. General types of cleaners and sanitizers
  - 2. Water hardness
  - 3. Milkstone
  - 4. Equipment, teats and udders
- C. Cooling Milk
- D. Abnormal Milk
  - 1. Causes
  - 2. Prevention
  - 3. Detection (California & Wisconsin Mastitis Tests and Confirmatory tests)
  - 4. Regulatory programs
- E. Milk Marketing, Economics and Distribution
  - 1. Transportation
  - 2. Cooperatives
  - 3. Pricing
  - 4. Supply and Demand

- F. Diseases Transmitted to Man Via Milk
- G. Off Flavors of Milk

II. Develop abilities to utilize knowledge of the composition and quality characteristics of milk.

- A. Nonfat Solid Portion
- B. Milkfat
- C. Adulterants, Including Water
- D. Bacteria and General Methods of Estimating Their Numbers; Maximum Numbers
- E. Somatic Cells; Maximum Numbers

III. Develop an understanding that clean cows and a clean environment are necessary to produce clean milk and how industry and government use the sediment test to detect unclean conditions.

IV. Be able to utilize selected skills to identify cheese varieties.

V. Be able to utilize selected skills in evaluating the quality of milk.

### **CONTEST FORMAT**

**Contest will include**: (Ties will be broken on milk flavor scores)

10 Milk Samples	20 minutes	120 points
10 Product Identification-Dairy Versus Non-	20 minutes	100 points
Dairy		
California Mastitis Test	20 minutes	40 points
10 Cheese Type ID	20 minutes for both	40 points
10 Cheese Characteristics ID	cheese activities	60 points
Problem Solving	40 minutes	100 points
Written Test	40 minutes	120 points

### **Suggested Layout for Contest**

Contestants 1	Contestants 2	Contestants 3	Contestants 4
Milk Samples &	Cheese ID & Cheese	Problem Solving	Written Test
Product Identification	Characteristics ID		
- Dairy vs Non-Dairy			

### RULES OF THE CONTEST

- 1. Contestants will report for instructions to the Division Superintendent at the time and place shown in the current year's Contests Schedule.
- 2. Paper cups for sampling purposes will be provided for the contestants.
- 3. Sample score cards are included on the following pages.

- 4. Cheese samples for identification will be selected from those listed on the score sheet Form 3. Cubes of the cheeses will be available for tasting. See references for cheese identification listed below.
- 5. Milk samples will be scored using Form 3. All samples of milk are prepared from pasteurized milk intended for table use and will score 1 to 10. Milk samples will be tempered to 60 F.
- 6. Contestants are to use whole numbers when scoring "Flavor" of milk. Check only the one most serious defect in **each milk** sample even if more than one flavor is detected. If no defect is noted, check "No defect."
- 7. Apples will be allowed for taste bud refreshing.
- 8. The score made by each contestant is the number of points deducted; therefore, the lower score, the higher rating.
- 9. Students may bring their own bottled water and an apple
- 10. Recommended references to use for preparation of the contest:
  - A. Hoard's Dairyman, PO Box 801, Fort Atkinson, Wisconsin 53538. Phone (414) 563-5551. Issues used are from September of previous year to August of current year.
  - B. Using the California Mastitis Test published by the University of Missouri-Columbia Extension Division, Columbia, Missouri 65211. (Single copy free, write for price quote for multiple copies)
  - C. California Mastitis Test can be ordered from NASCO. Toll free 1-800-558-9595 or toll call, 1-414-563-2446. NASCO, 901 Janesville Avenue, Fort Atkinson, WI 53538.
  - D. Dairy Handbook, TETRA Pak Processing Systems 8101 Corporate Woods Parkway Vernon Hills, IL 60061.
  - E. Dairy Foods: Producing the Best, Dr. Robert Marshall; Instructional Materials Laboratory, 1400 Rock Quarry Road, Q139, University of Missouri; Columbia, MO 65211
  - F. The Cheese Reporter (Publication Number: ISSN 0009-2142), published weekly by Cheese Reporter Publishing Co., Inc. 4210 Washington Ave., Madison, WI 53704. Phone (608) 246-8430, Fax (608) 246-8431.
  - G. Dairy Facts International Dairy Foods Association, 1250 H Street, N.W. Suite 900, Washington DC 20005 Phone – 202-732- 4332– <u>www.idfa.org</u> Agricultural Marketing Service www.ams. USDA.gov
  - H. Judging and Scoring Milk and Cheese, Farmers bulletin # 2259, United States Department of Agriculture, Washington DC, 20250 – Phone 202-447-7473
  - I. Judging, Identifying and Scoring Dairy Products Bulletin J250c, University of Illinois, 1401 S. Maryland Drive, Urbana, IL 61801 Phone 217-333-3871

### A. Milk Flavor Identification and Evaluation (20 minutes) - 120 points

- 1. Ten milk samples will be scored on flavor (taste and odor) using the computerized scorecard. All samples of milk are prepared from pasteurized milk intended for table use and will score 1 to 10 (See Scoring Guide). Milk samples will be tempered to 60°F. Only those cups provided at the event may be used.
- 2. Participants are to use whole numbers when scoring "Flavor" of milk and to check only the most serious defect in a sample even if more than one flavor is detected. If no defect is noted, participants should check, "No defect" and score as a ten (See Scoring Guide).
- 3. Palette cleansers (e.g. apples or soda crackers) will be allowed for refreshing.

Scoring Guide – Refer to the current scorecard being used at the national level.

Scores may range from 1 to 10. On a quality basis:

- 10 excellent (no defect)
- 8 to 9 good
- 5 to 7 fair
- 2 to 4 poor
- 1 unacceptable/un-salable

Example: Milk Flavor

SCOKE2.			
DEFECTS	Slight	Definite	Pronounced
Acid	3	2	1
Bitter	5	3	1
Feed	9	8	5
Flat/Watery	9	8	7
Foreign	5	3	1
Garlic/Onion	5	3	1
Malty	5	3	1
Oxidized	6	4	1
Rancid	4	2	1
Salty	8	6	4

\*Suggested scores are given for three intensities of flavor. All numbers within the range may be used. Intermediate numbers may also be used; for example, a bitter sample of milk may score 4.

# **B. PRODUCT IDENTIFICATION-DAIRY VERSUS NON-DAIRY (100 POINTS, 6 POINTS IDENTIFICATION, 4 POINTS FAT CONTENT)**

- A total of ten samples consisting of dairy and non-dairy products will be identified and assigned a milk fat content score.
- The following products may be included among the samples:
  - Dairy Products: nonfat (skim) milk (.05%), reduced fat milk (2%), milk (3.25%), half and half (10.5%), butter (80%), sour cream (18%), flavored milk (3.3%) light whipped cream (30%), heavy cream (35%)

• Non-Dairy Products: Margarine, non-dairy creamer, non-dairy sour cream, nondairy milk, non-dairy flavored beverage and non-dairy whipped topping all of these are to be categorized as non-dairy fat.

### C. California Mastitis Test (40 points)

- 1. The California Mastitis Test will be scored using even numbers from 0 to 8 inclusive. (See below for the Scoring Guide for the California Mastitis Test.)
- 2. Five samples of milk will be evaluated for abnormality, using the California Mastitis Test method.

### CALIFORNIA MASTITIS TEST (40 POINTS)

- The California Mastitis Test will be scored using even numbers from 0 to 8 inclusive. (See below for the Scoring Guide for the California Mastitis Test.)
- Five samples of milk will be evaluated for abnormality, using the California Mastitis Test method.

CMT Test Score	Appearance	Participant Score	* Somatic Cell Count
Negative	Mixture liquid, no precipitate	0	0
т	Slight precipitate tends to disappear with paddle movement	2	200-300,000
1	Distinct precipitate but does not gel	4	400-500,000
2	Distinct gel formation	6	1,2000,000 - 1,500,000
3	Strong gel formation, which tends to adhere to paddle. Forms distinct central peak	8	0ver 5,000,000

### Scoring Guide

### **D.** Cheese Identification (20 Minutes) - 100 points

1. Ten cheese samples for identification will be selected from those listed below. Cubes of the cheeses will be available for tasting. Note: More than one sample of

a given cheese may be used. A score of 4 points is given for each variety correctly identified. Uncolored cheeses may be used.

2. In addition to identifying cheese samples, participants will classify characteristics of identified cheeses using the following matrix. Participants will have seven characteristics to select based on the ten identified cheese samples (60 points possible). An example cheese characteristic problem can be found in the reference section of this handbook

# **Cheese Characteristics Matrix**

A description of majo	or varieties of cheeses	popular among	American consumers.
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VARIETY	Moisture (%) (Maximum) <sup>1</sup>	Fat (%) (Minimum) <sup>2</sup>	Pasta Filata <sup>3</sup>	Brine/surface Salted	Ripened by	Origin
Blue/Bleu	46	50	no	yes	mold	France
Brie	52.5	20	no	no	bacteria and mold	France
Cheddar Mild	39	50	no	no	bacteria	England
Cheddar Sharp	39	50	no	no	bacteria	England
Colby	40	50	no	no	bacteria	US
Cream	55	33	no	no	unripened	US
Feta	60	42	no	yes	bacteria	Grease
Gouda	45	48	no	yes	bacteria	Netherlands
Havarti	54	30	no	no	bacteria	Denmark
Gruyere	39	45	no	yes	bacteria	Switzerland
Monterey Jack	44	50	no	no	bacteria	US
Mozzarella	60	45	yes	yes	bacteria	Italy
Munster	46	50	no	no	bacteria	France
Parmesan	32	32	no	yes	bacteria	Italy
Processed American	40	50	no	no	bacteria	US
Provolone	45	45	yes	yes	bacteria	Italy
Queso Fresco	59	18	no	no	unripened	Mexico
Ricotta	73	4	no	no	unripened	Italy
Romano	34	38	no	yes	bacteria	Italy
Swiss	41	43	no	yes	bacteria	Switzerland

Some cheeses have a range in moisture permitted, but these are the highest permitted amounts.

<sup>2</sup>Some cheese standards use percentage by weight of total solids (e.g., cheddar) while others use percentage by weight of the cheese (e.g., cream). <sup>3</sup>Curd is stretched in hot water to align the protein molecules and provide stretch to the curd

# Cheese Characterization Example Problem

The six items in the "characteristics" column are based on the information found in the Cheese Characterization Matrix in this handbook.

Cheese samples are from the cheese identification activity. Participants will select all characteristics that apply to each sample. Answers will be recorded on the event-specific scan form. Characteristics in the problem can change each year.

	SAMPLE NUMBERS						
CHARACTERISTICS	1 (Cheddar)	2 (Cream)	3 (Swiss)	4 (Mozzarella)	5 (Bleu)		
A. Maximum moisture = 39%	х						
B. Minimum fat in the solids = 33%		х					
C. Receives "pasta filata treatment"				x			
D. Salted in brine				Х			
E. Ripened by molds					Х		
F. Originated in England	x						

### E. Problem Solving (40 Minutes) - 100 Points

The problem solving test will consist of critical-thinking, multiple choice questions. Topics may include, but are not limited to:

- 1. Decisions about the quality and acceptability of milk.
- 2. Calculations of the value of milk and components of milk.
- 3. Decisions about components of milk and milk products (including processing procedures).
- 4. Decisions about the use of chemicals in cleaning and sanitizing operations.

Starting in 2014, Problem Solving will come from the past five years of the National Dairy Foods CDE Tests. Each year an additional national Problem Solving will be added to the pool

until ten years of Problem Solving have been reached. Once ten years of Problem Solving have been added to the pool, each year the latest Problem Solving will be added and the oldest Problem Solving removed from the question pool.

### F. WRITTEN TEST (120 points)

The written test will be comprised of a total of 60 multiple - choice items (2 points each). The test will be given in two parts with one part consisting of questions on quality milk production and a second part on milk marketing.

Starting in 2012, test questions will come from the past five years of the National Dairy Foods CDE Tests. Each year an additional national test will be added to the question pool until ten years of questions have been reached. Once ten years of questions have been added to the pool, each year the latest test will be added and the oldest test removed from the question pool.

### TIEBREAKERS

If ties occur, the following events will be used in order to determine award recipients:

- 1. Milk identification
- 2. Cheese identification
- 3. Product identification
- 4. Problem solving

	Milk Quality and Products		Team Name										
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Team #	Last Name		First Name				0000	DE		31 (			2
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	9 A B C D E	7 Sour Cream	0	õ	0	0	õ	õ	õ	0	0	õ	sver
	10 A B C D E	8 Margarine	0	õ	õ	0	0	0	õ	0	õ	0	10 86
		9 Non Dairy Crean	ner O	ŏ	õ	õ	õ	0	õ	õ	0	õ	101
	12 A B C D E	10 Non Dairy Flavo	red Beverage	0	0	Ō	0	0	0	0	0	0	OÅI/I
	13 A B C D E	11 Non Dairy Milk	0	0	0	0	0	0	0	0	0	0	5
	14 A B C D E	12 Non Dairy Sour	Cream O	0	0	0	0	0	0	0	0	0	
	15 (A) (B) (C) (D) (E)	13 Non Dairy Whipp	ped Topping 🛛 🔾	0	0	0	0	0	0	0	0	0	
	16 A B C D E	II. Fat Co	ntent 🐴	2	3	4	5	6	7	8	9	10	
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	18 (A) (B) (C) (D) (E)	2 1% - 2%	0	0	0	0	0	0	0	0	0	0	tark.
	19 A B C D E	3 3.25% - 3.5%	0	0	0	0	0	0	0	0	0	0	0000
	20 A B C D E	4 10.5%	0	0	0	0	0	0	0	0	0	0	MS DIG
		<sup>5</sup> 18%	0	0	0	0	0	0	0	0	0	0	10.18
		6 30%	0	0	0	0	0	0	0	0	0	0	0.00
		7 36%	0	0	0	0	0	0	0	0	0	0	1004
		8 80%	0	0	0	0	0	0	0	0	0	0	autore .
		9 Non Dairy Varial	ble Fat	0	0	0	0	0	0	0	0	0	

					Sample	Number				
I. Identification	1	2	3	4	5	6	7	8	9	10
1 Blue/Bleu	0	0	0	0	0	0	0	0	0	0
2 Brie	0	0	0	0	0	0	0	0	0	0
3 Cheddar Mild	0	0	0	0	0	0	0	0	0	0
4 Cheddar Sharp	0	0	0	0	0	0	0	0	0	0
6 Cream/Neufchatel	0	0	0	0	0	0	0	0	0	0
6 Edam/Gouda	0	0	0	0	0	0	0	0	0	0
7 Monterey Jack	0	0	0	0	0	0	0	0	0	0
8 Mozzarella	0	0	0	0	0	0	0	0	0	0
9 Processed American	0	0	0	0	0	0	0	0	0	0
Provolone	0	0	0	0	0	0	0	0	0	0
11 Swiss	0	0	0	0	0	0	0	0	0	0
2 Colby	0	0	0	0	0	0	0	0	0	0
is Feta	0	0	0	0	0	0	0	0	0	0
14 Havarti	0	0	0	0	0	0	0	0	0	0
15 Gruyere	0	0	0	0	0	0	0	0	0	0
16 Muenster	0	0	0	0	0	0	0	0	0	0
7 Parmesan	0	0	0	0	0	0	0	0	0	0
🛿 Queso Fresco	0	0	0	0	0	0	0	0	0	0
19 Ricotta	0	0	0	0	0	0	0	0	0	0
20 Romano	0	0	0	0	0	0	0	0	0	0
II. Characteristics	1	2	3	4	5	6	7	8	9	10
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В	0	0	0	0	0	0	0	0	0	0
С	0	0	0	0	0	0	0	0	0	0
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4	0	0	0	0	0			
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	Na	tur	al /	Imi	itati	on				
East	Sample Number									
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Imitation	0	0	0	0	0	0	0	0	0	0
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			M	lilk Fla	vor					
I. Defect	4	2	2	4	Sample	Number	7	0	0	10
1 Acid	10	Ó	Ö	0	0	0	0	0	0	0
2 Bitter	0	0	ō	0	0	0	0	õ	0	0
3 Feed	0	0	0	0	0	0	0	0	0	0
4 Flat-watery	0	0	0	0	0	0	0	0	0	0
5 Foreign	0	0	0	0	0	0	0	0	0	0
6 Garlic or onion	0	0	0	0	0	0	0	0	0	0
7 Malty	0	0	0	0	0	0	0	0	0	0
8 No defect	0	0	0	0	0	0	0	0	0	0
9 Oxidized	0	0	0	Ó	0	0	0	0	0	0
10 Rancid	0	0	0	0	0	0	0	0	0	0
11 Salty	0	0	0	0	0	0	0	0	0	0
II. Score	1	2	3	4	5	6	7	8	9	10
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0

Maximum Number of Team Members	4	
Number of Team Members Scored	4	P
Scantron	Horticulture CDE# 105482	
Committee:		
Craig Canterbury		
Annie Erwin		
Ben Hays		
Mary Phillips		
Tara Tatalovich		

# Nursery/Landscape

### **Contest Scope**

The Nursery/Landscape Contest includes all aspects of the industry in producing, marketing, utilizing, and maintaining landscape plants (woody and herbaceous plants and turfgrasses), plus related products, equipment, and services including landscape design.

### **Contest Objectives**

PLANT MATERIALS - to demonstrate the ability to identify nursery and landscape plant materials and turfgrasses commonly used in the United States.

PLANT DISORDERS - to demonstrate the ability to identify unhealthy plant conditions due to pests, nutritional or physiological disorders, and mechanical or chemical injury.

CULTURAL PRACTICES - to demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, harvesting, marketing and maintenance of nursery plants and landscape turf.

DESIGN AND CONSTRUCTION - to demonstrate knowledge of the principles and techniques of landscape design and construction.

SUPPLIES AND EQUIPMENT - to demonstrate the ability to identify, select, use and maintain appropriate supplies and equipment for nursery and landscape operations, including equipment and procedures in mechanization and automation.

SAFETY - to demonstrate knowledge of safety practices in nursery and landscape operations.

INTERPERSONAL RELATIONS - to demonstrate skills in oral and written business communications.

MARKETING - to understand marketing principles and demonstrate proper sales and service skills.

**RECORDS** AND **REPORTS** - to demonstrate the ability to prepare accurate and legible records and reports and to interpret business documents.

### **Rules of the Contest**

- 1. Teams and/or schools or coaches will not visit the WVU greenhouses after September 1.
- 2. Observers will not be permitted in the contests area while the contest is in progress, unless they are assisting with the contest.
- 3. Contestants will be assigned to group leaders who will escort them to the various contest staging sites. Each contestant is to stay with his or her group leader throughout the contests or until told to change leaders by the Contest Superintendent.
- 4. Under no circumstances will any contestant be allowed to touch or handle plant material or other specimens during the contest except as specified in certain practicums. Any infraction of this rule will be sufficient cause to eliminate the team from the contest.
- 5. In addition to a clean clipboard and at least two No. 2 pencils, each contestant must also have a ruler or scale capable of measuring 1/8-inch increments, a calculator, and a ballpoint or felt-tip pen.
- 6. Calculators may only be used in the practicum portions of the contest. Printing calculators are not allowed.
- 7. The contest includes the following four phases:
  - identification of plant materials.
  - identification of plant disorders
  - general knowledge examination, and
  - practicum

These are described as follows.

**Phase 1 - IDENTIFICATION OF PLANT MATERIALS, EQUIPMENT AND SUPPLIES** (150 points). Please refer to page 213 of the National CDE Bulletin.

Participants will identify 50 items selected from the provided list covering the following categories:

- Plant Materials (25 items)
- Pests and Disorders (10 items)
- Equipment and Supplies (15 items)

Plants to identify will be presented as intact, live specimens. Equipment may be either an intact item or photograph. Pest and disorder items may be presented as an intact specimen, photograph, or preserved specimen (herbarium sheet, insect mount, etc.). When a problem must be presented with an affected plant, a "Disorder" label will be with the item to designate identification of the problem rather than the plant. Each specimen will be designated by a station number (1-50). When the participant identifies the item, its name is then located on the identification list. The participant then records the number by that name on Scanning Sheet 105482 at the respective station number.

Each participant will be provided a copy of the list at the event site. Three points will be awarded for each correct identification, and participants have 50 minutes to complete this event phase. No specimens or items may be touched or handled in any way.

### Phase 2 - GENERAL KNOWLEDGE EXAMINATION (150 points)

Fifty (50) question objective multiple-choice exam will be prepared on topics reflecting subject areas in the contest objectives. This contest phase will evaluate the contestant's knowledge and understanding of basic horticultural principles in producing, marketing, using, and maintaining nursery plants and turf. Contestants are allowed 50 minutes to complete this phase. Each correct answer is worth three (3) points.

Test questions will come from the past five years of the National Nursery Landscape CDE Tests.

### Phase 3 - LANDSCAPE ESTIMATING (100 points)

This practicum section is designed to evaluate contestant knowledge of and ability in 1) evaluating a landscape design, 2) reading a landscape drawing, 3) measuring and calculating materials needed to execute a landscape plan, and 4) evaluating factors that affect profitability of a landscape business.

A landscape drawing and scratch paper will be provided to the contestants. There will be objective questions about the landscape plan. Participants will record their answers using a scan form. Thirty (30) minutes will be allowed for this practicum. Each correct answer is worth 5 points each. Past national contests will be used to provide examples for the event.

Landscape estimating drawings and questions will come from the past years of the National Nursery Landscape CDE Tests.

### Phase 4 - ASSESSMENT AND SOLUTIONS (50 points)

This practicum is designed to evaluate participant knowledge of and ability in 1) assessing the request or problem presented, 2) reviewing alternative procedures or courses of action based on individual knowledge or reference information provided, and 3) deciding on a solution. Possible solutions will be presented in multiple-choice form for the participant to mark on Scanning Sheet 105482.

Ten situations will be presented from the following four areas:

*Measuring Nursery Stock* - One nursery plant will be measured for market size (height, spread, or caliper as appropriate) according to the American Standard for Nursery Stock for BR and B&B evergreen and deciduous trees and shrubs. A caliper and measuring rule will be provided. Plants presented in containers will be assumed as growing in the field, and a label will advise on

whether it is to be dug BR or B&B. Cut trunk sections may be presented for larger tree measurement.

*Pruning Nursery Stock* - One or more nursery plants will be displayed with points marked for possible pruning cuts. No plant will be actually pruned. Participants are to evaluate each labeled point and decide if the plant part should be pruned or not for improvement of the plant's health, form, and overall quality. The answer choice then will be the combination of cuts that should be made.

*Equipment Maintenance* – Tools from the list in Phase 3, a part for a tool, and/or an operating manual will be presented with answer choices of possible maintenance needs, corrective actions, and/or operating specifications. Examples of possible choices are low oil, uneven height setting, blade needs sharpening, incorrect gas:oil ratio provided, or replace broken handle.

Equipment will be placed to allow observing all components in the answer choices without handling the item. If handling should be required, allowance for this will be stated with that answer choice.

*Problem Solving* - Other situations of nursery and landscape plants, supplies, or practices where observation and analysis of the subject and resource materials are involved in a decision- making process. Example situations may include the following:

- According to the sample label provided, a spill of this chemical must be handled by \_\_\_\_\_?
- From the information provided on these catalog pages, one bag of the designated medium will fill \_\_\_\_\_ pots of the size and shape presented.
- According to the information provided, which plants in this list would likely need a protected site for winter survival in the Indianapolis, Indiana area?

Participants have 10 minutes to complete this phase. Each correct solution has a value of five points.

### **Scoring the Contest**

Individual contestant scores will be the sum of the scores from the four phases of the contest, based on the following possible point values:

Phase	Points	
General Knowledge Exam		150
Identification		150
Landscape Estimating		100
Assessment and Solution		50
		400

If needed in the case of tied individual or team total scores, final placings will be determined by comparing, in order, scores for the following:

- 1. Identification of Plant Materials
- 2. Exam
- 3. Landscape Drawing



SCANTRON. Mark Reflex@ EM-105482-3:854321 ED04



# WV Nursery Landscape Identification Lists

# NURSERY/LANDSCAPE PLANT IDENTIFICATION

101.	Abelia x grandiflora	Glossy Abelia
102.	Abies concolor	White Fir
103.	Acer palmatum cv.	Japanese Maple
104.	Acer platanoides cv.	Norway Maple
105.	Acer rubrum cv.	Red Maple
106.	Acer saccharum cv.	Sugar Maple
107.	Aiuga reptans cv.	Carpet Bugle
108.	Antirrhinum maius cv.	Snapdragon
109.	Aquilegia x hybrida cy.	Columbine
110.	Amelanchier arborea	Downy Serviceberry
111.	Astilbe hybrid cy.	Astilbe
112.	Begonia semperflorenscul	torum Wax Begonia
113.	Berberis x mentorensis	Mentor Barberry
114.	Betula nigra	River Birch
115.	Brassaia actinophylla Sch	efflera. Octopus Tree
116.	Buxus microphylla cv.	Littleleaf Boxwood
117.	Camellia iaponica cv.	Common Camellia
118.	Cedrus atlantica 'Glauca'	Blue Atlas Cedar
119.	Cercis canadensis	Redbud
120.	Chaenomeles speciosa cv.	Japanese (Flowering)
1201		Quince
121.	Clematis hybrid	Clematis
122.	Cornus florida cv.	Flowering Dogwood
123.	Cotoneaster dammeri	Bearberry Cotoneaster
124.	Cotoneaster divaricatus	Spreading Cotoneaster
125.	Crataegus phaenopyrum	Washington Hawthorn
126.	Cynodon dactylon cy	Bermudagrass
127.	Dieffenbachia maculata cy	2. Spotted Dumb Cane
128.	Dracaena deremensis 'Wa	rneckii' triped Dracaena
129.	Dracaena fragens 'Massa	ngeana' Corn Plant
130.	Echinaceae purpurea	Purple Coneflower
131.	Epipremnum spp.	Pothos
132.	Euonymus alatus	Winged Euonymus
133	Euonymus fortunei cy	Wintercreeper
134	Fagus sylvatica cy	European Beech
135	Festuca spp and cv	Fescue
136	Ficus benjamina	Benjamin Fig
137	Ficus elastica 'Decora'	Decora Rubber Plant
137.	Forsythia x intermedia cy	Border Forsythia
130.	Fraxinus americana cy	White Ash
140	Gaillardia aristata cy	Common Blanketflower
140. 141	Gardenia jasminoides 'Fo	rtuniana' Common
171.	Guruenia jusminoiaes 10	Gardenia
142	Ginkao hiloha	Ginkgo Maidenhair Tree
143	Gleditsia triacanthos iner	nis cy Thornless
173.	Greansia macaninos men	Honeylocust
144	Hedera helix cv	Fnolich Ivy
145	Homorocallis spn and ov	Day lily
140.	menocuns spp. and cv.	Day IIIy

146.	Hosta x hybrida cv.	Plaintain Lily
147.	Hydrangea quercifolia	Oakleaf Hydrangea
148.	Hydrangea macrophylla	Bigleaf Hydrangea
149.	llex cornuta cv.	Chinese Holly
150	Ilex crenata cy	Iapanese Holly
150.	Her y meservege cy	Meserve Holly
151.	Impations hybrid ov	Imposions
152.	Impatiens nybria cv.	Decendend Iric
155.	Tris x germanica fiorentina	cv. Bearded Ins
154.	Juniperus chinensis cv.	Chinese Juniper
155.	Juniperus horizontalis cv.	Creeping Juniper
156.	Lagerstroemia indica cv.	Crape Myrtle
157.	Leucanthemum x superbum	<i>cv.</i> Shasta Daisy
158.	Liquidambar styraciflua	Sweet Gum
159.	Liriodendron tulipifera	Tuliptree
160.	Liriope spp. cv.	Lilyturf
161.	Lonicera japonica 'Hallian	ha' Hall's Japanese
	5 1	Honevsuckle
162	Magnolia grandiflora cy	Southern Magnolia
163	Magnolia x soulangiana cy	Chinese (Saucer)
105.	magnona x somangiana ev	Magnolia
164	Mahonia aquifolia ay	Oragon Grana
104.	Mahonia aquijona cv.	Elementine Creck angle
105.	Maius spp. ana cv.	Flowering Crabappie
166.	Myrica pensylvanica	Bayberry
16/.	Nandina domestica	Heavenly Bamboo
168.	Narcissus pseudonarcissus	cv. Daffodil
169.	Nyssa sylvatica	Sour (Black) Gum
170.	Pachysandra terminalis	Japanese Spurge
171.	Paeonia hybrid cv.	Peony
172.	Parthenocissus tricuspidate	a Boston Ivy
173.	Pelargonium x hortorum c	v. Zonal Geranium
174.	Pennisetum ruppelia	Fountain Grass
175.	Petunia x hybrida cv.	Petunia
176.	Philodendron scandens oxy	<i>vcardium</i> Heartleaf
		Philodendron
177.	Picea abies	Norway Spruce
178.	Picea pungens cv.	Colorado (Blue) Spruce
179.	Pieris iaponica	Lilv-of-the-Valley Bush
180	Pinus mugo	Mugo Pine
181	Pinus strobus	Eastern White Pine
182	Pinus sylvestris	Scotch Pine
182.	Pinus thunharaiana	Jananese Black Pine
105.	Distance y goorifolia	Japanese Diack The
104. 195	Pog protongia cu	Kontuola Planetree
103.	rou praiensis cv.	Nentucky Bluegrass
186.	Poaocarpus macrophyllus	Southern Yew
187.	Potentilla fruticosa cv.	Shrubby Cinquetoil
188.	Prunus laurocerasus cv.	Cherry Laurel
189.	Prunus serrulata 'Kwanzar	<i>i'</i> Kwanzan Japanese
		Flowering Cherry

190.	Pyracantha coccinea cv.	Firethorn	204.	Taxodium distichum	Bald Cypress
191.	Quercus alba	White Oak	205.	Taxus spp. and cv.	Yew
192.	Quercus palustris	Pin Oak	206.	Thuja occidentalis cv.	American Arborvitae
193.	Quercus rubra	Red Oak	207.	Tilia cordata	Littleleaf Linden
194.	Rhododendron x catawb	iense Catawba Hybrid	208.	Tsuga canadensis	Canadian Hemlock
		Rhododendron	209.	Tulipa spp. cv.	Tulip
195.	Rhododendron Hybrid	Exbury Hybrid Azalea	210.	Verbena x hybrida cv.	Garden Verbena
196.	Rosa spp.	Landscape/Shrub Rose cv.	211.	Viburnum x burkwoodii	Burkwood Viburnum
197.	Salvia nemorosa cv.	Meadow Sage	212.	Viburnum trilobum	American Cranberrybush
198.	Sedum spp.	Sedum			Viburnum
199.	Solenostemon scutellari	oides Coleus	213.	Vinca minor cv.	Periwinkle
200.	Sorbus aucuparia	European Mountain Ash	214.	Viola x wittrockiana cv.	Pansy
201.	Spiraea x bumalda	Bumalda Spirea	215.	Wisteria sinensis cv.	Chinese Wisteria
202.	Syringa vulgaris cv.	Common Lilac	216.	Yucca filamentosa	Adam's Needle
203.	Tagetes spp. cv.	Marigold			

### NURSERY/LANDSCAPE PESTS AND DISORDERS IDENTIFICATION

#### Insects

- 217 Aphid
- 218 Bagworm
- 219 Borer
- 220 Leafhopper
- 221 Leaf Miner
- 222 Scale
- 223 Spider Mite
- 224 Snail/Slug
- 225 Whitefly
- White Grub

#### Diseases

- 227 Anthracnose
- 228 Apple Scab
- 229 Black Spot
- 230 Botrytis
- 231 Canker
- 232 Cedar-Apple Rust
- 233 Crown Gall
- 234 Fireblight
- 235 Powdery Mildew
- 236 Root Rot

### Weeds

- 237 Annual Bluegrass
- 238 Broadleaf Plantain
- 239 Buckhorn Plantain

- 240 Chickweed
- 241 Crabgrass
- 242 Dandelion
- 243 Henbit
- 244 Nutsedge
- 245 Oxalis
- 246 Purslane247 White Clover

### Physiological Problems

- 248 Frost/Freeze Injury
- 249 Iron Deficiency
- 250 Leaf Scorch (drought/ winter burn)
- 251 Nitrogen Deficiency
- 252 Pot-bound roots
- 253 String Trimmer Injury
- 254 2,4-D Injury

### **Beneficial Insects**

- 255 Praying Mantis
- 256 Lady Beetle
- 257 Paper Wasp
- 258 Lacewing
- 259 Spider

### NURSERY/LANDSCAPE EQUIPMENT AND SUPPLIES IDENTIFICATION

260	anvil-and-blade pruner
261	ball cart (B&B truck)
262	bark mulch
263	bow saw
264	broadcast (cyclone) spreader
265	bubbler head, irrigation
266	bulb planter
267	bunker rake
268	burlap
269	compressed air sprayer
270	core aerifier
271	chain saw
272	cut-off machine
273	drip emitter, irrigation
274	dry-lock wall block
275	edger (power or hand)
276	edging
277	erosion netting
278	fertilizer injector
279	fertilizer tablet
280	garden (spading) fork
281	garden (bow) rake
282	grafting band
283	grafting knife
284	granular fertilizer
285	gravity (drop) spreader
286	ground/pelleted limestone
287	hedge shears
288	hoe
289	hook-and-blade pruners
290	hose-end repair fitting
291	hose-end sprayer
292	hose-end washer
293	hose repair coupling
294	impact sprinkler
295	irrigation ring tool
296	landscape fabric
297	leaf rake
298	loppers
299	mattock
300	measuring wheel
301	mist nozzle (mist bed)
302	mower blade balancer
303	nursery container
304	oscillating sprinkler
305	peat moss
306	pick axe

307	planting/earth/soil auger
308	pole pruner
309	polyethylene pipe
310	pop-up irrigation head
311	post-hole digger
312	power blower
313	power hedge trimmer
314	pot-in-pot units
315	pump sprayer
316	propagation mat
317	pruning saw
318	quick coupler
319	quick coupler head adapter
320	reel mower
321	resin-coated fertilizer
322	rotary mower
323	rototiller
324	round point shovel
325	scoop shovel
326	shade fabric
327	sharpening stone
328	siphon proportioner
329	soaker hose
330	soil sampling tube
331	solenoid valve
332	spade
333	sphagnum moss
334	square point (flat) shovel
335	string trimmer
336	thatch rake
337	tree caliper
338	tree wrap
339	trowel
340	vertical mower
341	water breaker
342	wire tree basket

Maximum Number of Team Members	4		
Number of Team Members Scored	3		
Scantron	Horticulture –		
	CDE# 105482		
Committee:			
Tyler Butts			
Craig Canterbury			
Kathy Duffield			
Matt Knopp			
Tara Tatalovich			

### Plant Pathology

The contest will consist of identifying correctly from specimens **thirty** (**30**) common economic plant diseases which will be selected from the following list. Specimens will be numbered and contestants will identify the common name, host, and ONE control measure for each disease. Students will select the appropriate corresponding number for each disease, host, and ONE control measure from the lists provided and enter those appropriate numbers on the scantron sheet provided.

The score will be determined as follows:

- Each correctly identified disease will count 2 points.
- Each correctly identified host will count 2 point.
- Correct identifying ONE control measures for each disease will count 2 points.

Tie Breaker: Tie breakers will consist of the following:

• Judges will compare answers starting with specimen 1 and proceed through the contest until a contestant/team gains an advantage

Bulletins illustrating and describing plant diseases are issued occasionally by the Agricultural Experiment Stations of various states - usually the supply of these bulletins is so quickly exhausted that their listing here is not worthwhile. The 1953 Yearbook of Agriculture is devoted to Plant diseases. Copies of it should be available in all Vocational Agriculture Departments.

### **Plant Pathology Disease List**

### Revised by M. Rahman, Extension Plant Pathologist (08/2012)

HOST	DISEASE	CONTROL
ALFALFA	Leaf Spot	• Cut foliage in a timely manner

	Downy Mildew	• Cut foliage in a timely manner
BARLEY	Cover Smut	• Treat seed with suitable chemical
	Loose Smut	• Treat seed with suitable chemical
	Black Loose Smut	• Treat seed with a systemic fungicide
	Scald	Resistant varieties
	Stripe Rust	• Treat seed with suitable chemical
	Powdery Mildew	Resistant varieties
OATS	Crown Rust	Resistant varieties
	Black Loose or Covered Smut (Cannot be separated except by microscopic examination)	• Treat seed with suitable chemical
	Stem Rust	Destroy alternate host
		Resistant varieties
Wheat	Glume Blotch	• Treat seed with suitable chemical
	Leaf Rust	Resistant varieties
	Stem Rust	Destroy alternate host
		Resistant varieties
	Loose Smut	• Hot water seed treatment
		• Water soak treatment
		• Treat seed with a systemic fungicide
	Scab	Non grain crop rotation-bury stubbles
	Downlaws Mildow	Ireat seed with suitable chemical
DVE	Powdery Mildew	Resistant varieties
KIE	Ergot	• Disease free seed
	Loof Pust	Cut wild grass hosts
	Leal Kust	Resistant varieties
CLOVER	Kust	No practical control
	Powdery Mildew	Resistant varieties
	Sclerotina Crown Rot	• Close grazing in the autumn and early winter
APPLES	Frogeye Leaf Spot (Black Rot)	<ul> <li>Captan</li> <li>Nova+Mancozeb</li> <li>Remove and destroy diseased parts</li> </ul>
	Cedar Rust	<ul> <li>Remove alternate host</li> <li>Rubigan + Captan</li> <li>Rubigan + Ziram</li> </ul>

	Scab	Captan
		• Rubigan + Captan
		• Rubigan + Ziram
	Sooty Blotch	Facilitate quick fruit drying
	Bitter Rot	Captan + Pristine
		Remove dead branches
	Fire Blight	Remove and destroy diseased
		parts
		Streptomycin
		Bordeaux
		Fixed Copper
PEACHES	Brown Rot	• Topsin-M +Sulfur
		• Indar
		Captan
	Peach-Leaf Curl	• Ferbam
		Wettable Sulfur
		• Bravo
	Scab "Freckles"	Bravo
		• Topsim-M+ Captan
	Yellows	Pull and destroy diseased tree
	Lear Spot or Shot Hole	Wettable Sulfur
		• Fixed Copper
PLUMS	Black Knot	Remove and destroy diseased
		parts
		• Topsin-M + Captan
		Resistant varieties
	Brown Rot	• Captan and Topsin-M, mixed
CHERRIES	Leaf Spot or Shot hole	• Captan and Topsin- M, mixed
	Black knot	• Captan and Topsin- M, mixed
		• Prune out and destroy visible knot
NOTE: Most pea	ches, plums and cherries are sp	prayed or dusted with sulfur, except for
yellows, peach lea	af curl, and black knot Never u	ise Bordeaux or lime-sulfur on growing
	peaches	
CRUCIFERS	Club Root	Avoid infested soil or fumigate
(Cabbage,		• Apply lime to soil to pH 6.8
Cauliflower,	Blackleg	Clean seeds
Brussels Sprouts)		• Hot water seed treatment
		Rovral
	Soft Rot	Prevent mechanical and insect
		injuries to plant
CUCURBITS	Bacterial wilt	• Cover until bloom with a row
--------------------	------------------------------	---
(Cucumbers, Melons		cover
etc)		Ambush
		• Admire
		• Pounce
		• Rotenone for cucumber beetles
		N.B. Cucumber beetle is the vector of the
		pathogen, controlling the vector in most
		cases controls the disease
	Anthracnose	• Disease free seed
		Mancozeb
		• Bravo
		• Topsin-M
	Downy Mildew	Bravo
	-	Mancozeb
		Ranman
		• Tanos
	Powdery Mildew	Bravo
	-	• Nova
BEANS	Anthracnose	Bravo
		• Headline
		Mancozeb
		• Bury infected debris
	Bacterial Blight	• Disease free seed
		Crop rotation
	Rust	Bravo
		• Folicur
		• Endura
		Resistant varieties
	Common Mosaic	Certified seed
		Control aphid vector
		<ul> <li>Disease-free seed</li> </ul>
CORN	Rust	No Practical control
corut	Southern Leaf Blight	Resistant varieties
	Northern Leaf Blight	Desistant variation
	Northern Lear Bright	• Resistant varieties
	Smut	Remove and destroy diseased
	Sindt	• Remove and destroy diseased
		<ul> <li>Crop rotation</li> </ul>
	Maize Dwarf Mosaic Virus	Besistant variaties
	intuite D warr mosule villus	
	Gray Leaf Spot	Resistant varieties
	(Cercospora)	
PEPPER	Bacterial Spot	Resistant varieties

		• Copper
		• Disease free seed
POTATOES	Late Blight	Mancozeb
		• Copper
		Acrobat
		• Bravo
		• Curzate
		Resistant varieties
	Early Blight	Mancozeb
		• Copper
		• Bravo
	Hopper burn	• Insecticide spray of pyrethroid
	Leaf Roll	• Disease free seed
	Mosaics	• Disease free seed
	Rhizoctonia (Black Scurf,	No practical control
	Dry Stem Rot)	• Cultural practice "plant shallow
		and hill deep"
	Scab	Acidify soil
		Resistant varieties
	Black leg	• Treat seed with Captan
		• Polyram
		• Disease free seed
	Ring Rot	• Disease free seed
STRAWBERRIES	Leaf Spot	• Rally
		• Nova
		• Indar
		Pristine
	Botrytis Rot	Renovate
		• Thin old beds
		Luna privilege
		Captan
		• Topsin-M
		• CaptEvate
GRAPES	Black Rot	Remove mummies from cane
		• Ferbam
		• Captan
		Bayleton
		• Pristine

# 2019 Career Development Event Rules and Regulations

Downy Mildew	<ul> <li>Bordeaux</li> <li>Fixed copper</li> <li>Ridomil Gold MZ</li> <li>Abound</li> </ul>
Powdery Mildew	<ul><li>Nova</li><li>Quintec</li><li>Endura</li></ul>

BRAMBLES (Blackberries, Raspberries, Dewberries)	Anthracnose	<ul> <li>Lime-sulfur in spring when leaves show 1/2 inch growth: follow with Cabrio at bloom and two weeks after bloom</li> <li>Caution: do not use lime-sulfur after 1/2inch leaf, it will cause severe burning</li> </ul>
	Orange Rust	<ul> <li>Remove infected plants, including all roots</li> <li>Apply Rally</li> </ul>
	Cane blight and spot	<ul><li>Remove infected canes</li><li>Apply Quilt Xcel</li></ul>
TOMATOES	Late Blight	<ul> <li>Mancozeb</li> <li>Copper</li> <li>Quadris</li> <li>Bravo</li> <li>Bravo Weather</li> </ul>
	Early Blight	<ul> <li>Mancozeb</li> <li>Copper</li> <li>Bravo</li> <li>Keep foliage dry as much as possible</li> </ul>

Blossom End Rot	<ul><li>Mulch-Even Water Supply</li><li>Keep calcium high</li></ul>
Septoria Leaf Spot	<ul> <li>Crop rotation 3-years</li> <li>Mancozeb</li> <li>Copper</li> <li>Bravo Weathe rstik</li> </ul>
Anthracnose	<ul> <li>Rotation 3-years with non-solanaeeous crop</li> <li>Disease free seed</li> <li>Mancozeb</li> <li>Copper</li> <li>Bravo</li> <li>Quadris</li> </ul>
Wilt	Resistant varieties
Root Knot	<ul><li>Fumigate soil</li><li>Crop rotation</li></ul>

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SCANTRON. Mark Reflex@ EM-105482-3:854321 ED04

2019 Career Development Event Rules and Regulations Plant Pathology CDE Code Sheet Diseases 001. Anthracnose 014. Cedar/apple rust on 027. Late blight 041. Ring rot 002. Bacterial blight leaves or fruit 028. Leaf blight 042. Root knot (Nematode) 029. Leaf roll 043. Rust 003. Bacterial spot 015. Club root 004. Bacterial wilt 016. Covered smut 030. Leaf rust 044. Scab 045. Scab "freckles" 005. Bitter rot on fruit 017. Crown gall 031. Leaf spot 006. Black knot 018. Crown rust 032. Leaf spot or shot hole 046. Scald 007. Black leg 019. Downy mildew 033. Loose smut 047. Sclerotinia crown rot 020. Early blight 008. Black loose smut or 034. Maize Dwarf Mosaic 048. Septoria leaf spot covered smut\* 021. Ergot 049. Smut Virus

035. Mosaic (including

036. Northern leaf blight

037. Orange rust

040. Rhizoctonia

038. Peach leaf curl

039. Powdery mildew

common or virus)

050. Soft rot

053. Stem rust

054. Stripe

056. Yellows

055. Wilt

051. Sooty blotch on fruit

052. Southern leaf blight

- 009. Black rot
- 010. Blossom end rot
- 011. Botrytis rot
- 012. Brown rot

101

- 013. Cane blight and spot
- 025. Gray Leaf Spot (Cercospora) 026. Hopper burn

024. Glume blotch

022. Fire blight on twigs,

limbs or fruit

023. Frog-eye leaf spot

# Host

001. Alfalfa	005. Brambles	009. Crucifer	013. Peach	017. Rye
002. Apple	006. Cherry	010. Cucurbits	014. Pepper	018. Strawberry
003. Barley	007. Clover	011. Grapes	015. Plums	019. Tomatoes
004. Bean	008. Corn	012. Oats	016. Potato	020. Wheat

#### Controls

101.	Abound	125.	Crop rotation		Cabrio at bloom and two	166.	Remove infected canes
102.	Acidify soil	126.	Crop rotation 3-years		weeks after bloom	167.	Remove infected plants,
103.	Acrobat	127.	Cultural practice "plant	146.	Luna privilege		including all roots
104.	Admire		shallow and hill deep"	147.	Mancozeb	168.	Remove mummies from
105.	Ambush	128.	Curzate	148.	Mulch-Even Water		cane
106.	Apply lime (pH 6.8)	129.	Cut foliage in a timely		Supply	169.	Renovate
107.	Apply Quilt Xcel		manner	149.	No practical control	170.	Resistant varieties
108.	Apply Rally	130.	Cut wild grass hosts	150.	Non grain crop rotation-	171.	Ridomil Gold MZ
109.	Avoid infested soil or	131.	Destroy alternate host		bury stubbles	172.	Rotation 3-years with
	fumigate	132.	Disease free seed	151.	Nova		non-solanaeeous crop
110.	Bayleton	133.	Endura	152.	Nova+Mancozeb	173.	Rotenone - cucumber
111.	Bordeaux	134.	Facilitate quick fruit	153.	Polyram		beetles
112.	Bravo		drying	154.	Pounce	174.	Rovral
113.	Bravo Weather stik	135.	Ferbam	155.	Prevent mechanical and	175.	Rubigan + Captan
114.	Bury infected debris	136.	Fixed Copper		insect injuries to plant	176.	Rubigan + Ziram
115.	Captan	137.	Folicur	156.	Pristine	177.	Streptomycin
116.	Captan + Pristine	138.	Fumigate soil	157.	Prune out and destroy	178.	Tanos
117.	Captan & Topsin- M,	139.	Headline		visible knot	179.	Thin old beds
	mixed	140.	Hot water seed treatment	158.	Pull and destroy diseased	180.	Topsim-M + Captan
118.	CaptEvate	141.	Indar		tree	181.	Topsin-M
119.	Certified seed	142.	Insecticide spray of	159.	Quadris	182.	Topsin-M +Sulfur
120.	Clean seeds		pyrethroid	160.	Quintec	183.	Treat seed with a
121.	Close grazing in the	143.	Keep calcium high	161.	Rally		systemic fungicide
	autumn and early winter	144.	Keep foliage dry as much	162.	Ranman	184.	Treat seed with Captan
122.	Control aphid vector		as possible	163.	Remove alternate host	185.	Treat seed with suitable
123.	Copper	145.	Lime-sulfur in spring	164.	Remove and destroy		chemical
124.	Cover until bloom with a		when leaves show $1/2$		diseased parts	186.	Water soak treatment
	row cover		inch growth: follow with	165.	Remove dead branches	187.	Wettable Sulfur
	Page 151						

Maximum Number of Team Members	4	
Number of Team Members Scored	4	
Scantron	Poultry –	
	Form Number – 478-7	64
Committee:		
Leon Ammons		
Kelsey Flinn		
Ron Hudson		
Beth Massey		
John Workman		

# **Poultry Evaluation**

# An \$15 fee will be assessed per team to cover supplies required for the contest. This is in addition to the traditional fee assessed to cover Scantron supplies.

If the West Virginia Department of Agriculture issues a "poultry ban," the Poultry Evaluation Contest will NOT be held. If arrangements can be made, an alternative date and time for the contest will be made.

# I. PURPOSE

The Poultry Career Development Event stimulates learning activities relative to production and management, processing, marketing, and consumption of poultry products.

# II. EVENT RULES

- 1. **Team Make-up** Teams may consist of three or four members. Team ranking is determined by combining the scores of the top three students from each team. Teams that for whatever reason have fewer than three members are not eligible for team awards, but students may receive individual awards.
- 2. **Humane Treatment of Live Animals**: All live animals must be treated with the utmost care and respect. Violation of this rule will automatically disqualify an offending team member from the event. The supervision, interpretation, and enforcement of this rule will be the responsibility of the Event Superintendent and/or their designee.
- 3. Each team will receive computer scan sheets from contest superintendent.
- 4. Each participant will have ten minutes to complete each class. A warning signal will inform the participants when time expires for each class. Participants will have one minute to move from class to class.
- 5. A reliable technique will be used to identify the poultry and poultry products in the placing, selection, grading, and identification classes.

III. EVENT FORMAT

# A. EQUIPMENT

**Materials students must provide**- Each participant must have two sharpened No. 2 pencils, and an electronic calculator. Calculators that are permissible for use in this event are those that are battery operated, non-programmable, and silent. A calculator may have the following functions-addition, subtraction, multiplication, division, equals, percent, square root, +/- key, and one memory register. Calculators that are capable of storing equations, definitions, and/or terms are not permitted. Participants attempting to use unauthorized calculators will be disqualified.

# **B. INDIVIDUAL ACTIVITIES**

# **Live Poultry**

- 1. (BROILERS) Each participant will place a class of four market broilers. Each participant will be permitted to "handle" the birds, as long as the birds are inspected in a professional and humane manner. Participants may not remove the broilers from the holding unit.
- 2. (HENS) Each participant will place a class of four egg-type hens. The birds will be Single-Comb White Leghorns, or commercial strains of Leghorn-type (inbred cross). The birds may have trimmed beaks. Each participant will be permitted to "handle" the birds, as long as the birds are inspected in a professional and humane manner.
- 3. Each participant will present oral reasons for either the placing class of market broilers or for the class of egg-type hens. The class for which participants should develop oral reasons for presentation will be clearly identified during the event. Participants will have ten minutes to prepare and two minutes to present their oral reasons. Reasons should include current USDA and poultry industry terminology and standards.

Class	s #	Points
1.	Market broilers	50
2.	Egg-type hens	50
3.	Oral reasons for Class 1 or 2 (REASONS 1)	50

# **Ready-to-Cook Poultry**

- 4. (CARCASS/PART GRADING) Each participant will grade a class of ten ready-to-cook chicken and/or turkey carcasses and/or parts. Criteria for grading will be derived from USDA standards for chicken carcasses weighing two pounds to six pounds and for turkey carcasses weighing six to sixteen pounds or carcasses weighing greater than sixteen pounds. Four categories may be used, including the USDA quality grades A, B, C and the category NG (nongradable). Participants may not touch any carcass or part; doing so will result in disqualification. If used, the shackle holding a carcass may be rotated to show the entire carcass.
- 5. (RTC 3) Each participant will place a class of four ready-to-cook chicken or turkey carcasses. Criteria for placing will be derived from USDA standards relative to poultry weight classes. Participants may not touch any carcass; doing so will result in disqualification. If used, the shackle holding a carcass may be rotated to show the entire carcass.
- 6. (REASONS 1) Each participant will present oral reasons for their placing of the class of ready-to-cook chicken or turkey carcasses. Participants will have ten minutes to prepare

and two minutes to present their reasons. Reasons should include current USDA and poultry industry terminology and standards.

Class #	ŧ	Points
4.	Ten chicken and/or turkey carcasses and/or parts for quality grading	50
5.	Four RTC carcasses for placing	50
6.	Oral reasons for Class 5	50

# Shell Eggs

- 7. (EGG INTERIOR QUALITY GRADING) Each participant will grade a class of ten white (or white-tint) shell eggs. Criteria for grading will be derived from USDA standards for interior quality of market eggs. The USDA quality grades will be AA, A, B and Loss. Participants must candle the eggs to determine the appropriate USDA quality grade, but improper handling of eggs will result in disqualification.
- 8. (EGG INTERIOR QUALITY GRADING and WRITTEN FACTORS) Each participant will grade a class of ten shell eggs (white, brown or other). Criteria for grading will be derived from USDA standards for exterior quality of market eggs. The USDA quality grades will be AA/A, B and NG (nongradable). Criteria for grading may include decisions related to the following quality factors: Soundness (unbroken, check, dented check or leaker); Stains (slight/moderate stain or prominent stain); Adhering Dirt or Foreign Material; Egg Shape (approximately normal shape, unusual or decidedly misshapen); Shell Texture (large calcium deposits, body check or pronounced ridges); Shell Thickness (pronounced thin spots); No Defect.
- 9. (EGG INTERIOR QUALITY GRADING and WRITTEN FACTORS) Each participant will determine written factors for the grading of the exterior chicken eggs. The written factors will relate to the criteria used for grading exterior quality of eggs.

Class #	£	Points
7.	Ten white-shell eggs for interior quality grading	50
8.	Fifteen chicken eggs for exterior quality grading	50
9.	Evaluation criteria for Class 8	50

# **Further Processed Poultry**

- 10. (BONELESS FUTHER PROCESSED POULTRY MEAT PRODUCTS) Each participant will determine written quality factors for a class of ten boneless further processed poultry meat products (e.g. precooked, poultry meat patties, tenders, nuggets or other boneless products). Criteria for evaluation will include coating defects, color defects, consistency of shape/size, broken and/or incomplete products, cluster/marriages and evidence of foreign material. Participants may not touch any product; doing so will result in disqualification.
- 11. (BONE-IN FUTHER PROCESSED POULTRY MEAT PRODUCTS) Each participant will determine written quality factors for a class of ten bone-in further processed poultry meat products (e.g., precooked, bone-in wings or other bone-in poultry meat products). Criteria for evaluation will include coating defects, color defects, consistency of size, broken products, miscut products, mixed products and evidence of foreign material. Participants may not touch any product; doing so will result in disqualification.

12. (IDENTIFICATION OF CARCASS PARTS) Each participant will identify ten poultry parts. Poultry parts to be identified will be randomly selected and consistent with those used in the chicken processing and merchandising industries. The participant may not touch any part; doing so will result in disqualification.

Class	s #	Points
10.	Boneless Further Processed Poultry Meat Products	50
11.	Bone-In Further Processed Poultry Meat Products	50
12.	Ten chicken carcass parts for identification	50

# **Poultry Management Written Exam**

13. Each participant will complete a 30 item written examination on poultry production, management, anatomy and physiology. Five or more items will require mathematical calculations. Examination items will be developed from information found in the references (see Section IX).

Class # 13. Written Examination		Points 150
VI. Scoring	Individual	Team
Twelve Classes	600	1800
Written Exam	150	450
Total Individual Points Possible	750	2,250

# VII. Tiebreakers

If ties occur, the following classes will be used in order to determine the ranking of award recipients:

1. Written Management Exam

2. Evaluation of Live Birds

# 2019 Career Development Event Rules and Regulations

	Poultry Form #478-7	This sheet is for	demonstration a	and practice
	Incorrect Marks Correct Mark	only. You must competition.	use a real scan s	sheet for actual
Team #	Last Name	First Name	Carcass / Part Grading	Placing Classes
0000			Carcass/ Quality Grade	Broilers Hens RTC
00000				1 1234 0 0 0
2222	<b>B B B B B B B B B B B B B B B</b>	BBBBBBB	2 (A) (B) (C) (C)	2 1243 0 0 0
3333	00000000000000	0000000	3 ABCO	3 1324 0 0 0
4444		0000000	4 (A) (B) (C) (C)	4 1342 0 0 0
6656	EEEEEEEEEEE	EEEEEE	5 ABCO	§ 1423 O O O
6666	FFFFFFFFFFFFFFFFFF	EEEEE	6 (A) (B) (C) (C)	6 1432 O O O
TTTT	0000000000000000	GGGGGGG	7 ABCO	7 2134 0 0 0
8888	B B B B B B B B B B B B B B B	H H H H H H H	8 A B C O	* 2143 O O O
0000	000000000000000	00000000	9 (A) (B) (C) (C)	9 2314 0 0 0
	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	00000000	10 (8) (6) (0) (0)	10 2341 0 0 0
Code #	KKKKKKKKKKKKKK	KKKKKKK	TNG = Nongradable	11 2413 0 0 0
		DDDDDDDD		12 2431 0 0 0
			Egg Interior	13 3124 0 0 0
00	M M M M M M M M M M M M	N N N N N N N	Quality Grading	14 3142 0 0 0
DD	000000000000000000000000000000000000000	00000000	Egg Quality Grade	15 3214 🔘 🔘 🔘
22	<u> </u>	PPPPPP	Number AA A B Loss	16 3241 🔾 🔾 📿
33	000000000000000000	00000000		17 3412 🔘 🔘 🔘
(A) (A)	B B B B B B B B B B B B B B B B B B B	(R) (R) (R) (R) (R) (R)	2 (A) (B) (C)	18 3421 🔘 🔘 🔘
66	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3333333	3 AA A B O	19 4123 0 0 0
66	annanananana	aaaaaaa	4 (A) (B) (C)	2º 4132 O O O
00		00000000	5 (AA) (A) (B) ()	21 4213 0 0 0
88	A A A A A A A A A A A A A A A A A A A	W W W W W W W W W W W W W W W W W W W	6 AA A B C	<b>2 4231</b> O O O
99	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		7 AA A B O	23 4312 0 0 0
	XXXXXXXXXXXXXXXXXX	xxxxxxxx	8 AA A B O	24 4321 0 0 0
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	00000000	9 AA (A) (B) (	1 2 3
	T T T T T T T T T T T T T T T T T T T	(Z) (Z) (Z) (Z) (Z) (Z) (Z)	10 AA A B C	

Rea	sons	Egg Exterior Quality Grading													
4	2			and V	Vritten	Factor	s								
			Egg Number												
		Grade	1	2	3	4	5	6	7	8	9	10	en lo		
00	00	1 AA/A	6A9	64.3	64.0	AAG	ARIA	hais	(A)	64.0	(A)	64.9			
DD	DO	2 B	B	B	B	(B)	B	(B)	B	B	B	(8)	the state		
22	22	3 Nongradable	NG	(HG)	HG	(HG)	(NG)	(NG)	NG	NG	HG	(116)	- 0		
33	33	Defect	1	2	3	4	5	6	7	8	9	10			
(D) (D)	(4) (4)	1 Checked	0	0	0	0	0	0	0	0	0	0			
66	66	2 Dented Checked	0	0	0	0	0	0	0	0	0	0			
6	6	3 Leaker	0	0	0	0	0	0	0	0	0	0			
0	C	4 Slight / Moderate Stain	0	0	0	0	0	0	0	0	0	0			
(3)	(9)	5 Prominent Stain	0	0	0	0	0	0	0	0	0	0	Man		
9	9	6 Adhering Dirt / Foreign Material	0	0	0	0	0	0	0	0	0	0	BIII		
	1	7 Decidedly Misshapen	0	0	0	0	0	0	0	0	0	0	nat a		
		8 Large Calcium Deposits	0	0	0	0	0	0	0	0	0	0	(pp)		
		9 Body Check	0	0	0	0	0	0	0	0	0	0	-		
		10 Pronounced Ridges	0	0	0	0	0	0	0	0	0	0			
		11 Pronounced Thin Spots	0	0	0	0	0	0	0	0	0	0	1		
		12 No Defect	0	0	0	0	0	0	0	0	0	0			
			1	2	3	4	5	6	7	8	9	10			

# 2019 Career Development Event Rules and Regulations

Identification of Carcass Parts													Exam
					Part N	umber						1 (	ABCDE
Part	1	2	3	4	5	6	7	8	9	10		2 (	ABCDE
1 Half	0	$\circ$	0	$\bigcirc$	0	$\bigcirc$	0	$\circ$	0	$\bigcirc$		3 (	ABCDE
2 Front Half	0	0	0	0	0	0	0	0	0	0		4 (	ABCDE
3 Rear Half	0	0	0	0	0	0	0	0	0	0		5 (	ABCDE
4 Whole breast with ribs	0	0	0	$\circ$	0	0	0	0	0	$\circ$		6 (	ABCDE
<sup>5</sup> Bnls., skinless whole breast with rib meat	0	0	0	0	0	0	0	0	0	0		7 (	ABCDE
6 Whole breast	0	$\circ$	0	0	0	$\circ$	0	$\circ$	0	$\bigcirc$		8 (	ABCDE
7 Bnls., skinless whole breast	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$		9 (	ABCDE
8 Split breast with ribs	0	0	0	0	0	0	0	0	0	0		10 (	ABCDE
9 Bnls., skinless split breast with rib meat	0	0	0	0	0	0	0	0	0	0		11 (	ABCDE
10 Split breast	0	0	0	0	0	0	0	0	0	0		12 (	ABCDE
11 Bnls., skinless split breast	0	0	0	0	0	0	0	0	0	0		13 (	ABCDE
12 Breast quarter	0	0	0	0	0	0	0	0	0	0	Ma	14 (	ABCDE
13 Breast quarter without wing	0	0	0	0	0	0	0	0	0	$\bigcirc$	201	15 (	ABCDE
14 Tenderloin	0	0	0	0	0	0	0	0	0	0	e an	16 (	ABCDE
16 Wishbone	0	$\bigcirc$	0	$\circ$	0	$\circ$	0	$\bigcirc$	0	$\bigcirc$	SWei	17 (	ABCDE
16 Leg quarter	0	$\bigcirc$	0	$\circ$	0	$\bigcirc$	0	0	0	$\bigcirc$	Пe	18 (	ABCDE
17 Leg	0	0	0	0	0	0	0	0	0	0	6	19 (	ABCDE
18 Thigh w/ back portion	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$	olu	20 (	ABCDE
19 Thigh	0	0	0	0	0	0	0	0	0	0	1	21 (	ABCDE
20 Bnls., skinless thigh	0	0	0	0	0	0	0	$\circ$	0	0		22 (	ABCDE
21 Drumstick	0	0	0	0	0	0	0	0	0	$\bigcirc$		23 (	ABCDE
22 Bnls., skinless drum	0	0	0	0	0	0	0	0	0	$\bigcirc$		24 (	ABCDE
23 Wing	0	0	0	0	0	0	0	0	0	0		25 (	ABCDE
24 Drumette	0	$\bigcirc$	0	0	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$		26 (	ABCDE
26 Wing portion	0	0	0	0	0	0	0	0	0	0		27 (	ABCDE
26 Liver	0	0	0	0	0	0	0	0	0	0		28 (	ABCDE
27 Gizzard	0	0	0	0	0	0	0	0	0	0		29 (	ABCDE
28 Heart	0	0	0	0	0	0	0	0	0	0		30 (	ABCDE
29 Neck	0	0	0	0	0	0	0	0	0	0			
30 Paws	0	0	0	0	0	0	0	0	0	0			
	1	2	3	4	5	6	7	8	9	10			

Boneless Further Processed Poultry Meat Products											
					Product	Number					Γ
Defect	1	2	3	4	5	6	7	8	9	10	
1 Coating Void	0	0	0	0	0	0	0	0	0	0	
2 Inconsistent Color	0	0	0	0	0	0	0	0	0	0	3
<sup>3</sup> Inconsistent Shape / Size	0	0	0	0	0	0	0	0	0	0	R a
4 Broken / Incomplete	0	0	0	0	0	0	0	0	0	0	
6 Cluster / Marriages	0	0	0	0	0	0	0	0	0	0	- ab
6 Foreign Material	0	0	0	0	0	0	0	0	0	0	Ň
7 No Defect	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	10	

Bone-In Further Processed Poultry Meat Products											
					Product	Number	r				Г
Defect	1	2	3	4	5	6	7	8	9	10	L
1 Coating Void	Ó	0	Õ	Ó	Õ	Õ	Ó	0	Ō	0	L
2 Inconsistent Color	0	0	0	0	0	0	0	0	0	0	1
Inconsistent Size	0	0	0	0	0	0	0	0	0	0	H
4 Broken / Broken Bone	0	0	0	0	0	0	0	0	0	0	1
6 Miscut	0	0	0	0	0	0	0	0	0	0	1
6 Foreign Material	0	0	0	0	0	0	0	0	0	0	1
7 No Defect	0	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	10	1

# Veterinary Science

Maximum Number of Team Members	4	BBAR
Number of Team Members Scored	4	The and a first
Scantron	Horticulture CDE# 105482	
Committee:		
Craig Canterbury		
Tim Kidwell		
Charity Marstiller		
Brianne McCauley		
Julie Sions		

# Purpose

The purpose of the veterinary science career development event is to promote college and career readiness by providing opportunities to develop technical knowledge and demonstrate practical skills in the field of veterinary science.

# Objectives

Participants will demonstrate professional ethics, decision-making, communication and problemsolving skills.

Participants will demonstrate technical competency with small and large animals in the areas of:

- Anatomy and physiology
- Clinical procedures
- Identification
- Health and safety
- Medical terminology

## **Event Rules**

- 1. Teams will consist of four members with all four members' scores counting toward total team score.
- 2. **Dress code:** All participants must wear either scrubs (top and bottoms; solid color) or polo with slacks. All participants must wear closed toe, closed heel and flat shoes (no clogs, sandals or flip-flops). No jewelry may be worn on the second day of this event. This includes rings, bracelets, earrings and exposed body piercing. Wrist watches are permitted.
- 3. **Tools and Equipment:** The chapter must provide pencils, calculators, clipboards and paper. Due to sanitation reasons, some items that may be needed in the event (such as stethoscopes) will need to be provided by the participant or their chapter.
- 4. Contest coordinators will provide the specific tools and equipment needed to complete practicums.

## **Event Format**

- A. Individual Activities
  - 1. Written Exam 100 points

The objective, multiple-choice exam is designed to determine team members' broad understanding of the veterinary science field. The written exam will consist of 50 multiple-choice questions. Forty minutes will be given for the exam. Topics for the exam may include:

Topics for the exam may include:

- Behavior
- Disease (causes and sources, signs and clinical signs)
- Medical terminology
- Medical records
- Anatomy/physiology
- Regulations (OSHA: Federal Occupational Safety and Health
- Administration; GHS: Globally Harmonized System for Hazard
- Communication; SDS: Safety Data Sheets)
- Patient management
- Facility management
- Practice management
- Genetics
- Nutrition
- Husbandry
- 2. MATH APPLICATIONS EXAM (100 POINTS) The number of practicum questions will vary based on the type of activity that is assigned. Participants will have 30 minutes to complete the entire math application practicum. Questions may include conversions, dose calculations, dilutions, cost calculations and invoices.
- 3. CURRENT EVENTS (100 POINTS) The current event activity will allow students to utilize critical thinking and problem-solving skills. Thirty minutes total will be allowed to complete this portion of the event. Participants will be provided a current event topic in the superintendent letter. The current event portion could be a blend of writing and digital evaluation. Written responses may range from short answers to essays.
- 4. Identification 100 points total

Participants will identify equipment, parasites and breeds/species for a total of 100 points (2 points per item). Fifty minutes will be given for this activity. Identification lists are located at the end of this handbook.

5. Equipment – 50 points Participants will identify

Participants will identify pieces of equipment (actual equipment and photos). They will also need to have general knowledge about the use for each item.

- Parasites/Microscopic 30 points
   Participants will identify parasites (specimen and photos) and explain the life cycles of selected parasites. Participants will identify microscopic organisms.
- 7. Breeds 20 points Participants will identify breeds of small and large animals (photos).
- B. Practicums 320 points total

- 1. Clinical Procedure Practicum (200 points) Participants will be given four clinical procedure activities to complete (50 points each). Fifteen to thirty minutes will be allotted for this section depending on the activities selected each year. Participants are expected to talk through the clinical procedure steps to a judge as they are being scored. Judges may ask participants for clarification on steps performed. All clinical procedure scorecards can be found at the end of this handbook.
- 2. Handling and Restraining Practicum (120 points) Participants will be given four handling/restraint activities to complete (30 points each). Fifteen to thirty minutes will be allotted for this section depending on the activities selected each year. Participants are expected to talk through the handling and restraining steps to a judge as they are being scored. Judges may ask participants for clarification on steps performed. All handling and restraining scorecards can be found at the end of this handbook.
- 3. Math Applications Practicum 100 points

Five math practicum questions will be used. Participants will have 30 minutes to complete the entire math application practicum. Questions may include conversions, dose calculations, dilutions, cost calculations and invoices.

# Example:

Sophie, a golden retriever, and her owner have just moved from out-of-state and are reestablishing veterinarian relations at your clinic. Sophie's owner has provided you with her health records from their previous veterinarian. Sophie had been prescribed a diet plan by the previous veterinarian and had been coming into the clinic for weekly weight checks. Sophie's owner would like to continue the weekly checks with you. You weigh Sophie and record her weight as 19 kg. The owner would like you to tell her how much weight Sophie has lost. Sophie's last recorded weight was 43.2 lb. How many pounds did Sophie lose since the last weighing? ANSWER: Sophie has lost 1.4 lb. since the last recorded weighing.

4. Handling and Restraining Practicum – 120 points

Participants will be given four handling/restraint activities to complete (30 points each). Fifteen to thirty minutes will be allotted for this section depending on the activities selected each year. Participants are expected to talk through the handling and restraining steps to a judge as they are being scored. Judges may speak and ask questions to the participant at the end of each activity, if time allows. All handling and restraining scorecards can be found at the end of this handbook.

5. Clinical Procedure Practicum - 200 points

Participants will be given four clinical procedure activities to complete (50 points each). Fifteen to thirty minutes will be allotted for this section depending on the activities selected each year. Participants are expected to talk through the clinical procedure steps to a judge as they are being scored. Judges may speak and ask questions to the participant at the end of each activity, if time allows. All clinical procedure scorecards can be found at the end of this handbook.

# C. Team Activity - 200 points

Teams will conduct research using local veterinarians and veterinary resources based on the annual topic posted on the CDE webpage in November. The team will be provided a specific scenario when they begin their team activity. They will have a total of 15 minutes to prepare their presentation. Teamwork will be assessed during the plan development time. Teams will evaluate the information provided and prepare the questions, diagnostics and recommendations as well as explain steps and procedures for the veterinary process in their plan. Teams need to determine what aspects of veterinary medicine and roles are most important to demonstrate based on the annual topic. After preparation the team will be required to give an oral presentation for a maximum of 15 minutes explaining decisions made by the team. All team members are expected to participate in the presentation. The team will then be required to answer questions from judges regarding the decisions reached by their team. Resources provided for the team activity may include diagnostic information like blood work, synopsis of disease state, treatment recommendations and cost information.

# **Event Scoring**

Scoring		
ACTIVITIES	Individual Points	Team Points
Written Exam	100	
Current Event	100	
Identification	100	
Math Application Exam	100	
Handling and Restraining Exam	120	
Clinical Procedures Practicum	200	
Team Activity		200
	720	3,080

# TIEBREAKERS

Tiebreakers will be settled in the following order:

- 1 Combined practicum score
- 2 Written exam score

# Resources

This list of references is not intended to be all inclusive. Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.

## **Resources**

## This list of references is not intended to be all inclusive.

Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. Make sure to use discretion when selecting website references by only using reputable, proven sites. The following list contains references that may prove helpful during event preparation. The most current edition of resources will be used.

Past CDE materials and other resources are available by logging in to *https://www.ffa.org/participate/cdes/veterinary-science* 

# WRITTEN EXAM:

- Small Animal Care and Management. Warren. ISBN: 978-1-4180-4105-2
- McCurnin's Clinical Textbook for Vet Technicians 8th edition-ISBN 978-1-4377-2690-0
- An Illustrated Guide to Veterinary Medical Terminology. Romich. ISBN: 978-1-4354-2012-0
- Official Guide: Maintaining and Cleaning Surgical Instruments. Stow.: https://www.ffa.org/SiteCollectionDocuments/cde\_vetsci\_ guide\_maintaining\_clearing\_surgical\_instruments.pdf
- Veterinary Science: Preparatory Training for the Veterinary Assistant. Faries. ISBN: 978-0-9849115-0-9. Order online: https:// agrilifebookstore.org/publications\_browse2.cfm?keywordid=4
- Introduction to Veterinary Science. Lawhead, Baker. ISBN: 978-1-4283-1225-8
- http://todaysveterinarypractice.navc.com/
- Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6
- Clinical Procedures & Handling/Restraining Practicums : 11
- Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6
- McCurnin's Clinical Textbook for Vet Technicians 8th edition- ISBN 978-1-4377-2690-0
- Manual of Clinical Procedures in Dogs, Cats, Rabbits & Rodents. Crow, Walshaw, Boyle. ISBN: 978-0813813042
- Veterinary Science: Preparatory Training for the Veterinary Assistant. Faries. ISBN: 978-0-9849115-0-9. Order online: *https://agrilifebookstore.org/publications\_browse2.cfm?keywordid=4*

# **IDENTIFICATION:**

- Veterinary Instruments and Equipment: A Pocket Guide. Sonsthagen. ISBN: 978-0323032032 http://loudoun.nvcc.edu/vetonline/vet121/instruments.htm
- https://www.spectrumsurgical.com/product/10-0227/Surgical-Instrument-Flash-Cards.php
- American Kennel Club http://www.akc.org/index.cfm
- Cat Fanciers' Association *http://www.cfa.org/client/breeds.aspx*
- American Rabbit Breeders Association *http://www.arba.net/*

# MATH PRACTICUM:

• Medical Mathematics and Dosage Calculations for Veterinary Professionals. Bill, Robert. ISBN: 978-08138263 Essential Calculations for Veterinary Nurses and Technicians. Terry Lake and Nicola Green. ISBN 978-0-7020-2930-1
 https://www.ffa.org/SiteCollectionDocuments/Math%20Resource.pdf

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# **Equipment and Materials Identification List**

100.	Ambubag
101.	Anesthetic machines
102.	Autoclave
103.	Autoclave tape indicator
104.	Backhaus towel clamps
105.	Balling gun
106.	Bandaging material — Elasticon
107.	Bandaging material — roll gauze
108.	Bandaging material — vet wrap
109.	Bands (castration or docking)
110.	Cat bag
111.	Catch pole (dog snare)
112.	Catheter - butterfly
113.	Catheter — IV
114.	Catheter — Tomcat urinary
115.	Centrifuge
116.	Chemical indicator strips
117.	Cold sterile tray
118.	Dehorner – Barnes
119.	Dehorner – electric
120.	Dental floats
121.	Dental scaler
122.	Drench gun — small ruminant
123.	Ear notcher
124.	Elastrator
125.	Elizabethan collar
126.	Emasculators
127.	Endoscope
128.	Endotracheal tubes
129.	Fecal loop

130.	Fecalyzers
131.	Feeding tube for small animals
132.	Fetal extractor – calf
133.	Forceps - Alligator
134.	Forceps – Allis tissue
135.	Forceps – Babcock tissue
136.	Forceps - Brown-Adson thumb
137.	Forceps - Crile
138.	Forceps - Kelly
139.	Forceps — Halstead mosquito hemostatic
140.	Forceps — Rat tooth thumb
141.	Gravity feeder / J tube
142.	Head gate
143.	Hog snare
144.	Hoof knife
145.	Hoof rasp
146.	IV administration set
147.	Laparoscope
148.	Laryngoscopes
149.	Muzzle – basket
150.	Muzzle – nylon
151.	Needle holder – Mayo-Hegar
152.	Needle holder – Olsen-Hegar
153.	Obstetrical chain and handle
154.	Ophthalmoscope
155.	Otoscope
156.	Pig tooth nippers
157.	Radiology personal protective equipment
158.	Rectal prolapse ring – swine

159. Rumen magnet 160. Scalpel blade 161. Scalpel handle 162. Scissors - Suture wire cutting 163. Scissors - Bandage 164. Scissors - Lister bandage 165. Scissors - Littauer suture removal 166. Scissors - Mayo dissecting 167. Scissors - Metzenbaum dissecting 168. Silver nitrate sticks 169. Small animal oxygen cage 170. Snook ovariohysterectomy hook 171. Speculum - large animal oral 172. Speculum - small animal oral 173. Speculum - vaginal 174. Squeeze chute 175. Staple remover 176. Stethoscope 177. Surgical drapes 178. Suture needle - cutting 179. Suture needle - taper 180. Syringe - automatic, multi-dose 181. Tattooing instruments - small and large 182. Tonometer 183. Tourniquet 184. Trocar and cannula 185. Twitch chain 186. Twitch human

# Parasite/Microscopic Identification List

- 200. Blowfly (Family Calliphoridae)
- 201. Calcium oxalate crystals
- 202. Cat Warble (Genus Cuterebra)
- 203. Cocci (bacteria)
- 204. Coccidia (Genus Isospora or Eimeria)
- 205. Demodectic Mite (Genus Demodex)
- 206. Ear Mite (Family Psoroptidae ; Genus Otodectes)
- 207. Eosinophils
- 208. Epithelial cells (urine)
- 209. Flea Larva (Genus Ctenocephalides)
- 210. Flea Tapeworm Egg\* (Genus Dipylidium)
- 211. Flea Tapeworm Segment\* (Genus Dipylidium)
- 212. Flea Tapeworm\* (Genus Dipylidium)
- 213. Fleas\* (Genus Ctenocephalides)
- 214. Giardia\* (Genus Giardia)
- 215. Heartworm Adult\* (Genus Dirofilaria)
- 216. Heartworm Microfilaria\* (Genus Dirofilaria)
- 217. Hookworm Adult" (Family Ancylostomatidae; Genus Ancylostoma, Uncinaria, Bunostomum or Globocephalus)
- 218. Hookworm Egg\* (Family Ancylostomatidae; Genus Ancylostoma, Uncinaria, Bunostomum or Globocephalus)
- 219. Horse Bots\* (Genus Gasterophilus)
- 220. Horse Strongyles\* (Family Strongylidae; Genus Strongylus)
- Lice Biting (Order Mallophaga; Genus Bovicola or Trichodectes)
- Lice Sucking (Order Anoplura; Genus Linognathus or Hematopinus)
- Liver Fluke (Class Trematoda; Genus Fasciola, Fascioloides or Dicrocoelium)
- 224. Mosquito Adult (Family Culicidae; Genus Anopheles,

Culex or Aedes)

- 225. Mosquito Larva (Family Culicidae; Genus Anopheles, Culex or Aedes)
- 226. Neutrophils
- 227. Platelets
- 228. Red blood cell (erythrocyte)
- 229. Rod (bacteria)
- Roundworm Adult\* (Family Ascarididae or Toxocaridae; Genus Toxocara, Toxascaris, Ascaris, Parascaris or Neoascaris)
- Roundworm Egg\* (Family Ascarididae or Toxocaridae; Genus Toxocara, Toxascaris, Ascaris, Parascaris or Neoascaris)
- 232. Sarcoptic Mite (Family Sarcoptidae ; Genus Sarcoptes or Notoedres)
- 233. Struvite crystals (triple magnesium phosphate)
- 234. Taenia Tapeworm Egg\* (Family Taeniidae; Genus Taenia)
- 235. Taenia Tapeworm Segment\* (Family Taeniidae; Genus Taenia)
- 236. Taenia Tapeworm\* (Family Taeniidae; Genus Taenia)
- 237. Tick American Dog (Family Dermacentor; Genus variabilis)
- Tick Black Legged Deer (Family Ixodes; Genus scapularis)
- Tick Brown Dog (Family Rhipicephalus; Genus sanguineus)
- 240. Tick Lonestar (Family Amblyomma; Genus americanum)
- 241. Whipworm Egg\* (Genus Trichuris)
- 242. Whipworm\* (Genus Trichuris)
- 243. Yeast (cytology)

# **Breed/Species Identification List**

# DOGS

#### HERDING GROUP

300. Australian Cattle Dog
301. Australian Shepherd
302. Border Collie
303. Collie
304. German Shepherd Dog
305. Old English Sheepdog
306. Pembroke Welsh Corgi
307. Shetland Sheepdog

#### HOUND GROUP

308. Afghan Hound
309. Basenji
310. Basset Hound
311. Beagle
312. Black and Tan Coonhound
313. Bloodhound
314. Dachshund
315. Greyhound
316. Rhodesian Ridgeback

#### NON-SPORTING GROUP

317. Bichon Frise
318. Boston Terrier
319. Bulldog
320. Chinese Shar-Pei
321. Chow Chow
322. Dalmatian
323. Poodle

#### SPORTING GROUP

324. Brittany Spaniel
325. Cocker Spaniel
326. English Setter
327. German Shorthaired Pointer
328. Golden Retriever
329. Irish Setter
330. Labrador Retriever
331. Weimaraner

#### **TERRIER GROUP**

332. Bull Terrier
333. Cairn Terrier
334. Parson Russell Terrier
335. Scottish Terrier
336. West Highland White Terrier

#### TOY GROUP

337. Cavalier King Charles Spaniel
338. Chihuahua
339. Miniature Pinscher
340. Papillon
341. Pekingese
342. Pomeranian
343. Poodle
344. Pug
345. Shih Tzu
346. Yorkshire Terrier

#### WORKING GROUP

347. Bernese Mountain Dog 348. Boxer 349. Doberman Pinscher 350. Great Dane 351. Great Pyrenees
352. Mastiff
353. Newfoundland
354. Portuguese Water Dog
355. Rottweiler
356. Saint Bernard
357. Siberian Husky
358. Standard Schnauzer

# CATS

359. Abyssinian
360. American Shorthair
361. Burmese
362. Maine Coon
363. Manx
364. Persian
365. Ragdoll
366. Russian Blue
367. Siamese
368. Sphynx

# BIRDS

369. African Gray Parrot
370. Canary
371. Cockatiel
372. Cockatoos
373. Love Birds
374. Macaw
375. Parakeet
376. Sun Conure
377. Zebra Finch

#### Breed/Species Identification List continued

## REPTILES

378. Bearded Dragon 379. Chameleon 380. Gecko 381. Iguana

## POULTRY

382. Chicken – Cornish
383. Chicken – Leghorns
384. Chicken – Plymouth Rock
385. Chicken – Rhode Island Red
386. Duck
387. Geese
388. Quail
389. Turkey

#### SMALL MAMMALS

390. Chinchilla
391. Ferret
392. Gerbils
393. Guinea Pig
394. Hamster
395. Hedgehog
396. Sugar Glider

## RABBITS

397. Angora 398. Californian 399. Dutch 400. English Spot 401. Holland Lop 402. Mini-Rex 403. Netherland Dwarf 404. New Zealand

#### DAIRY CATTLE

405. Ayrshire 406. Brown Swiss 407. Guernsey 408. Holstein 409. Jersey

#### **BEEF CATTLE**

410. Angus 411. Brahman 412. Charolais 413. Hereford 414. Shorthorn 415. Simmental

#### HORSE

416. Appaloosa
417. Arabian
418. Belgian
419. Clydesdale
420. Morgan
421. Paint
422. Percheron
423. Quarter Horse
424. Saddlebred
425. Tennessee Walking Horse
426. Thoroughbred

## GOAT

427. Alpine 428. Nubian 429. Angora 430. Boer 431. LaMancha 432. Saanen 433. Toggenburg

#### SHEEP

434. Columbia 435. Dorper 436. Dorset 437. Hampshire 438. Merino 439. Rambouillet 440. Southdown 441. Suffolk

## SWINE

442. American Landrace 443. Berkshire 444. Chester White 445. Duroc 446. Hampshire 447. Yorkshire

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# **Team Activity Preparation Rubric**

200 points

INDICATOR	Very strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 1-0 points	Points Earned	Weight	Total Score
Effective listening	Clearly evident that all team members are listening.	Listening occurs but distraction is evident.	Not listening to each other and/or talking over each other.		X 5	
Oral communication	Clearly evident that all team members are discussing the topic.	Communication occurs but side conversations are occurring or two to three members dominating.	One member dominating conversation.		Χ5	
Demonstrated cooperation	Clearly all team members completing tasks, sharing written and oral solutions.	Tasks primarily completed by two to three members, other members assist occasionally.	Tasks primarily completed by one member, other members contributing only slightly.		X8	
	Clearly all team members respected the input of other team members.	Most team members respected the input of other team members.	The team members did not respect the input of other team members.		Х7	
Participated in the team preparation	Clearly all team members are engaged, attentive, and making notes for the full term of event.	Members are engaged and attentive with two to three making notes, participation fades over time.	One to twomembers form the primary team, other members participate occasionally early, fade over time.		X8	
	Clearly all team members demonstrate efficient use of his/her time in comprising the plan.	Most team members demonstrate efficient use of his/her time in comprising the plan.	One to twoteam members demonstrate efficient use of his/her time in comprising the plan.		X7	

TOTAL

Veterinary Science

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# **Team Activity Presentation Rubric**

300 points

INDICATOR	Very strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 1-0 points	Points Earned	Weight	Total Score
Non-verbal -	- 50 points					
Attention (eye contact)	Eye contact constantly used as an effective connection. Constantly looks at the entire audience (90-100 percent of the time).	Eye contact is mostly effective and consistent. Mostly looks around the audience (60-80 percent of the time).	Eye contact does not always allow connection with the speaker. Occasionally looks at someone or some groups (less than 50 percent of the time).		X4	
Mannerisms	Does not have distracting mannerisms that affect effectiveness.	Sometimes has distracting mannerisms that pull from the presentation.	Has mannerisms that pull from the effectiveness of the presentation.		Х3	
Gestures	Gestures are purposeful and effective. Hand motions are expressive, and used to emphasize talking points. Confident with positive body language.	Usually uses purposeful gestures. Hands are sometimes used to express or emphasize. Occasionally slumps; sometimes negative body language.	Occasionally gestures are used effectively. Hands are not used to emphasize talking points; hand motions are sometimes distracting. Lacks positive body language; slumps.		X3	
Oral – 50 po	ints					
Speaking without hesitation	Speaks very articulately without hesitation. Never has the need for unnecessary pauses or hesitation when speaking.	Speaks articulately, but sometimes hesitates. Occasionally has the need for a long pause or moderate hesitation when speaking.	Speaks articulately, but frequently hesitates. Frequently hesitates or has long, awkward pauses while speaking.		Х 3	
Tone	Appropriate tone is consistent. Speaks at the right pace to be clear. Pronunciation of words is very clear and intent is apparent.	Appropriate tone is usually consistent. Speaks at the right pace most of the time, but shows some nervousness. Pronunciation of words is usually clear, sometimes vague.	Has difficulty using an appropriate tone. Pace is too fast; nervous. Pronunciation of words is difficult to understand; unclear.		X 2	

#### Veterinary Science

#### Team Activity Presentation Rubric continued

All team members participated	All team members took an active role in the presentation.	Three team members took an active role in the presentation.	Two or less team members took an active role in the presentation.	X 5	
Content - 20	00 points				
Veterinary topic research	Demonstrates prior research and preparedness of the veterinary topic.	Demonstrates somewhat prior research and preparedness of the veterinary topic.	Does not demonstrate prior research and preparedness of the veterinary process.	X 5	
	Full understanding of disease and/or veterinary process.	Somewhat understanding of disease and/or veterinary process.	Does not understand the disease and/or veterinary proces.s	X 5	
	Full understanding of treatment protocols and/or recommendation for the topic.	Somewhat understanding of treatment protocols and/or recommendation for the topic.	Does not understand the treatment protocols and/or recommendation for the topic.	X5	
Demonstrates knowledge of topic	Presentation supports strong knowledge of the subject with good evidence of support.	Presentation supports some knowledge of the subject with fair evidence of support.	Presentation supports little knowledge of the subject with poor evidence of support.	X 15	
Q&A: Knowledge of the topic	Participants knowledge of topics: Strong knowledge with solid answers.	Participants knowledge of topics: Somewhat knowledgeable but with less concise and clear answers.	Participants knowledge of topics: Little knowledge with weak evidence of support to answers.	X5	
	Speaks unrehearsed with comfort and ease. Is able to speak quickly with organized thoughts and concise answers.	Speaks unrehearsed mostly with comfort and ease, but sometimes seems nervous or unsure. Is able to speak effectively, has to stop and think sometimes, and gets off focus.	Shows nervousness or seems unprepared when speaking unrehearsed. Seems to ramble or speaks before thinking.	X5	
		I		TOTAL	

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Veterinary Science



# **Current Events Rubric**

100 points

NAME

MEMBER NUMBER

CHAPTER

STATE

INDICATOR	Very strong evidence of skill is present 5-4 points	Moderate evidence of skill is present 3-2 points	Strong evidence of skill is not present 1-0 points	Points Earned	Weight	Total Score
WRITTEN C	OMMUNICATION				h7	
Spelling/ grammar (sentence structure, verb agreement, etc.)	<ul> <li>Spelling and grammar are extremely high quality.</li> <li>Two or fewer spelling errors are present.</li> <li>Two or fewer grammar errors are present.</li> </ul>	<ul> <li>Spelling and grammar are adequate.</li> <li>Three to five spelling errors are present.</li> <li>Three to five grammar errors are present.</li> </ul>	<ul> <li>Spelling and grammar are less than adequate.</li> <li>Six or more spelling errors are present.</li> <li>Six or more grammar errors are present.</li> </ul>		X 1	
Message	Communicates ideas extremely clearly as well as extremely focused. Thoughts are very interesting and understandable. • All main ideas are supported by clear and vivid details. • Clearly organized and concise by remaining on target, is completely focused with obvious construction and strong introduction, body and conclusion layout.	Communicates ideas clearly and concisely, and message is interesting and understandable. Most of the main ideas are supported by sufficient details. Good organization with few statements out of place or lacking in clear construction.	Communicates ideas clearly, but message is difficult to understand. • None of the main ideas are supported by sufficient details. • Little to no organization is present and is sometimes awkward and lacking construction.		X 3	
Writing style	<ul> <li>Writing style is selectively appropriate for the intended audience.</li> <li>The style chosen has obviously been well thought-out based on the specific audience.</li> </ul>	<ul> <li>Thought was given to the intended audience, and the style reflects the purpose for communicating with that audience.</li> <li>Most language is appropriate for the intended audience.</li> </ul>	<ul> <li>Writing style does not show intent to connect with different types of audiences, style is more for a generic reader.</li> <li>Some language used might be confusing for some audiences</li> </ul>		X 1	



#### Veterinary Science

#### Breed/Species Identification List continued

WRITTEN CONTENT         Subject knowledge       Cavers topic in-depth with details and examples.       Includes essential knowledge about the topic.       Includes essential knowledge about the topic.       Includes essential knowledge about the topic.       Includes essential knowledge appears to be good.       Includes essential information about the topic but there are one to two factual errors.         Critical thinking/ problem-solving skills       Uses general methods, in an orderly manner, for finding solutions to groblems.       Uses limited critical thinking skills in determining solutions to problems.       Uses limited critical thinking skills in determining solutions to problems.       Develops moderate defense to conclusion for position or argument.       Develops weak defense to conclusion for position or argument.       X 6         Inductive reasoning skills       Establishes a logical, systematic process of achieving certain ends with accuracy and efficiency.       Establishes a shallow reasoning process of achieving certain ends.       Sathers together limited observations in the form of premises.       Howes from of premises.       Howes from of premises.       Howes from of premises.       Howes from of premises.       X 3	INDICATOR	Very strong evidence of skill is present 5-4 points	Moderate evidence of skill is present 3-2 points	Strong evidence of skill is not present 1-0 points	Points Earned	Weight	Total Score
Subject knowledgeCovers topic in-depth with details and examples. • Subject knowledge is excellent.Includes essential knowledge about the topic. • Subject knowledge appears to be good.Includes essential information about the topic but there are one to two factual errors.Includes essential information about the topic but there are one to two factual errors.X 6Critical thinking/ problem- solving skillsUses general methods, in an orderly manner, for finding solving skills in determining solutions to specific problems. • Evaluates evidence and assesses conclusions. • Develops and defends a 	WRITTEN C	ONTENT					
Critical thinking/ problem- solving skillsUses general methods, in an orderly manner, for finding solutions to specific problems.Uses limited critical thinking skills in determining solutions to problems.Uses weak critical thinking skills in determining solutions to problems.X 6Inductive reasoning skillsEstablishes a logical, systematic process of achieving certain ends with accuracy and efficiency.Establishes a shallow reasoning process of achieving certain ends with accuracy and efficiency.Establishes a shallow reasoning process of achieving certain ends.Establishes a shallow reasoning process of achieving certain ends.Establishes a ninadequate reasoning process of achieving certain ends.X 3Noves from specific premises to a general conclusion.Moves from in the form of premises to a general conclusion.X 3X 3	Subject knowledge	Covers topic in-depth with details and examples. • Subject knowledge is excellent.	Includes essential knowledge about the topic. • Subject knowledge appears to be good.	Includes essential information about the topic but there are one to two factual errors.		X 6	
Inductive reasoning skillsEstablishes a logical, systematic process of achieving certain ends with accuracy and efficiency. • Gathers together particular observations in the form of premises. • Moves from specific premises to a general conclusion.Establishes a shallow reasoning process of achieving certain ends. • Incompletely gathers observations in the form of specific a general conclusion.Establishes an inadequate reasoning process of achieving certain ends. • Incompletely gathers observations in the form of specific a general conclusion.X 3	Critical thinking/ problem- solving skills	Uses general methods, in an orderly manner, for finding solutions to specific problems. • Evaluates evidence and assesses conclusions. • Develops and defends a reasonable position or argument.	Uses limited critical thinking skills in determining solutions to problems. • Develops moderate defense to conclusion for position or argument.	Uses weak critical thinking skills in determining solutions to problems. • Develops weak defense to conclusion for position or argument.		X 6	
conclusion.	Inductive reasoning skills	Establishes a logical, systematic process of achieving certain ends with accuracy and efficiency. • Gathers together particular observations in the form of premises. • Moves from specific premises to a general conclusion.	Establishes a shallow reasoning process of achieving certain ends. • Gathers together limited observations in the form of premises. • Moves from incomplete specific premises to a general conclusion.	Establishes an inadequate reasoning process of achieving certain ends. • Incompletely gathers observations in the form of specific premises. • Inadequately formulates a general conclusion.		X 3	

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# Clinical Procedures Practicum Administering Aural Medication

CRITERIA	Points Possible	Points Earned
<ul> <li>The student successfully administered the proper amount of medication into the ear canal.</li> <li>Ear pinna held upright</li> <li>Correct amount of medication was administered without contamination</li> </ul>	20	
The student massages the base of the outside of the ear canal causing a swishing sound from the medication moving around in the ear canal.	15	
The student wipes any solution that may have leaked onto the outside of the ear flap or hair.	15	
TOTAL POINTS	50	

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# Clinical Procedures Practicum Administering Ophthalmic Medication

CRITERIA	Points Possible	Points Earned
The student wipes any discharge from the patient's eye using a gauze sponge or cotton ball.	8	
The student opens the end of the ophthalmic medicine	6	
The student uses the index finger and thumb to pull the upper and lower lids apart to open the eye.		
The student's thumb pulls the lower lid down and the index finger pulls the upper lid upward.	12	
The student's other finger may rest on the head of the animal.		
While resting the hand holding the medication on the head of the patient, the student applies the drops or ointment gently into the eye without touching the eye, counting each drop or applying the proper amount of ointment without contamination.	12	
The student releases the eyelids.	6	
The student allows the animal to blink to move the medication throughout the eye.	6	
TOTAL POINTS	50	

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# Clinical Procedures Practicum Administering an Intramuscular Injection

CRITERIA	Points Possible	Points Earned
The student selected the proper site for administration.	10	
The student directs the needle through the skin and into the muscle.	10	
The student aspirates; if no blood is noted, inject.	10	
The student withdraws the needle and places in the sharps container.	10	
The student massages the area where the injection was given and praises the patient.	10	
TOTAL POINTS	50	

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# Clinical Procedures Practicum Administering a Subcutaneous Injection

CRITERIA	Points Possible	Points Earned
The student lifts the skin using the thumb and forefinger forming a triangle or tent with the skin.	10	
The student inserts the needle into the skin at the base of the tent or triangle parallel to the body.	10	
The student aspirates; looking for any signs of blood entering the syringe; if no blood enters the syringe, the student administers the injection.	10	
The student withdraws the needle and places in the sharps container.	10	
The student rubs the injection site and praises the patient.	10	
TOTAL POINTS	50	

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# Clinical Procedures Practicum Bandage Removal

CRITERIA	Points Possible	Points Earned
The student chooses the bandage scissors and holds in proper orientation.	10	
The student keeps the blade flat against the body and the tip raised slightly upward in contact with bandage.	10	
The student begins cutting each layer from the distal end moving proximally.	10	
The student gently removes each layer of bandage.	10	
The student notes the status of the unbandaged area and states if it is normal or if there are any problems.	6	
The student cleans up work area.	4	
TOTAL POINTS	50	

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# Clinical Procedures Practicum Filling a Syringe for Injection

CRITERIA	Points Possible	Points Earned
The student determines the amount to be placed in the syringe.	6	
The student selects the proper-sized syringe.	8	
The student inserts the syringe into the top of the bottle.	6	
The student places the bottle upside down in one hand and holds securely.	6	
The student withdraws the proper volume.	6	
The student removes the syringe from the bottle.	6	
The student gently taps or snaps the edge of the syringe to remove any air bubbles, or slightly expel the air by pushing the end of the plunger.	6	
The student places syringe in the sharps container.	6	
TOTAL POINTS	50	
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### Clinical Procedures Practicum Fecal Flotation with Fecalyzer

CRITERIA	Points Possible	Points Earned
The student selected about ¼ teaspoon of feces and placed it into a fecalyzer.	6	
The student added enough flotation solution to fill the fecalyzer about half full.	6	
The student mixed the feces into solution until no large fecal particles remain.	6	
The student places insert into fecalyzer.	6	
The student filled the vial with more solution until there was a visible meniscus at the top.	6	
The student placed a cover slip on top of the fecalyzer.	6	
The student allowed the vial to sit undisturbed for 10-15 minutes.	6	
The student carefully removed the cover slip without tilting it and placed it on a microscope slide.	8	
TOTAL POINTS	50	

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# Clinical Procedures Practicum Opening a Surgery Pack

CRITERIA	Points Possible	Points Earned
The student placed the surgery pack on a clean, dry surface.	4	
The student removed or tore the tape securing the package.	4	
The student opened the first flap away from them.	8	
The student opens the side flaps without reaching across open pack.	8	
The student opens the last flap towards them.	8	
The student opened the pack without contamination.	12	
The student stepped away so the surgeon or scrub nurse could complete the opening of the pack.	6	
TOTAL POINTS	50	

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### Clinical Procedures Practicum Prepare a Surgical Pack for Sterilization

CRITERIA	Points Possible	Points Earned
The student gathered the appropriate instruments and instrument pan if applicable.	5	
The student gathered additional supplies if applicable.	10	
The student selected the appropriate packaging material and chemical indicator.	10	
The student assembled the pack correctly by following the instructions on the checklist or recipe.	10	
The student placed the chemical indicator in the correct area of the pack.	10	
The student properly wrapped, secured and labeled the pack.	5	
TOTAL POINTS	50	

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### Clinical Procedures Practicum Surgical Site Preparation

CRITERIA	Points Possible	Points Earned
The student applied antiseptic scrub to clipped area.	8	
The student prepped the clipped area with a clean surgical sponge beginning at the incision site moving in a circular motion and worked toward the edges.	8	
The student did not bring the sponge back to the incision site once it was moved away from the incision site.	8	
The student discarded the sponge once it reached the edge of the clipped area.	8	
The student wiped the clipped area with a rinse solution using a clean surgical sponge following the same pattern as when scrubbing with the antiseptic.	8	
The student repeated the scrub and rinse a minimum of three times or until the final rinse sponge was clean.	10	
TOTAL POINTS	50	

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### Clinical Procedures Practicum Prescription Filling

CRITERIA	Points Possible	Points Earned
The student reads and verbally interprets prescription.	10	
The student selects the correct drug and concentration.	20	
The student places the pill counting tray on the pharmacy counter with the channel to the left and the open plate in front of him/her.	1	
The student pours the medication tablets or capsules onto the tray plate.	1	
The student opens the channel cover.	1	
The student uses a spatula or tongue depressor to push groups of tablets or capsules into the channel.	1	
When the student has counted the desired amount of medication, he/she closes the channel cover. The student tilts the tray to return the unused medicine into the stock bottle.	4	
The student lifts the tray to place the channel spout into the medicine vial and transfers medication.	4	
The student places the lid on the vial and sets it on the counter.	1	
The student appropriately fills out label with prescription information.	7	
TOTAL POINTS	50	

Veterinary Science

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#### Clinical Procedures Practicum Removal of Sutures

CRITERIA	Points Possible	Points Earned
The student clearly visualized and inspected the incision site.	10	
If there were problems with the incision site, the student informed the veterinarian. If there were no problems, the student removed the sutures.	10	
The student chose the correct tool to remove the sutures.	10	
The student placed the curved blade underneath the suture for removal and removed the suture.	15	
The student did not cause unnecessary harm or discomfort to the patient.	5	
TOTAL POINTS	50	

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### Clinical Procedures Practicum Administer Oral Tablet/Capsule

CRITERIA	Points Possible	Points Earned
The student reads and interprets the veterinarian's order.	10	
The student selects the correct drug and concentration.	20	
The student was able to open the mouth of the animal.	5	
The student maintained control of the head or muzzle during the administration of the medication.	5	
The student used an appropriate technique to encourage the patient to swallow.	5	
The student was able to control the animal in a manner that was adequate to administer the medication yet did no harm to the patient.	5	
TOTAL POINTS	50	

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### Handling and Restraining Practicum Removing a Cat from a Cage and Placing in Cat Bag

CRITERIA	Points Possible	Points Earned
The student opens the cage door and calls the cat by name.	2	
The student scruffs the cat with one hand and lifts it up.	3	
The student cradles the cat's abdomen with their other hand and removes the cat from the cage.	2	
With the cat still scruffed, the student places the cat under one arm close to their body and closes the cage door with their free hand.	3	
The student carries the cat close to their body to the exam table.	3	
The student scruffs the cat and lifts it into the bag in one swift motion while supporting the hind end.	4	
The student wraps the Velcro strap around the cat's neck and immediately zips up the bag.	4	
The student uses the proper zippered opening to expose the front limb.	4	
To remove the cat, the student removes the Velcro strap first, then unzips the bag and removes the cat by scruffing and supports hind end.	5	
TOTAL POINTS	30	

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# Handling and Restraining Practicum Applying a Cat Muzzle

CRITERIA	Points Possible	Points Earned
The student opens the cage door and calls the cat by name.	2	
The student scruffs the cat with one hand and lifts it up.	2	
The student cradles the cat's abdomen with their other hand and removes the cat from the cage.	2	
With the cat still scruffed, the student places the cat under one arm close to their body and closes the cage door with their free hand.	2	
The student places cat on table.	2	
The student selects a muzzle of appropriate size for the cat.	5	
The student places the cat in sitting or sternal position on exam table.	2	
The student positions the muzzle properly in his/her hands.	3	
The student approaches the cat from behind with the muzzle in both hands while another person restrains cat.	3	
The student brings the muzzle up to the cat's face in one swift motion.	4	
The student secures the muzzle.	3	
TOTAL POINTS	30	

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### Handling and Restraining Practicum Restraint of the Cat in Lateral Recumbency for Femoral Venipuncture

CRITERIA	Points Possible	Points Earned
The student places the cat on an examination table.	3	
The student scruffs the cat with one hand and lifts it off of the table enough to grasp both hind legs with his/her other hand or reach under cat to grasp both hind limbs.	8	
The student lays the cat on its side with the hind legs stretched rearward.	7	
The student tucks top rear leg and tail while occluding with side of hand.	8	
The student spoke to the patient in a calm and affectionate manner during the procedure.	4	
TOTAL POINTS	30	



### Handling and Restraining Practicum Restraint of the Cat for Jugular Venipuncture

CRITERIA	Points Possible	Points Earned
The student places the cat in sternal recumbency with its chest close to the edge of the table.	6	
The student controls and lifts the head up by placing thumb and forefingers over top of head, fingers firm on zygomatic arches (below eyes).	7	
The student's other hand grasps the front legs and extends them down off the edge of the table.	7	
The student uses arm and elbow to restrain the cat's body close to the student's body.	6	
The student spoke to the patient in a calm and affectionate manner during the procedure.	4	
TOTAL POINTS	30	



### Handling and Restraining Practicum Restraint of the Cat for Cephalic IV Catheter Placement

CRITERIA	Points Possible	Points Earned
The student places the cat in sternal recumbency on an examination table.	4	
The student controls and lifts the head up by placing up by placing thumb and forefingers over top of head, fingers firm on zygomatic arches (below eyes).	7	
The student extends the left front limb forward by grasping the elbow in the palm of his/her hand with thumb on the top of the elbow joint.	7	
The student allows the judge to grasp the left front paw and extend the limb toward him/her.	5	
The student occludes the vein by pressing down on the top of the elbow joint with his/her thumb and then rotating his/her thumb laterally.	7	
TOTAL POINTS	30	

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### Handling and Restraining Practicum Applying a Gauze Dog Muzzle

CRITERIA	Points Possible	Points Earned
The student selects proper type of material and length.	4	
The student places the dog in sitting or sternal position on exam table or floor.	2	
The student makes a loop in the gauze and approaches the dog from behind.	6	
The student places the loop on the dog's face with the tie on top.	6	
The student quickly tightens the loop, and then crosses the ends under the dog's face.	6	
The student brings the ends back behind the dog's head under the ears and ties in a quick-release bow.	6	
TOTAL POINTS	30	

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# Handling and Restraining Practicum Applying a Nylon Dog Muzzle

CRITERIA	Points Possible	Points Earned
The student selects appropriate muzzle.	4	
The student places the dog in sitting or sternal position on exam table or floor.	2	
The student comes from behind the dog's head with the muzzle in one hand in the correct position.	7	
The student brings the muzzle up to the dog's face and slips it on while grasping the strap with the other hand.	6	
The student secures the muzzle.	5	
The student checks for proper fit (one finger inserted under the strap).	6	
TOTAL POINTS	30	

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Handling and Restraining Practicum

### Removing Dog from Floor Level Cage to Restrain for Lateral Saphenous Venipuncture

CRITERIA	Points Possible	Points Earned
The student places a leash in one hand with a large loop open in the correct position (in the "P") and ready to place over the dog's head.	2	
While blocking the opening, the student opens the cage door enough to slip the hand holding the leash into the cage.	2	
The student slips the leash over the neck of the dog and gently tightens the leash around the neck.	2	
The student opens the door and allows the dog to exit the cage.	1	
The student lifts the dog and places on the table.	1	
The student places his/her right arm across the dog's neck and reaches between the front legs to grasp the dog's right forelimb in right hand.	4	
The student places left arm over the dog's back and reaches for the dog's right rear limb; just proximal to the hock.	5	
With the dog's body close, the student gently lifts the limbs while allowing the dog's body to lay on the table; the dog should be on its right side.	5	
The student allows the dog to relax for a couple seconds, not releasing the grasp on the limbs.	3	
The student uses left hand to hold the limb tightly in the area just distal to the stifle, which will occlude the vein.	5	
TOTAL POINTS	30	

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### Handling and Restraining Practicum Restraint of the Small Dog for Jugular Venipuncture

CRITERIA	Points Possible	Points Earned
The student puts a noose leash on the dog and has the dog sit.	3	
The student places one arm around the dog's neck and places the other arm around the dog's back to grasp the forelimbs.	6	
The student pushes the dog's back with his/her body to encourage the dog to lie down.	6	
The student holds the head up under the jaw, away from the chest (can be achieved by cupping hand underneath the muzzle and by pushing the head upward.)	8	
The student's other hand grasps the front legs and extends them over the end of the table.	7	
TOTAL POINTS	30	

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#### Handling and Restraining Practicum Restraint of the Dog for Cephalic Venipuncture

CRITERIA	Points Possible	Points Earned
The student places a noose leash on the dog.	2	
The student restrains the dog in sternal recumbency.	5	
The student stands on the dog's right side; wrapping his/her right arm around the dog's neck.	5	
The student holds the dog's left forelimb with elbow in the palm of his/her hand; extend the limb forward toward the person performing the procedure.	6	
With the elbow of the dog in his/her palm, the student rotates his/her thumb up so it is on top of the limb at the bend of the elbow.	6	
The student occludes the vessel with the thumb, rotates the thumb laterally.	6	
TOTAL POINTS	30	

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#### Handling and Restraining Practicum Restraint of a Rabbit

CRITERIA	Points Possible	Points Earned
The student approaches the rabbit calmly and quietly.	4	
The student scruffs the rabbit with one hand while gently lifting the front end.	6	
The student's other hand immediately reaches under the hind limbs and holds them (not allowing the hind limbs to dangle).	7	
The student rests the rabbit's body on the arm with the hand holding the hind limbs.	6	
The scruffing hold is released and the hand is moved to hold the rabbit's outside front leg.	7	
TOTAL POINTS	30	

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# Handling and Restraining Practicum Haltering Ruminants

Participant must talk through practicum steps with judge.

CRITERIA	Points Possible	Points Earned
Without quick movements and loud noises, the student properly approaches the patient at a 45 degree angle to the patient's left shoulder.	5	
The student places crown piece of halter over ears, then slips nose through nosepiece.	6	
The student properly adjusts the halter such that the nose band crosses over bridge of nose halfway between the nostrils and eyes.	7	
The student ensures that the adjustable portion of the nose band is under the chin, not across the bridge of the nose.	6	
The student keeps the standing end or lead rope portion on the left side of the cow.	6	
TOTAL POINTS	30	

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### Handling and Restraining Practicum Haltering a Horse

CRITERIA	Points Possible	Points Earned
Without quick movements and loud noises, the student properly approaches the patient at a 45 degree angle to the patient's left shoulder.	5	
The student places end of the lead rope over the horse's neck and passes sufficient length of lead to form a handheld loop around the horse's neck.	5	
Holding the handheld loop in their right hand, with their left hand, the student slip the nose-band of the halter over the nose.	5	
Student releases the lead rope and with their right hand under the horse's neck, the student passes the crown strap over the head and behind the ears and attaches the end to the appropriate place on the halter.	5	
The student snaps the end of the lead to the lead ring of the halter and undrapes the lead rope from the horse's neck.	4	
The student adjusts the halter so it is snug enough that the nose piece could not fall over the end of the nose, but not so tight that the halter cut or rubbed the horse or restricted jaw movement or breathing.	6	
TOTAL POINTS	30	

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### Handling and Restraining Practicum Placing a Tail Tie

CRITERIA	Points Possible	Points Earned
The student lays the rope over the tail at the tip of the tail bone.	6	
The student folds all the tail hairs up over the rope.	6	
The student passes the short end of the rope behind the tail, and makes a fold or bight in it.	6	
The student passes the fold or bight over the folded tail and under the rope, which is looped around the tail.	6	
The student pulls tight.	6	
TOTAL POINTS	30	

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# Handling and Restraining Practicum Applying Elizabethan Collar

CRITERIA	Points Possible	Points Earned
The student chooses the correct size of E-collar for the patient.	6	
The student correctly prepared the E-collar for placement.	6	
The student correctly placed the E-collar on the animal.	6	
Placement was adequately secured so the animal could not remove the E-collar.	6	
The E-collar was secured such that the animal's breathing was not restricted.	6	
TOTAL POINTS	30	



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# Handling and Restraining Practicum **Snare Restraint of the Pig**

CRITERIA	Points Possible	Points Earned
The student, standing next to the patient, guided the loop of the snare into the mouth and over the nose or upper jaw	4	
The student made sure the loop is inserted far enough into the patient's mouth	5	
The student pulled the loop tight when it is in the proper position	5	
The student kept the loop tight while moving to the front of the patient	5	
The student maintained the pressure on the snare so that the patient could not escape.	5	
The student kept control of the patient until the patient ceased to struggle.	4	
The student released the patient after the procedure was completed	2	
TOTAL POINTS	30	