

Tennessee FFA Association

Agronomy Handbook

2017-2021

Purpose

The purpose of the Tennessee FFA Agronomy Career Development Event is to create interest and promote understanding in agronomy by providing opportunities for recognition through the demonstration of skills and proficiencies. It also gives students an opportunity to explore career opportunities available in agronomy and encourage students to pursue careers in agronomy.

Objectives

Through participation in the State event, participants will be able to:

- To demonstrate knowledge and skills used in agronomic sciences.
- To explore career opportunities, skills and proficiencies in the agronomy industry.
- To determine the ability to identify agronomic:
 - Crops
 - Weeds
 - Seeds
 - Insects
 - Diseases
 - Plant nutrient deficiencies
 - Plant disorders
 - Crop grading and pricing
 - Equipment
 - Agronomy – Local, state and global issues
- To evaluate a scenario and develop a crop management plan including crop selection, production and marketing.
- To demonstrate understanding of sustainable agriculture and environmental stewardship through the use of integrated pest management and best management practices.

Event Rules

TEAM MAKE-UP

- Four members will be on each team. All four members will be scored, and all four scores will count toward the team total.
- FFA Official Dress is NOT required for the state event.
- All participants will be given an identification number by which they will be designated throughout the event.
- Under no circumstances will a participant be allowed to destroy any of the items in the identification portion of the practicums. Any infractions of this rule will be sufficient to eliminate a team from the event.
- Participants will be assigned to group leaders who will escort them to various event-staging sites. Each participant is to stay with his or her assigned group leader throughout the event or until told to change leaders by the event superintendent.

WRITTEN MATERIAL

- All written material will be furnished for the event. No written materials such as tests, problems and worksheets should be removed from the site.
- Any participant in possession of an electronic device in the event area is subject to disqualification.

Event Format

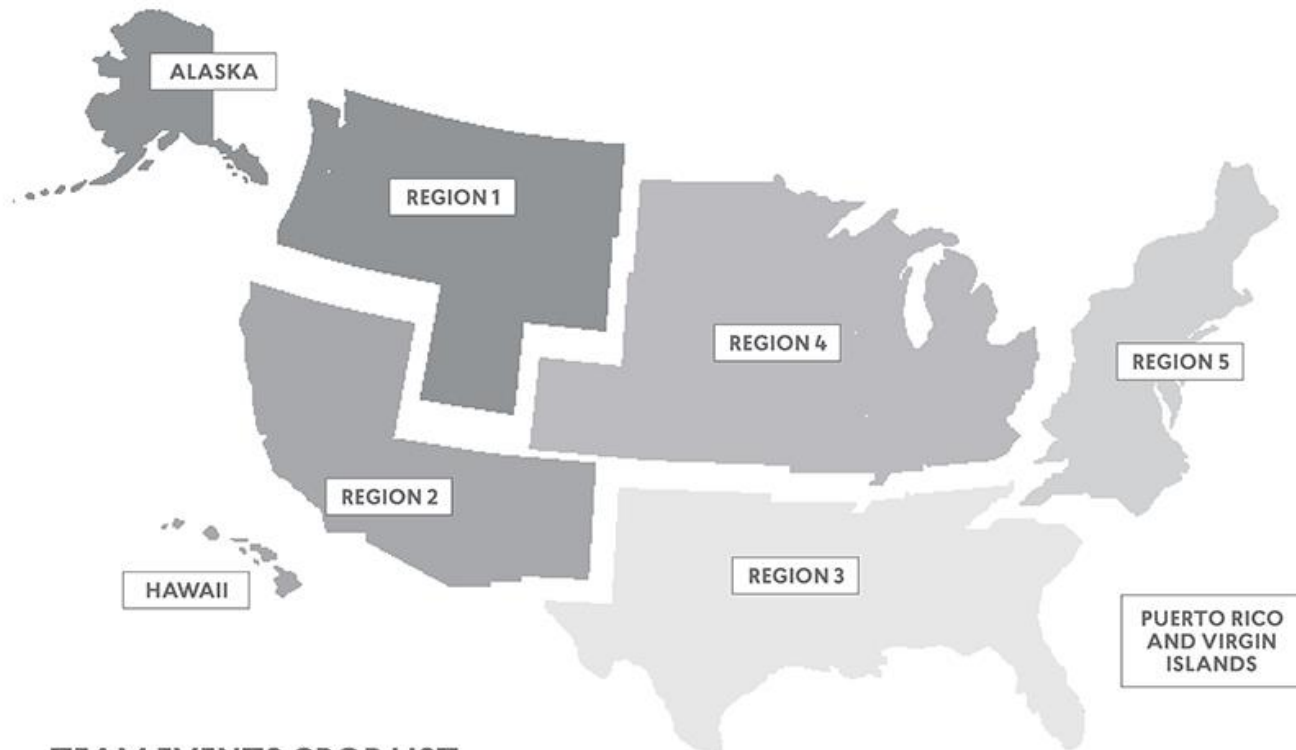
Materials students must provide:

- Clear, transparent clipboard free of notes
- Two sharpened No. 2 pencils
- Non-programmable electronic calculator
 - The calculators used during the event are to be battery operated, non-programmable, silent with large keys and large displays. The 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.
- One laptop computer per team (Laptop may or may not be needed. The event superintendent will alert state staff and chapters at least two weeks before the event if a

laptop is needed).

- Laptops must have USB port, be flash drive compatible and have Microsoft Word and Excel. The laptop will be used for budgets and final reporting for the team activity only. Laptops must be fully-charged and be capable of continuous activity for 90 minutes.

National FFA Agronomy CDE Regional Areas



TEAM EVENTS CROP LIST

REGION 1 2021	REGION 2 2017	REGION 3 2018	REGION 4 2019	REGION 5 2020
Alfalfa	Alfalfa	Bermudagrass	Alfalfa	Alfalfa
Barley	Bermudagrass	Brassica	Barley	Clover
Canola	Brassica	Corn	Canola	Corn
Chickpea/Garbanzo	Corn	Cotton	Corn	Cranberry
Corn	Cotton	Cucumber	Dry edible beans	Fescue
Dry edible beans	Lettuce	Fescue	Flax	Lima bean
Fescue	Melons	Melon	Peas	Melon
Hops	Onion	Peanuts	Rye	Orchardgrass
Lentil	Pepper	Rice	Sorghum	Peas
Peas	Rice	Sod	Soybean	Potatoes
Potatoes	Safflower	Sorghum	Sugarbeet	Sorghum
Ryegrass	Sorghum	Soybean	Sunflower	Soybean
Safflower	Spinach	Sucarcane	Tomato	Squash
Sugarbeet	Strawberry	Tomato	Wheat	Strawberry
Wheat	Sundangrass	Wheat	Safflower	Tobacco
	Tomato			Tomato
	Wheat			Wheat

Individual Practicums

GENERAL KNOWLEDGE EXAMINATION (100 POINTS)

Fifty objective multiple choice questions will be given to each participant. All questions will come from the previous five years National Agronomy General Knowledge Exams located on FFA.ORG. A test bank consisting of previous five years National Exam Questions will be maintained on the Downloads page of tnffa.org and updated annually. Questions may include, but are not limited to, the following areas: general agronomy questions, plant and soils science, cost sheets, seed tag information, tillage practices, pesticide labels, extension bulletins, fertility reports, tissue analysis, contract information, water management, seeding rates, variety information, trial data and application/calibration information for nozzle selection, chemigation, fertigation and aerial application.

IDENTIFICATION (150 POINTS)

Students will identify 50 weed and/or crop plants and/or seeds. Plants may be presented in any stage of growth following emergence. The list of possible specimens is in the reference section of the handbook.

SOILS (100 POINTS)

Each participant will be responsible for the following activities related to soils:

- Identify various soil structures: web soil survey, custom soil resource report, soil maps.
- Analyze web soil survey data and answer questions related to:
 - Relative drainage (e.g., poor, moderate, well)
 - Relative topographic position (e.g., summit, slope, depression)
 - Depth to water table
 - Frost free period
 - Identify the USDA land capability classes and answer problem solving questions related to various classes.
 - Use soil survey to locate specific sites, use of suggested soil spots and questions related to the soil survey map.

COMMODITY EVALUATION (250 POINTS)

Participants will evaluate the quality of four different crops. These evaluations will be broken down into three different categories representing different aspects of quality: variety selection,

marketability and usability.

Variety selection (50 points)

Participant will be given multiple seed tags and they must select most appropriate and economical choice for the given scenario. A written reason must be given for the selection. Necessary information will be provided, including soil type, maturity information, germination rate, and percent of weed seeds and cost of seed.

Marketability (Grain Grading) (100 points)

Participants will determine factors and conditions that will determine the grade of various crops. Grain grading will be done in accordance with the Official U.S. Standards for Grain. Information on grain grading can be found in the laws and regulations section of www.gipsa.usda.gov.

Two samples will be graded in 30 minutes. Each sample is worth 50 points.

Participants will be given two base samples to determine the class and/or subclass of grain. The rotation for the given seed samples are as follows:

- 2017 Region 2: Rice and Corn
- 2018 Region 3: Grain Sorghum and White wheat
- 2019 Region 4: Canola and Durum Wheat
- 2020 Region 5: Red Wheat and Soy Bean
- 2021 Region 1: Barley and Dry Beans

Participants will be provided information about grain samples (i.e., test weight, moisture and special conditions).

Participants will be given representative samples in a sealed package of defected seed. Raw weights of each defect will be given, and participants calculate the percentage of each based on the flow chart provided.

Participants will complete the Grain Grading Answer Sheet.

Participants will determine market price based on provided discount schedule.

Usability (Crop Quality) (100 points)

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).

PEST MANAGEMENT (200 POINTS)

Disorders (100 points)

- 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.

Insect Identification (100 points)

- 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.

EQUIPMENT AND MACHINERY IDENTIFICATION (100 POINTS)

- Participants will be required to identify 20 specimens from the list in the reference section of the handbook. 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.
- Identification samples will be of the complete item. There will be no identification of individual parts/pieces.

Event Scoring

Participant scores are the sum of the individual phases of the event, and team scores are the sum of the four participant scores plus the team activity.

ACTIVITIES	Individual Points	Team Points
Written Exam	100	400
Identification	150	600
Soils	100	400
Commodity	250	1,000
Pest Management	200	800
Equipment and Machinery Identification	100	400
Team Points	900	3,600

TIEBREAKERS

If ties occur for team awards the following events will be used to determine the placings:

1. Total Written Exam
2. Total Plant and Seed Identification
3. Total Soils

If ties occur for individual awards the following events will be used to determine the placings:

1. Written Exam
2. Plant and Seed Identification
3. Soils

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. 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 <https://www.FFA.org/participate/cdes/agronomy>

PLANT IDENTIFICATION

- Flash cards for both seeds and plants are available through Wards Natural Science Establishment wardsci.com.
- Weeds of the Northeast, Comstock Books, by Richard H. Uva (Author), Joseph C. Neal (Author), Joseph M. Ditomaso (Author).
- Weeds of the Great Plains, Nebraska Department of Agriculture by James L Stubbendieck (Author)
- Weeds of the West, University of Wyoming Extension, by Tom D. Whitson (Editor)
- Common Weed Seedlings of the North Central States, Michigan State University Extension
- Sunset Western Garden Book
- An Illustrated Guide to Arizona Weeds, University of Arizona, <https://www.uapress.arizona.edu/onlinebks/WEEDS/TITLWEED.HTM>
- Weeds of California and Other Western States University of California
- Interactive Encyclopedia of Weeds of North America, North Central Weed Science Society
- <http://plants.usda.gov/>
- <http://www.ppws.vt.edu/weedindex.html>
- http://www.ipm.ucdavis.edu/PMG/weeds_multi.html
- <http://wssa.net/weed/weed-identification/>

SEED IDENTIFICATION

- Illustrated Taxonomy Manual of Weed Seeds, North Central Weed Science Society
- Weed Seeds of the Great Plains, University Press of Kansas

- <http://www.oardc.ohio-state.edu/seedid/>
- <http://plants.usda.gov/>

MACHINERY IDENTIFICATION

Resources for machinery identification can be obtained online from various equipment manufacturers. A visit to an implement dealer in your area would be recommended. Farm toys can also be used.

GRAIN GRADING

Teaching and CDE samples can be obtained by contacting Northeast Indiana Grain Inspection Service, Mr. Neil Reynolds at 260-341-7497 or neigi@eawifi.com.

- <https://www.gipsa.usda.gov/fgis/usstandards.aspx>

HAY EVALUATION

- <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2556/PSS-2588web2015.pdf>

VEGETABLE / SEED EVALUATION AND PLACING

- <http://www.wyomingextension.org/agpubs/pubs/70501G.pdf>

DISEASE / DISORDER

- http://plant-disease.ippc.orst.edu/image_index.cfm
- <http://plantpathology.tamu.edu/Textlab/index.html>

INSECTS:

- http://pest.ca.uky.edu/EXT/master_gardener/entbasics/mouthparts/mouthparts.shtml

SOILS:

- <http://www.nrcs.usda.gov/wps/portal/nrcs/soilsurvey/soils/survey/state/>

TEAM EVENT

- www.cdms.net.

WRITTEN EXAM:

The best resource for the written exam is old exams available from the National FFA Organization. There is no one resource for the exam.

- <http://ohioline.osu.edu/factsheet/HYG-1133>
- <http://www.extension.iastate.edu/Publications/SR48.html>
- <http://extension.agron.iastate.edu/soybean/topicpage1.html>
- <http://gaps.cornell.edu>

Weeds List

Weeds marked with * are considered noxious weeds according to the USDA.

ID #	Weed Name	Form	Botanical Name
100	barnyardgrass	plant and seed	Echinochloa crus-galli
101	black nightshade	plant and seed	Solanum nigrum or Solanum ptycanthum
102	broadleaf plantain	plant and seed	Plantago major
103	buckhorn plantain	plant and seed	Plantago lanceolata
104	bull thistle*	plant and seed	Cirsium vulgare
105	Canada thistle*	plant and seed	Cirsium arvense
106	cheat	plant and seed	Bromus secalinus
107	common chickweed	plant and seed	Stellaria media
108	common cocklebur	plant and seed as bur	Xanthium strumarium
109	common lambsquarters	plant and seed	Chenopodium album
110	common mallow	plant and seed	Malva neglecta
111	common milkweed	plant and seed	Asclepias syriaca
112	common purslane	plant and seed	Portulaca oleracea
113	common ragweed *	plant and seed	Ambrosia artemisiifolia
114	common sunflower	plant and seed	Helianthus annuus
115	crabgrass	plant and seed	Digitaria spp.
116	crown vetch	plant and seed	Coronilla varia
117	curly dock *	plant and seed	Rumex crispus
118	dandelion	plant and seed	Taraxacum officinale
119	downy brome	plant	Bromus tectorum L.
120	field bindweed*	plant and seed	Convolvulus arvensis
121	field dodder*	plant and seed	Cuscuta spp.
122	field pennycress	plant and seed	Thlaspi arvense
123	field sandbur	plant and seed	Cenchrus incertus

124	foxtail, giant *	plant and seed	Setaria faberi
125	foxtail, green	plant and seed	Setaria viridis
126	foxtail, yellow	plant and seed	Setaria glauca
127	giant ragweed *	plant and seed	Ambrosia trifida
128	ground cherry	plant and seed	Physalis spp.
129	horsenettle*	plant and seed	Solanum carolinense
130	horseweed* (maretail)	plant only	Conyza canadensis
131	jimsonweed	plant and seed	Datura stramonium
132	johnsongrass*	plant and seed	Sorghum halpense
133	knapweed, Russian *	plant only	Centaurea repens
134	kochia *	plant and seed	Kochia scoparia
135	kudzu *	plant only	Pueraria montana var lobata
136	leafy spurge*	plant and seed	Euphorbia esula
137	morningglory	plant and seed	Ipomoea spp.
138	nightshade, silver	plant and seed	Solanum elaeagnifolium
139	nutsedge*	plant and seed as nutlet	Cyperus spp.
140	prickly lettuce	plant and seed	Lactuca serriola
141	prostrate knotweed	plant and seed	Polygonum aviculare
142	prostrate spurge	plant only	Euphorbia supina
143	puncturevine*	plant and seed	Tribulus terrestris
144	quackgrass*	plant and seed	Agropyron repens
145	redroot pigweed	plant and seed	Amaranthus retroflexus
146	Russian thistle	plant and seed	Salsola pestifer
147	shepardspurse	plant and seed	Capsella bursa-pastoris
148	sicklepod	plant and seed	Senna obtusifolia
149	smartweed	plant and seed	Polygonum spp.
150	sowthistle*	plant and seed	Sonchus spp.
151	tansy mustard	plant and seed	Descurainia pinnata
152	velvetleaf *	plant and seed	Abutilon theophrasti

153	wild carrot *	plant and seed	Daucus carota
154	wild mustard	plant and seed	Brassica kaber
155	wild oats	plant only	Avena sativa
156	wild onion/garlic *	plant and seed	Allium spp.

Crops List

ID #	Weed Name	Form	Botanical Name
200	Alfalfa	plant or seed	Medicago sativa
201	Barley	plant or seed	Hordeum vulgare
202	Bean (dry)	plant only	Phaseolus vulgaris
203	Bermudagrass	plant or seed	Cynodon dactylon
204	Black bean	seed only	Phaseolus vulgaris
205	Broccoli	plant only	Brassica oleracea var. italica
206	Cabbage	plant only	Brassica oleracea capitata
207	Canola	plant or seed	Brassica napus
208	Cantaloupe	plant or seed	Cucumis melo var. cantalupensis
209	Carrot	root provided	Daucus carota
210	Cauliflower	plant only	Brassica oleracea var. botrytis
211	Chickpea/Garbanzo	seed only	Cicer arietinum
212	Chili pepper	plant or seed	Capsicum annum
213	Corn	plant only	Zea mays
214	Cotton	plant or seed	Gossypium hirsutum
215	Cranberry	plant only	Vaccinium macrocarpon
216	Cucumber	plant or seed	Cucumis sativus var. sativus
217	Dent corn	seed only	Zea mays
218	Durum wheat	seed only	Triticum turgidum
219	Flax	plant or seed	Linum usitatissimum
220	Hops	plant only	Humulus lupulus
221	Kentucky bluegrass	plant or seed	Poa pratensis
222	Lentil	plant or seed	Lens culinaris
223	Lettuce	plant or seed	Lactuca sativa
224	Lima bean	seed only	Phaseolus lunatus
225	Oats	plant or seed	Avena sativa

226	Onion	plant or seed	Allium cepa
227	Orchardgrass	plant or seed	Dactylis glomerata
228	Peanut	plant or seed	Arachis hypogaea
229	Peas	plant or seed	Pisum Sativum
230	Pinto bean	seed only	Phaseolus vulgaris
231	Popcorn	seed only	Zea mays
232	Potato	plant only	Solanum tuberosum
233	Red bean	seed only	Phaseolus vulgaris
234	Red clover	plant or seed	Trifolium pretense
235	Red wheat	seed only	Triticum aestivum
236	Rice	plant or seed	Oryza sativa
237	Rye	plant or seed	Secale cereal
238	Safflower	plant or seed	Carthamus tinctorius
239	Sorghum	plant or seed	Sorghum bicolor
240	Soybean	plant or seed	Glycine max
241	Spinach	plant or seed	Spinacia oleracea
242	Squash	plant or seed	Curcubita pepo
243	Strawberry	plant only	Fragaria virginiana
244	Sudangrass	plant or seed	Sorghum bicolor
245	Sugar beets	plant or seed	Beta vulgaris
246	Sugarcane	plant only	Saccharum sp.
247	Sunflower	plant or seed	Helianthus annuus
248	Sweet corn	plant only	Zea mays
249	Sweet potato	plant only	Ipomoea batatas
250	Sweetclover	plant or seed	Melilotus albus
251	Tall fescue	plant or seed	Festuca arundinacea
252	Timothy	plant or seed	Phleum pretense
253	Tobacco	plant or seed	Nicotiana tabacum
254	Tomato	plant or seed	Lycopersicon esculentum

255	Watermelon	plant or seed	Citrullus lanatus
256	Wheat	plant only	Triticum aestivum
257	White bean	seed only	Phaseolus vulgaris
258	White clover	plant or seed	Trifolium repens
259	White wheat	seed only	Triticum aestivum

Machinery List

600. Air compressor/hose
601. Air seeder (tool and air cart together)
602. Anemometer
603. Anhydrous applicator with tank
604. Articulated tractor
605. Auger platform head for combine
606. Back pack sprayer
607. Bale wagon (kick or flat)
608. Baler
609. Bean harvester head
610. Bed mulcher
611. Bed shaper
612. Belt pickup head for combine
613. Broadcast spreader
614. Chemigation unit for irrigation
615. Combine (may be displayed with harvesting head attached)
616. Conveyer/Elevator/Auger
617. Corn head for combine
618. Cotton picker
619. Cotton stripper
620. Cultipacker
621. Disk

622. Disk chisel
623. Draper head for combine or swather
624. Drawn planter
625. Fertilizer density scale (dry fertilizer)
626. Field cultivator
627. Field shovel
628. Forage harvester (maybe displayed with harvesting head attached)
629. Gauge Wheel
630. GPS receiver
631. Grain bin/leg
632. Grain drill (Includes No-Till)
633. Grain dryer
634. Hand hoe
635. Hay merger
636. Hay mower conditioner (disk or reel/drawn, 3pt, or self-propelled)
637. Hay rake (reel or wheel)
638. Hearing protection
639. Hitch pin
640. Hydraulic cylinder/ hose
641. In-line ripper
642. Integral planter
643. Irrigation - Lateral
644. Irrigation - Traveling Gun

645. Irrigation Pivot
646. Liquid manure tank/applicator (includes draglines)
647. Manure sampling kit
648. Manure spreader
649. Module builder
650. Moldboard plow
651. Nurse tank trailer
652. Pea harvester
653. Peanut digger
654. Plastic layer
655. Potato harvester
656. PPE (all equipment)
657. Press wheel
658. Pressure gauge
659. Pressure regulator
660. PTO shaft
661. Rotary hoe
662. Round baler
663. Row crop cultivator
664. Row crop tractor
665. Row Independent Forage Harvester Head (kemper head)
666. Skid steer
667. Soil penetrometer

668. Soil probe
669. Soil sample bag
670. Soil thermometer
671. Specialty tractor (orchard, narrow, low profile, high clearance)
672. Sprayer
673. Sprayer nozzle/nozzle body
674. Square baler (large or small)
675. Strip tiller
676. Sugar beet harvester
677. Swather
678. Sweep net
679. Tensiometer
680. Tissue sample bag
681. Tracked tractor (non articulating)
682. Vegetable transplanter
683. Virtual terminal/monitor/controller
684. V-Ripper
685. Wheel loader

National Insect List 2017 Official 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

26	pink bollworm larva	421 - Fruit/Flower Destruction	510 - Complete	070 - Chewing
27	salt marsh caterpillar/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	423 - Removal of Plant Fluids	511 - Incomplete	073 - Piercing-Sucking
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

Agronomic Disorders Practicum Scorecard

NAME _____	MEMBER NUMBER _____
CHAPTER _____	STATE _____ TEAM NUMBER _____

		Member Answer	Possible Points	Member Score	
1.	Casual Category:		3		<p style="text-align: center;">Possible Answers</p> <p style="text-align: center;">Causal Category</p> <p>Biological Cultural Environmental</p> <p style="text-align: center;">Agents</p> <p>Bacteria Chemical Compaction Drought Frost damage Fungus Hail Heat Insect Lightning Mechanical Moisture Nematodes Nutritional Pollution Sun scald Virus Wind damage</p> <p style="text-align: center;">Parts of Plant Displayed</p> <p>Reproductive parts Vegetative parts Vascular Bundles More than one</p>
	Agent:		4		
	Part of Plant Displayed:		3		
2.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
3.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
4.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
5.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
6.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
7.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
8.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
9.	Casual Category:		3		
	Agent:		4		

	Part of Plant Displayed:		3		
10.	Casual Category:		3		
	Agent:		4		
	Part of Plant Displayed:		3		
TOTAL SCORE:			100		

Insect Identification Rubric

NAME		MEMBER NUMBER			
CHAPTER	STATE	TEAM NUMBER			
		Member Answer	Possible Points	Member Score	Possible Answers
1.	Identification:		4		Possible Answers Identificaton 10. alfalfa weevil 11. aphids 12. armyworm larva 13. assassin bug 14. bean leaf beetle 15. blister beetle 16. boll weevil 17. chinch bug 18. Colorado potato beetle 19. corn ear worm larva 20. corn rootworm larva 21. cricket 22. cutworm larva 23. European corn borer larva 24. flea beetle 25. grain weevil 26. grasshopper 27. green lacewing 28. honeybee 29. Japanese beetle 30. lady beetle larva 31. leaf skeletonizer 32. leafhopper 33. lygus 34. Mexican bean beetle 35. pink bollworm larva 36. salt marsh caterpillar/wooly worm 37. scale 38. spider mite 39. spittlebug 40. spotted cucumber beetle/Southern corn rootworm beetle 41. stinkbug 42. tobacco/tomato hornworm larva 43. Western corn rootworm beetle 44. western flower thrip 45. white grub 46. whitefly 47. wireworm Economic Impact None or predatory: NP Fruit/Flower destruction: F Vegetative Part destruction: V Removal of plant fluids: R Life Cycle
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
2.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
3.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
4.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
5.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
6.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
7.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		

	Mouth Part:		2		Complete: C Incomplete: I None: N Mouth Part Chewing: CH Chewing-lapping: CL Rasping-sucking: RS Piercing-sucking: PS Sponging: SP Siphoning: SI
8.	Identification:		4		
	Economic Impact		2		
	Life Cycle:		2		
	Mouth Part:		2		
9.	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
10	Identification:		4		
	Economic Impact:		2		
	Life Cycle:		2		
	Mouth Part:		2		
TOTAL SCORE:			100		

Crop Placing Written Reasons Scorecard

25 points

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

Placing		Total Points
TOTAL POINTS		

JUDGE'S NAME JUDGE'S SIGNATURE DATE

Grain Grading Scorecard

NAME	MEMBER NUMBER
CHAPTER	STATE
	TEAM NUMBER

FFA GRAIN INSPECTION SERVICE

IDENTIFICATION AND LOT:

GRADE AND KIND:	Amounts	Base Price:
		Discounts
TEST WEIGHT BY BUSHEL		
MOISTURE %		
DOCKAGE %		
BCFM %		
HEAT DAMAGED KERNELS %		
DAMAGED KERNELS TOTAL %		
TOTAL DEFECTS %		
TOTAL DAMAGE %		
FOREIGN MATERIAL %		
SHRUNKEN OR BROKEN %		
DEFECTS %		
CLASSES THAT BLEND %		
CONTRASTING CLASSES %		
WHEAT OF OTHER CLASSES % SPLITS %		
SAMPLE GRADE FACTORS SPECIAL GRADES		

OTHER		
MYCOTOXINS		
		FINAL PRICE

This tag is an example. Each scorecard will resemble this and be crop specific.
 They will be included at <https://www.FFA.org/participate/cdes/agronomy>.