

PLANT PATHOLOGY

PURPOSE

The Plant Pathology Career Development Event stimulates learning activities

ELIGIBILITY

The participant must be an active member of a chartered West Virginia FFA Chapter and enrolled in grades 9, 10, 11, or 12. Each chapter may enter one team.

EVENT PROCEDURE

The event will be a team event consisting of four students. The lowest score will be dropped. FFA members will wear official dress or professional dress as it pertains to the profession. For example, Black plants white shirt or button up shirt.

No FFA advisors/coaches will be allowed in the area of the contest, but arrangements will be made to view the specimens following the contest.

PRACTICUMS

The contest will consist of ID of economic plant diseases and their control measures. Participants will have 1 ½ min per ID slide.

EVENT MATERIALS

MATERIALS STUDENTS MUST PROVIDE

- Pencils
- Clipboards
- Electronic Calculator



INDIVIDUAL PRACTICUMS

GENERAL KNOWLEDGE EXAMINATION

Each participant will complete a 30 specimen ID

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.

SCORING

Practicum	Activity	Individual	Team
ID of Disease	Written Exam	60	180
ID of Host	Written Exam	60	180
ID of Control Measure	Written Exam	60	180
TOTAL		180	540

TIE BREAKER

In the event of a tie in team scores, the fourth contestant's score will be used to determine placing.



HORTICULTURE CDE# 105482

Incorrect Marks Correct Mark **₹**X € □

Team Name

This sheet is for demonstration and practice only. You must use a real scan sheet for actual competition.

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HOST	DISEASE	CONTROL
ALFALFA	Leaf Spot	Cut foliage in a timely manner
	Downy Mildew	Cut foliage in a timely manner
		Treat seed with a systemic fungicide
BARLEY	Smut	Treat seed with suitable chemical
	Scald	Resistant varieties
	Stripe Rust	Treat seed with suitable chemical
	Powdery Mildew	Resistant varieties
OATS	Crown Rust	Resistant varieties
	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
	Smut	Hot water seed treatment
		Water soak treatment
		Treat seed with a systemic fungicide
	Scab	Non grain crop rotation-bury stubbles
		Treat seed with suitable chemical
	Powdery Mildew	Resistant varieties
RYE	Ergot	Disease free seed
		Cut wild grass hosts
	Leaf Rust	Resistant varieties
CLOVER	Rust	No practical control
	Powdery Mildew	Resistant varieties
	Sclerotina Crown Rot	Close grazing in the autumn and early winter
APPLES	Frogeye Leaf Spot (Black	Captan
	Rot)	Nova+Mancozeb
		Remove and destroy diseased parts
	Cedar Rust	Remove alternate host
		• Rubigan + Captan
		• Rubigan + Ziram
	Scab	Captan
		• Rubigan + Captan
		• Rubigan + Ziram
	Sooty Blotch	Facilitate Quick Fruit Drying
	Bitter Rot	Captan + Pristine
		Remove dead branches

HOST	DISEASE	CONTROL
APPLES	Fire Blight	 Remove and destroy diseased parts Streptomycin Bordeaux Fixed Copper
PEACHES	Brown Rot	Topsin-M +SulfurIndarCaptan
	Peach-Leaf Curl	FerbamWettable SulfurBravo
	Scab "Freckles"	BravoTopsim-M+ Captan
	Yellows Lear Spot or Shot Hole	Pull and destroy diseased treeWettable SulfurFixed 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, mixedPrune out and destroy visible knot
_		orayed or dusted with sulfur, except for yellows, eaux or lime-sulfur on growing peaches
CRUCIFERS (Cabbage,	Club Root	Avoid infested soil or fumigateApply lime to soil to pH 6.8
Cauliflower, Brussels	Blackleg	Clean seedsHot water seed treatment
Sprouts)	Soft Rot	 Rovral Prevent mechanical and insect injuries to plant

HOST	DISEASE	• CONTROL
CUCURBITS	Bacterial wilt	Cover until bloom with a row cover
(Cucumbers, Melons etc)		Ambush 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
		Disease-free seed
CORN	Rust	No Practical control
Colar	Southern Leaf Blight	
	Northern Leaf Blight	Resistant varieties
	Smut	Remove and destroy diseased parts
	Sinut	• Crop rotation
	Maize Dwarf Mosaic	Resistant varieties
	Virus	Resistant varieties
	Gray leaf Spot	Resistant varieties
	(Cercospora)	Resistant variencs
PEPPER	Bacterial Spot	Resistant varieties
1 11 1 111	Dacterial Spot	• Copper
		1 CODDEI

HOST	DISEASE	CONTROL
POTATOES	Late Blight	Mancozeb
		Copper 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
	D 1011	• Pristine
	Downy Mildew	Bordeaux
		• Fixed copper
		Ridomil Gold MZ
	D1	• Abound
	Powdery Mildew	• Nova
		 Quintec Endura

HOST	DISEASE	CONTROL
BRAMBLES (Blackberries, Raspberries,	Anthracnose	Lime-sulfur in spring when leaves show 1/2 inch growth: follow with Cabrio at bloom and two weeks after bloom
Dewberries)		Caution: do not use lime-sulfur after 1/2inch leaf, it will cause severe burning
	Orange Rust	Remove infected plants, including all rootsApply Rally
	Cane blight and spot	Remove infected canesApply Quilt Xcel
TOMATOES	Late Blight	 Mancozeb Copper Quadris Bravo Bravo Weather
	Early Blight	 Mancozeb Copper Bravo Keep foliage dry as much as possible
	Blossom End Rot	Mulch-Even Water SupplyKeep calcium highCrop rotation 3-years
	Septoria Leaf Spot	MancozebCopperBravo Weathe rstik
	Anthracnose	 Rotation 3-years with non- solanaeeous crop Disease free seed Mancozeb Copper Bravo Quadris
	Wilt Root Knot	Resistant varietiesFumigate soilCrop rotation



Plant Pathology CDE CODE SHEET 2022

		00			
001. Anthracnose	013. Cedar/apple rust on		025. Late blight		038. Ring rot
002. Bacterial blight	leaves or fruit			Leaf blight	039. Root knot (Nematode)
003. Bacterial spot	014. Club root		027.	Leaf roll	040. Rust
004. Bacterial wilt	015. Smut		028.	Leaf rust	041. Scab
005. Bitter rot on fruit	016. Crown rust			Leaf spot	042. Scab "freckles"
006. Black knot	017. Downy mildew		030.	Leaf spot or shot hole	043. Scald
007. Black leg	018. Early blight	018. Early blight			044. Sclerotinia crown rot
	019. Ergot	019. Ergot		Maize Dwarf Mosaic	045. Septoria leaf spot
008. Black rot			,	Virus	
009. Blossom - end rot	020. Fire blight on twigs,		032.	Mosaic (including	046. Soft rot
010. Botrytis rot	limbs or frui	limbs or fruit		common or virus)	047. Sooty blotch on fruit
011. Brown rot	021. Frog-eye lea	021. Frog-eye leaf spot		Northern leaf blight	048. Southern leaf blight
012. Cane blight and	022. Glume blotc	2. Glume blotch		Orange rust	049. Stem rust
spot	023. Gray Leaf S	Gray Leaf Spot		Peach leaf curl	050. Stripe
	(Cercospora)	(Cercospora)		Powdery mildew	051. Wilt
	024. Hopper burn		037.	Rhizoctonia	052. Yellows
Host					
001.Alfalfa	005. Brambles	009. Cruci		013. Peach	017.Rye
002. Apple	006. Cherry	010. Cucur		014. Pepper	018. Strawberry
003. Barley	007. Clover	011. Grape		015. Plums	019.Tomatoes
004. Bean	008. Corn	012. Oats	,5	016.Potato	020. Wheat
004. B ean	008.Com	012. Oats		010.Fotato	020. Wileat
Controls					
101. Abound	125. Crop rotati	on		Cabrio at bloom and two	166. Remove infected canes
102. Acidify soil	126. Crop rotati			weeks after bloom	167. Remove infected plants,
103. Acrobat		7. Cultural practice "plant		Luna privilege	including all roots
104. Admire		shallow and hill deep"		Mancozeb	168. Remove mummies from
105. Ambush	128. Curzate	-		Mulch-Even Water	cane
106. Apply lime (pH 6.8)	129. Cut foliage	9. Cut foliage in a timely		Supply	169. Renovate
107. Apply Quilt Xcel	manner	manner		No practical control	170. Resistant varieties
108. Apply Rally	130. Cut wild g	. Cut wild grass hosts		Non grain crop rotation-	171. Ridomil Gold MZ
109. Avoid infested soil or	r 131. Destroy alt	. Destroy alternate host		bury stubbles	172. Rotation 3-years with
fumigate	132. Disease fre	2. Disease free seed		Nova	non-solanaeeous crop
110. Bayleton	133. Endura	3. Endura		Nova+Mancozeb	173. Rotenone - cucumber
111. Bordeaux	134. Facilitate q	134. Facilitate quick fruit		Polyram	beetles
112. Bravo	drying			Pounce	174. Rovral
113. Bravo Weather stik	135. Ferbam	135. Ferbam		Prevent mechanical and	175. Rubigan + Captan
114. Bury infected debris	136. Fixed Copp	36. Fixed Copper		insect injuries to plant	176. Rubigan + Ziram
115. Captan	137. Folicur	7. Folicur		Pristine	177. Streptomycin
116. Captan + Pristine	138. Fumigate s	8. Fumigate soil		Prune out and destroy	178. Tanos
117. Captan & Topsin- M,	, 139. Headline			visible knot	179. Thin old beds
mixed	140. Hot water	. Hot water seed treatment		Pull and destroy diseased	180. Topsim-M + Captan
118. CaptEvate	141. Indar			tree	181. Topsin-M
119. Certified seed		. Insecticide spray of		Quadris	182. Topsin-M +Sulfur
120. Clean seeds		pyrethroid		Quintec	183. Treat seed with a
121. Close grazing in the		3. Keep calcium high		Rally	systemic fungicide
autumn and early wir				Ranman	184. Treat seed with Captan
122. Control aphid vector	as possible			Remove alternate host	185. Treat seed with suitable
123. Copper		. Lime-sulfur in spring		Remove and destroy	chemical
124. Cover until bloom wi		when leaves show 1/2		diseased parts	186. Water soak treatment
row cover	row cover inch growth: follow with		165.	Remove dead branches	187. Wettable Sulfur