

CHANGES July 28, 2006 CHANGES

FORESTRY RULES

OHIO CAREER DEVELOPMENT EVENTS

Purpose

To provide recognition for those students who have demonstrated skills and competencies as a result of forestry instruction.

Date

Hocking College (First full weekend in October)

Location

Hocking Technical College, Nelsonville

CDE Rules

1. Under no circumstances will any contestants be allowed to touch or handle plant material during the contest. Any infraction of this rule will be a disqualification of the contestant.
2. Each school may enter an unlimited number of dues paid FFA members as participants, the top 4 scores will be considered the "team" and the top 3 scores will be the team score of record.
3. Observers will not be permitted in the CDE area while the event is in progress.
4. No CDE team, team member, or team coach shall visit the CDE facilities to observe plant materials or facilities a week prior to the CDE. Any team, team member, or team coach reported and proven to do so will be disqualified from competing in the state CDE.
5. Any contestant caught cheating during the CDE will be disqualified from the event.
6. Contestants must come prepared to work in adverse weather conditions. The CDE will be conducted regardless of the weather conditions. Contestants should have heavy coats, other warm clothes, and appropriate footwear.
7. Written materials will be furnished for the contest. Contestants should provide clipboards and 2- #2 lead pencils. Electronic calculators will be allowed.

CDE Format

The CDE will be divided into the following four parts:

General Knowledge (100 points)

Forty (40) multiple choice questions (worth 2 points each) relating to areas of the forestry industry will constitute the forestry written test. This phase of the CDE will test the student's knowledge and understanding of basic principles of forestry problems and five relating to "Timber Pricing Highlights" (worth 4 points each). This test may have questions pertaining to urban forestry general knowledge. Each contestant will be allowed 30 minutes to complete this part of the CDE.

Tree Identification (100 points)

Twenty five (25) specimens from the following list will be displayed for contestants to identify by common Ohio species names. A total of 15 minutes will be allotted for completion of this section of the event. Each correctly identified specimen will be worth four points. Species will be identified by leaf, twig/bud, fruit, bark, and/or form.

Ash
Aspen
Basswood
Beech, American
Birch
Black Gum
Buckeye
Catalpa
Cedar
Cherry
Chestnut, American
Cottonwood
Cucumbertree
Elm
Fraser Fir
Hackberry
Hemlock
Hickory
Locust, Black
Maple, Soft
Maple, Hard
Oak, Red
Oak, White
Pine, Red
Pine, Scotch
Pine, Virginia
Pine, White
Poplar, Yellow
Sassafras
Spruce, Norway
Sweet Gum
Sycamore
Tree of Heaven
Walnut, Black

Equipment Identification (100 points)

Fifteen (15) pieces of equipment from the following list will be displayed for the contestant to identify by technical names. Each piece of equipment will be designated by a number. This part of the event will be allotted 15 minutes for completion.

Abney level
Altimeter
Axe, brush
Axe, double bit
Axe, single bit
Backpack fire pump
Bark gauge
Buck saw/bow saw
Chainsaw
Chainsaw chaps
Chainsaw depth gauge
Chainsaw file
Chemical sprayer
Climbing rope
Clinometer
Data recorder
Densimeter
Diameter tape
Dot grid
Drip torch
Ear protectors
Evergreen shearing knife
Felling wedge
Fiberglass measuring tape
Fire rake
Fire swatter
Fire weather kit
GPS receiver
Hand lens/field microscope
Hand Pruners
Hip chain
Increment borer
Log scale stick
Logging chains
Lopping shears
Lumber scale stick/Log Rule
Mattock
Splitting maul
Peavy/Cant hook
pH meter
Planimeter
Plastic flagging
Pole saw
Pruning saw
Pulski-forester axe
Rail tool
Range finder
Relaskop
Safety hardhat

Safety glasses
Staff compass
Survey instruments
Tree Scale stick
Soil sampler
Soil test kit
Steel tape
Stereoscope
Tally book
Tally meter
Timber carrier
Tree caliper
Tree injector
Tree marking gun
Tree planting hoe/bar
Tree trimming belt and saddle
Trimmer/brush cutter
Wedge prism
Wheel caliper

Timber Cruising (100 points) WEATHER PERMITTING!

Using a scale stick, diameter tape or clinometer, each contestant will measure pre-numbered trees on a 1/5 acre plot for either cord volume, board foot volume, or both, as specified by the CDE judge. The contestant must record the DBH and merchantable height (Merritt Hypsometer Reading) of each tree. The hypsometer reading will be at the nearest 1/2 log (8') for saw log. The contestant must convert the resulting volume to a one-acre basis.

a. Timber cruising will reflect to industry standards. The following minimum diameters and heights will be:

Saw timber	DBH 12 inches
	Top diameter 10 inches

b. The contestant will be allowed 15 minutes to record the DBH and the height of the marked trees and an additional 15 minutes to make volume recordings and conversions.

c. A total of 100 points will be allotted for this portion of the CDE. One point will be allowed for the correct tree identification, 4 points for the correct DBH, and the correct height. Ten points will be allowed for the correct volume per acre in saw timber. One point will be deducted for each 5 percent, plus or minus, the contestant's calculation deviates from the correct measured volume.

d. Refer to Tree I.D. specimen list for the tree species identification list.

Practicums (200 points)

Contestants will complete two (2) practicums from the following rotated list. Each practicum has a maximum score of 100 points. Three practicums will be rotated every other year but only two will be selected from these three. Odd numbered practicums will take place in odd years (2006-2007 & 2008-2009) and even numbered practicums in even years (2007-2008 & 2009 -2010). If the weather does not permit timber cruising to occur, then all three practicums may be used.

1. T.S.I. (Timber Stand Improvement)

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:

1. Harvest (utilize the tree)
2. Leave - (tree should remain in stand for a good reason)
3. 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:

1. Markets available - (including hardwood)
2. Wildlife habitat considerations - (scope, etc.)
3. Present condition of stand
4. 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.

2. Map Reading - Legal Descriptions

a. Contestants will be furnished a U.S. geological survey map with specific points marked for the contestant to identify. The contestant shall: know legal descriptions, recognize topographic map symbols, understand the meaning of map symbols, understand the meaning of map

symbols, and identify the size and location of 40 acres or more in a section.

b. Ten (10) positions 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.

EXAMPLES

1. What is the legal description of the area boxed?—; NW 1/4 of SW 1/4, S 16, T4N, R2E
2. What is the item located at this point?— Church
3. What is the acreage of the area enclosed?— 120 acres

c. The U.S. Department of Interior Geological Survey Topographic Map Information and symbols will be the official key. Legal descriptions will be written or described according to the following:

NW - Northwest R - Range SE - Southeast 1/4 - Quarter of a S - Section (640 acres) section (160 acres) T - Township or a quarter of a quarter (40 of 160)

d. Thirty minutes will be allowed for this section of the CDE.

e. Ten (10) points will be awarded for each correct land parcel. All answers must be correct; no partial credit will be given.

3. Compass

a. The student will furnish and use a hand compass and pacing to simulate the determination of property lines on a tract of timber. The compass course will have 10 marked points. The student will start at point one and record the compass reading and distance to point 2. The contestant will do the same from point 2 to point 3 and so on. The readings will be azimuth readings. North will be defined as magnetic north.

b. Thirty minutes will be provided for this portion of the CDE.

c. A total of 100 points are possible, 10 points for each numbered site. Five points for correct bearing or azimuth and five points for correct distance. Partial credit will be given with a deduction of one point for each 2 degrees or 2 feet the contestant is off the correct answer.

4. Chain Saw Part Identification and Troubleshooting

This practicum is divided into two parts:

a. Part 1 - In chain saw part identification each contestant will identify 10 common terms as parts of a chain saw. These parts will be labeled on a saw or will be removed from the saw.

b. Part 2 - Troubleshooting - The contestant will identify

10 “problems” or “troubles.” Each station will have a part, component, saw, or written situation with problem areas clearly identified. The contestant may pick-up parts or the saw.

c. Thirty minutes will be allowed for completion of the entire practicum

d. Each correct answer will be valued at five points each.

CHAIN SAW PARTS LIST (Refer to parts list from Stihl)

Adjusting wheel of quick tensioner

Air filter

Bumper spike

Carburetor

Carburetor adjusting screws

Chain brake

Chain catcher

Chain scabbard

Chain sprocket

Chain sprocket cover

Chain tensioner (front)

Chain tensioner (side)

Crankshaft

Decompression valve

Front hand guard

Front handle (handlebar)

Fuel filler cap

Fuel pump

Guide bar

Handle of wingnut

Master control lever

Muffler

Oil filler cap

Oilomatic saw chain

Piston

Rear hand guard

Rear handle

Shroud

Spark plug

Spark plug boot

Starter grip

Throttle trigger

Throttle trigger interlock

Twist lock

Types and parts of chains will be added shortly

5. Forest Products

a. Ten 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:

1. Actual Sample
2. Picture(s)/Slides
3. Written description

A number will designate each sample representing a species.

b. Scoring: This will be a multiple-choice practicum. Ten points will be given for each wood product or sample that is correctly identified for a total of 100 points.

6. Tree and Forest Problems

a. Symptoms of ten (10) problems 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:

1. Actual sample
2. Picture(s)/Slides
3. Written description
4. Written case history

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

b. Scoring: Ten points will be given for each problem that is correctly identified for a total of 100 points.

Air pollution

Aphid

Beetles

Canker

Chemical damage

Cicada

Climatic injury: snow, wind, frost, drought, hail

Damping off

Douglas fir tussock moth

Emerald ash borer

Fire damage

Girdling roots

Grapevine, wild

Gypsy moth

Honeysuckle

Landscape equipment damage

Leaf spot

Lightning damage

Mechanical damage

Multiflora Rose

Needle cast

Nematode

Rot, butt or heart

Rust

Spruce budworm

Spider mite

Sawfly

Sunscald

Scale

Tent caterpillar

Wetwood or slime flux

Wildlife/Livestock damage

Wood borer

Scoring Guide

1. Individual

General Knowledge	100 points
Tree Identification	100 points
Equipment Identification	100 points
Timber Cruising	100 points
Practicums	200 points
Total Possible	600 points

2. Team

600 points x 3 individuals = 1800 Total Points

References:

1. Crop Tree Management in Eastern Hardwoods-USDA
2. Chain Saw Owner's Manuals (the most current Stihl Chainsaw Manual can be purchased from your local dealer or from Stihl)
3. Stihl Chain Safety Manual- Can be downloaded at www.stihlusa.com/manuals/index.html
4. Ohio Timber Pricing Quarterly Sheets:
www.oardc.ohiostate.edu/ohiowood
5. TSI Reference Book (check National FFA Rules)
6. Harlow, W.M., E.S. Harrar, and F.M. White. *Textbook of Dendrology*. New York: McGraw-Hill Book Company, 2000.
7. Silvics of Forests of United States, Handbook #271, U.S. Forest Service, P.O. Box 2417, 12th and Independence Avenue, SW, Washington, D.C. 20013.
8. Braun, E. Lucy. *The Woody Plants of Ohio*. Columbus: The Ohio State University Press, 1961.
9. Ohio State University Horticulture and Crop Sciences:
www.hcs.ohio-state.edu/odnr/forestry.htm
10. Avery, Thomas E. and Harold Burkhart. *Forest Measurements*. Fifth Edition. New York: McGraw-Hill, 2002.
11. Hicks, Ray Jr. *Ecology and Management of Central Hardwood Forests*. New York: Wiley & Sons, 1998.

Supplemental Reference:

Hobar disk- (not used for test)

Current Catalogs:

1. Forestry Suppliers, Inc. 205 West Rankin Street,

Jackson, MS 39204-0397 www.forestry-suppliers.com

2. The Ben Meadows Company, 3589 Broad Street, Atlanta, GA 30366 www.benmeadows.com

Other References:

1. Wenger, Karl, ed. *Forestry Handbook*. 2nd Edition. New York: Wiley & Sons, 1984.
2. *Choices in Silviculture for American Forests*. Bethesda, MD: Society of American Foresters, 1981.

Web page addresses for review:

- www.fs.fed.us/na/morgantown/frm/stewardship/stewardship.htm
- www.nass.usda.gov/oh/tmbrprt.htm
- www.usajobs.opm.gov
- www.fs.fed.us/people/employ
- www.cnr.vt.edu/dendro/dendrology
- www.safnet.org

Team Number _____
Student Name _____

Timber Cruising

DBH Class SIZE	CLASS
9" - 11"	10"
11" - 13"	12"
13" - 15"	14"
15" - 17"	16"
17" - 19"	18"
19" - 21"	20"
21" - 23"	22"
23" - 25"	24"
25" - 27"	26"
27" - 29"	28"
29" - 31"	30"
31" - 33"	32"
33" - 35"	34"
35" - 37"	36"
37" - 39"	38"
39" - 41"	40"
41" - 43"	42"
43" - 45"	44"
45" - 51"	46"
51" - 61"	48"
61" - 63"	50"

If the mean diameter is an exact odd number, round up to the higher even DBH class.

EXAMPLE: 13" (exact) would round up to 14" (even).

Tree (1 pt. ea) No. DBH (4 pt. ea.) #16 Ft. Logs (4 pt. ea.)

Total Board Feet (10 pt. total)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Total volume in board feet per:

Acre _____ (10 Points)