

Virginia FFA Turf Management



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VIRGINIA FFA



Turf Management Career Development Event



Purpose of Event

The Turf Management Career Development Event provides competition that fosters on-the-spot thinking, working as a team to accomplish one goal, and problem-solving skills necessary for turf grass managers. The skills learned in this event can be used to be successful as a Golf Course Superintendent, Sports Turf Manager, Lawn Care Provider, and much more.

Objectives

- To demonstrate the ability to identify turf grasses, weeds and diseases common in Virginia.
- To demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, marketing and maintenance of turf.
- To demonstrate the ability to identify, select, use, and maintain appropriate supplies and equipment for turf management.
- To demonstrate skills in oral and written business communications.
- To understand marketing principles and demonstrate proper sales and service skills.
- To demonstrate the ability to prepare accurate and legible records and reports, and to interpret business documents.

Event Rules

- A team will consist of four (4) team members with only the three highest individual score being totaled for the team score. Teams with fewer than three members are not eligible for team awards, but students may receive individual awards.
- Participants are NOT allowed to use (or have visible) electronic devices during the event, unless for medical reasons. This includes cell phones, iPods, iPads, mp3 players, smart watches, etc. Participants will be allowed to use calculators, if specified; however, cell phone calculators and graphing calculators are not permitted.
- This event will be scored using an answer sheet, and test booklet as needed. It is important that students follow instructions and fill out the sheets correctly in order to receive credit.
- This event will be held rain or shine.

Event Format

Equipment

Materials provided by students: Two pencils or pens, clipboard, and calculator

Flow of Event

- General Knowledge Examination—30 minutes
- Identification of turf diseases, pests, equipment, and disorders—25 minutes
- Equipment preparation, maintenance, problem-solving, and safety—25 minutes
- Customer Relations, Problem Solving, Job Estimating
 - Site Evaluation—20 minutes
 - Problem Solving—20 minutes

Individual Activities

Phase I - General Knowledge Examination—100 points Twenty-five (25) question exam (questions worth various points and will be clearly designated) to evaluate the participant's knowledge of, but not limited to, basic turf grass management principles, irrigation, soil types, fertilizers, cultural practices, and pesticides. This phase of the event will be worth 100 points. Time of this phase will be 30 minutes.

Phase II - Identification of turf species, pests, equipment, and disorders—100 points Twenty-five (25) specimens (4 points each) to be presented as an intact live specimen, photograph, or preserved specimen. Each specimen will be designated by a station number. When the participant identifies the item, its number is recorded on the answer sheet. When a problem must be presented with an infected plant, a "disorder" label will be with the item to designate identification of the problem rather than the plant name. This phase will be worth 100 points. Time of this phase will be 1 minute/specimen for a total of 25 minutes.

Phase III - Equipment preparation, maintenance, and problem solving—100 points Participants will solve five (5) problems (10 points each) dealing with equipment calibration, equipment check for faulty parts, selection of proper equipment for a specific job, identification of a turf problem caused by equipment or operator malfunction, selection of proper management practices to withstand stress conditions, and proper pesticide label evaluation. A problem situation will be presented with answer choices of possible maintenance needs, corrective actions and/or operating specifications. This phase of the event will be worth 50 points. Time of this phase will be five minutes/problem for a total of 25 minutes.

Phase IV - Customer Relations, Problem Solving, and Job Estimating—100 points

This phase will be composed of two parts:

Part One - Site Evaluation: Participants will be required to measure and evaluate a turf area for a specific property (worth 50 points). Site-specific information will be provided on the day of the event. There will be twenty-five (25) questions (2 points each) about the site. Time of this phase will be 20 minutes.

Part Two - Problem Solving: (worth 50 points) Time for part two will be 20 minutes.

Tiebreakers - If ties occur, the following sections will determine award recipients:

Team and Individual

1. Written Exam
2. Identification

Event Snapshot - Below is a brief overview of the Turf Management CDE

- This event will have four (4) phases: a.
 - Phase I - General Knowledge Exam- 100 points (30 minutes) b.
 - Phase II - Identification of turf species, pests, equipment, and disorders—100 points (25 minutes) c.
 - Phase III - Equipment preparation, maintenance, and problem solving—100 points (25 minutes)
 - Phase IV - Customer Relations, Problem Solving, and Job Estimating—100 points (40 minutes)

Scoring:

- Total Possible Individual Points - 400 points
- Total Team Score- 1200

VIII. References

- Doak, Ervin, and Goatley. Virginia Turfgrass Certification Manual (latest edition).
- Goatley, Askew, Ervin, McCall, Studholme, Schultz, and Horvath (2008). Sports Turf Management in the Transition Zone.
- Christians and Agnew (2008). The Mathematics of Turfgrass Maintenance (Fourth Edition).
- Emmons and Rossi (2015). Turfgrass Science and Management (Fifth Edition).
- Puhalla, Krans, and Goatley (2010). Sports Fields: Design, Construction, and Maintenance.
- Walker (2009). The Field Guide: The Layout and Dimensions of Sports Fields.
- Smiley, Dernoeden, and Clarke (2005) Compendium of Turfgrass Diseases (Third Edition)

Identification (100 points) Insects, Diseases, Turf Species, Physical Disorders, Weeds, and Equipment List

Physical Disorders

101. Chemical Burn
102. Drought Stress
103. Mower Scalping

Insects

104. Billbug (*Sphenophorus parvulus*)
105. Chinch Bug (*Blissus leucopterus*)
106. Cutworm (*Agrotis ipsilon*)
107. Grubs (*Popillia japonica*)
108. Sod Webworm (*Toumeyella liriiodendra*) Weeds
109. Annual Bluegrass (*Poa Annua*)
110. Black Medic (*Medicago lupulina*)
111. Broadleaf plantain (*Plantago major*)
112. Buckhorn plantain (*Plantago lanceolate*)
113. Canada thistle (*Cirsium arvense*)
114. Carpetweed (*Mollugo verticillate*)
115. Cinquefoil (*Potentilla simplex*)
116. Common chickweed (*Stellaria media*)
117. Common groundsel (*Oxalis montana*)
118. Crabgrass (*Digitaria sanguinalis*)
119. Dandelion (*Taraxacum officinale*)
120. Foxtail (*Setaria viridis*)
121. Goosegrass (*Eleusine indica*)
122. Ground Ivy (*Glechoma hederacea*)
123. Henbit (*Lamium amplexicaule*)
124. Knotweed (*Polygonum aviculare*)
125. Mouse Ear Chickweed (*Cerastium vulgatum*)
126. Nimblewill (*Muhlenbergia schreberi*)
127. Pennsylvania smartweed (*Polygonum pensylvanicum*)
128. Rough Bluegrass (*Poa trivialis*)
129. Purslane (*Portulaca oleracea*)
130. Quackgrass (*Elymus repens*)
131. Red sorrel (*Rumex acetosella*)
132. Spurge (*Euphorbia maculata*)
133. Velvetgrass (*Holcus lanatus*)
134. White Clover (*Trifolium repens*)
135. Wild Garlic (*Allium ursinum*)
136. Yellow Nutsedge (*Cyperus esculentus*)
137. Yellow Woodsorrel (*Oxalis stricta*)

Turf Species:

138. Creeping Bentgrass (*Agrostis stolonifera*)
139. Bermuda grass (*Cynodon dactylon*)
140. Annual Ryegrass (*Lolium multiflorum*)
141. Buffalo grass (*Bouteloua dactyloides*)
142. Fine Fescue (*Festuca rubra*)
143. Kentucky Bluegrass (*Poa pratensis*)
144. Perennial Ryegrass (*Lolium perenne*)
145. Tall Fescue (*Festuca arundinacea*)
146. Zoysiagrass (*Zoysia japonica*)

Diseases:

147. Brown Patch (*Rhizoctonia solani*)
148. Dollar Spot (*Sclerotinia homoeocarpa*)
149. Fairy Ring (*Basidiomycetes*)
150. Leaf Spot (*Magnaporthe oryzae*)
151. Powdery Mildew (*Erysiphe graminis*)
152. Pythium Blight (*Pythium aphanidermatum*)
153. Red Thread (*Laetisaria fuciformis*)
154. Rust (*Puccinia graminis*)
155. Stripe Smut (*Ustilago striformis*)

Equipment:

156. Aerator
157. Cup Cutter
158. Broadcast Spreader
159. Drop Spreader
160. Over-seeder
161. Reel Mower
162. Respirator
163. Rotary Mower
164. Rototiller
165. Sod Cutter
166. Spray Nozzle
167. Sprayer
168. String Trimmer
169. Thatcher
170. Fungicide
171. Herbicide
172. Fertilizer