

**New Jersey FFA Association, Inc.
New Jersey Department of Agriculture
P.O. Box 330, Trenton, NJ 08625**

TURF MANAGEMENT CAREER DEVELOPMENT EVENT

GENERAL RULES

Career Development Event rules outlined in the State Activity Guide form 7.000 will be followed.

SCOPE

The New Jersey FFA Turf Management Career Development Event includes all aspects of the industry in producing, marketing, utilizing, and maintaining turf as well as related products, equipment and services.

PURPOSE

To stimulate career interest, encourage proficiency development and recognize excellence in students of turf management through the agricultural education curriculum.

OBJECTIVES

<i>PLANT MATERIALS</i>	To demonstrate the ability to identify turf grasses commonly used in New Jersey
<i>PLANT DISORDERS</i>	To demonstrate the ability to identify unhealthy plant conditions due to pests, nutrition or physiological disorders and mechanical or chemical injuries.
<i>CULTURAL PRACTICES</i>	To demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, marketing and maintenance of turf.
<i>SUPPLIES AND EQUIPMENT</i>	To demonstrate the ability to identify, select, use and maintain appropriate supplies and equipment for turf management.
<i>INTERPERSONAL RELATIONS</i>	To demonstrate skills in oral and written business communications.
<i>MARKETING</i>	To understand marketing principles and demonstrate proper sales and service skills.
<i>RECORDS AND REPORTS</i>	To demonstrate the ability to prepare accurate and legible records and reports and to interpret business documents.

EVENT RULES

1. A team will consist of four members. The three highest individual scores will be totaled from the team score.
2. Under no circumstances will any participant be allowed to touch or handle plant materials or other specimen during event except as specified in certain practicums.
3. Each participant must have a clipboard, at least two No. 2 pencils and a calculator.
4. Official FFA/business dress is required during the event. (Will be held rain or shine)

EVENT FORMAT

PHASE I - GENERAL KNOWLEDGE EXAMINATION

Twenty-five (25) multiple choice question exam (4 points each) to evaluate the participants knowledge of pesticide use and safety, cultural practices, fertilizers, soil type, irrigation, plant anatomy and proper turf management practices will be given. This phase of the event will be worth 100 points. Time of this phase will be 25 minutes.

PHASE II - IDENTIFICATION OF TURF SPECIES, PESTS, EQUIPMENT AND DISORDERS

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 contestant identifies the item, its number is written on the identification list at the corresponding specimen name. When a problem must be presented with an affected plant, a "disorder" label will be with the item to designate identification of a problem rather than a plant name. This phase of the event will be worth 100 points. Time of this phase will be one minute/specimen for a total of 25 minutes.

PHASE III - EQUIPMENT PREPARATION, MAINTENANCE, PROBLEM SOLVING AND SAFETY

Participant will solve five (5) problems (10 points each) dealing with equipment calibration, equipment check for faulty parts, selection of proper equipment for specific job, identification of a turf problem caused by equipment or operator malfunction, selection of proper management practices to withstand stress conditions, 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 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

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. Site-specific information will be provided on the day of the event. Total point value is 100 points. The value of each correct answer will be 1.5 points – 50 answers - for identification questions and twenty-five (25) points for determining the plot size. Time for Part 1 - Site Evaluation will be 20 minutes.

Part Two – Problem Solving - This part will be worth 50 points. Time for this Part 2 - will be 10 minutes.

SCHOLARSHIP OPPORTUNITY

The three highest scoring individuals in the Turf Management Career Development Event will be eligible for scholarships at Rutgers University if they are accepted and enroll in either the Twenty Week Turf Management Program or as a four-year Rutgers, School of Environmental and Biological Science student with a Turfgrass Management major. The scholarship would be applied towards first year tuition.



**FFA Turf Management Career Development Event
Phase II 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
- 105. Chinch Bug
- 106. Cutworm
- 107. Grubs
- 108. Sod Webworm

Weeds

- 109. Annual Bluegrass
- 110. Black medic
- 111. Broadleaf plantain
- 112. Buckhorn plantain
- 113. Canada Thistle
- 114. Carpetweed
- 115. Cinquefoil
- 116. Common chickweed
- 117. Common groundsel
- 118. Crabgrass
- 119. Dandelion
- 120. Foxtail
- 121. Goosegrass
- 122. Ground Ivy
- 123. Henbit
- 124. Knotweed
- 125. Mouse Ear Chickweed
- 126. Nimblewill
- 127. Pennsylvania smartweed/Ladysthumb
- 128. Poa trivialis
- 129. Purslane
- 130. Quackgrass
- 131. Red sorrel
- 132. Spurge
- 133. Velvetgrass
- 134. White clover
- 135. Wild Garlic/Onion
- 136. Yellow Nutsedge
- 137. Yellow Woodsorrel (Oxalis)

Turf Species

- 138. Bentgrass
- 139. Bermuda grass
- 140. Annual Ryegrass
- 141. Buffalo grass
- 142. Fine Fescue
- 143. Kentucky Bluegrass
- 144. Perennial Ryegrass
- 145. Tall Fescue
- 146. Zoysia grass

Diseases

- 147. Brown Patch
- 148. Dollar Spot
- 149. Fairy Ring
- 150. Leaf Spot
- 151. Powdery Mildew
- 152. Pythium Blight
- 153. Red Thread
- 154. Rust
- 155. Stripe Smut

Equipment

- 156. Aerator
- 157. Cup Cutter
- 158. Broadcast Spreader
- 159. Drop Spreader
- 160. Overseeder
- 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



FFA TURF CAREER DEVELOPMENT EVENT
PHASE IV -PART 1 - SITE EVALUATION SHEET

NAME _____ CHAPTER _____

Directions: First determine the total square footage of the plot. Record your square footage in the box below. Using the "Exam" section of your scantron sheet, evaluate the plot according to the following areas. If the answer is "Yes" enter it as "A", if the answer is "No", enter it as "B" on the scantron sheet. Each choice given below must have either the "Yes/A" or the "No/B" box filled in. Some sections may have more than one "yes/A" box filled in.

TOTAL SQUARE FEET _____ (25 points)

Yes (A) No (B)

GRASS TYPE

- 1. ANNUAL BLUEGRASS
- 2. BENTGRASS
- 3. FINE FESCUE
- 4. KENTUCKY BLUEGRASS
- 5. PERENNIAL RYEGRASS
- 6. TALL FESCUE

THATCH THICKNESS (only one "yes" the rest "no")

- 7. LESS THAN 1"
- 8. 1"-2"
- 9. MORE THAN 2"

AVAILABLE SUNLIGHT (one "yes" the rest "no")

- 10. 100% SUN
- 11. 75% SUN
- 12. 50% SUN
- 13. 25% OR LESS SUN

WATERING PRACTICE

- 14. PROPER

SOIL pH

- 15. PROPER

MOWING

- 16. PROPER

NITROGEN FERTILITY (only one "yes" the rest "no")

- 17. ADEQUATE
- 18. EXCESSIVE
- 19. INADEQUATE

INSECT DAMAGE

- 20. CINCH BUGS
- 21. GRUBS
- 22. SOD WEBWORM
- 23. NONE ACTIVE

SOIL TEXTURE (CLOSEST) (only one "yes" the rest "no")

- 24. CLAY
- 25. CLAY LOAM
- 26. LOAM
- 27. SAND
- 28. SANDY LOAM

WEEDS

- 29. BROADLEAF PLANTAIN
- 30. BUCKHORN PLANTAIN
- 31. COMMON CHICKWEED
- 32. CRABGRASS
- 33. DANDELION
- 34. FOXTAIL
- 35. GOOSEGRASS
- 36. KNOTWEED
- 37. MOUSEAR CHICKWEED
- 38. NIMBLEWILL (NIMBLEWEED)
- 39. PURSLANE
- 40. SPURGE
- 41. THISTLE
- 42. WHITE CLOVER
- 43. WILD GARLIC/ ONION
- 44. YELLOW NUTSEDGE
- 45. YELLOW WOODSORREL (OXALIS)

DISEASES PRESENT

- 46. BROWN PATCH
- 47. DOLLAR SPOT
- 48. LEAF SPOT
- 49. RED THREAD
- 50. RUST

TOTAL SQUARE FEET _____ (25 PTS)

CORRECTED BY: _____

CHECKED BY: _____

PHASE IV- PART 2
TURF PROBLEM SOLVING
SAMPLE

NAME: _____ CHAPTER: _____

I. A soil test result shows a turf area has a very low level of phosphorous and a pH of 6.8.

(5 points)

1. Should lime be applied to the area? Yes No

(5 points)

2. Which of the following fertilizers would be best to apply?

A. 34-0-0 B. 10-20-10 C. 10-5-20

(20 points)

II. How much fertilizer having an analysis of 20-5-15 do you need to apply to 10,000 square feet of turf at a rate of 1 pound of nitrogen per 1000 square feet?

_____ pounds

(20 points)

III. You have a choice of two different fertilizers with different prices per 50-pound bag.

A. 16-4-8 at \$18.00 per bag

B. 28-4-10 at \$25.00 per bag

Which fertilizer is the least expensive based on cost per pound of nitrogen?

Fertilizer _____ Price per pound of nitrogen \$ _____
(to the nearest cent)



Recommended References For Turf Management Career Development Event

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Compendium of Turfgrass Diseases 3rd edition.
Smiley, Dernoeden, Clarke 2005. APS Press ISBN 0-89054-330-5

Cooper, Elmer L., Agriscience Fundamentals & Applications, Delmar Publishers, Inc. 1990.

Emmons, Turfgrass Science and Management (2nd edition), Delmar Publishers, Inc. 1995.

Ingels, Landscaping: Principles and Practices (5th edition), Delmar Publishers, Inc., 1997.

“Landscape, Lawn Care & Golf Course Management” CD-ROM, National Council for Agricultural Education, 2001.

Schroder and Sprague, Turfgrass Management Handbook (4th edition), Interstate Publishers, Inc. 1994.

Smith, Ortho Problem Solver (4th edition), Chevron Chemical Co., 1994.

Turgeon and Giles, Turfgrass Management, Prentice-Hall, Inc. 1991.

Watschke, Dernoeden and Shellar, Managing Turfgrass Pests, Lewis Publishers, 1995.

Weeds of Northeast, Cornell Press.