



# **Introduction to Horticulture CDE**

## **Purpose**

The Introduction to Horticulture Career Development Event is unique to North Carolina. The event is designed to allow students to demonstrate their proficiency in plant identification, weed and pest identification, and general horticultural knowledge.

## **Superintendent**

The superintendent for this event is Mrs. Sherilee Deal, Agriculture Education Curriculum Coordinator, 444 Bristol Dr, Statesville, NC 28677. Phone: 704.796.5736, Email: sdeal2@ncsu.edu

## **Eligibility and General Guidelines**

This event is open to FFA members in good standing. Students who have completed any level 2 horticulture course at the time of the regional qualifying event are not eligible to participate.

Any student eligible to participate at the regional level is also eligible to participate in the state event if they qualify according to regional guidelines.

Teams shall consist of four members. Only the top three scores will count towards the team total. No alternates are allowed in state events. Any alternate found participating in a state event will result in team disqualification.

At the North Carolina FFA State Convention, participation in more than one FFA CDE is permitted as long as events are not being held concurrently and no special provisions are required to facilitate participation with the exception that Parliamentary Procedure and Prepared Public Speaking and Parliamentary Procedure and Creed Speaking which are held concurrently will allow dual participation and special provisions for flighting.

The use or possession of cellular phones or any other mobile electronic communication device is prohibited during any state-level career development event. Any violation of this rule by any team member will result in total team disqualification.

FFA members participating in career development events that require the use of calculators may only use non-programmable/graphing calculators that do not have the ability to communicate with other calculators. Calculators will be screened prior to the start of a CDE for acceptability. Students caught using data stored on a calculator or communicating with other calculators will result in a total team disqualification for the event.

Any member found cheating in any state-level career development event will result in total team disqualification for that event.



The North Carolina FFA Association, in keeping with the FFA mission and purposes, does not permit the use of tobacco products, e-cigarettes, vapes, or Juuls at any FFA facility or at any FFA activity. In compliance with the Americans with Disabilities Act, North Carolina FFA will honor requests for reasonable accommodations made by individuals with disabilities. Please direct accommodation requests through the CDE/LDE Accommodation Request [Form](#). If the accommodation can be made for all and/or doesn't provide an unfair advantage, then every effort will be made to provide the accommodation. Requests can be accommodated more effectively if notice is provided at least 10 days before the event.

## **Middle School Participation**

Middle school students and teams may participate in Career Development Events or Leadership Development Events. The top middle grades team will be recognized at the state FFA convention. Middle school participants should designate during registration.

## **State Career Development Event Participation**

The appropriate number of teams based on event participation from each region are eligible to compete in the state career development event. The top three individuals in the regional event are eligible to participate in the state event as individuals regardless of their team placing. Teams and individuals advancing to state event participation must be certified by the regional FFA advisor.

## **Dress Code**

Participants are required to follow the North Carolina FFA Career Development Event Dress Code. Participants are allowed to wear long pants, an appropriate shirt with a collar, or an appropriate high school or FFA t-shirt.

The North Carolina FFA Association strives to promote a positive image at all official FFA events. The dress code policy was established to address the issue of appropriate attire at all official FFA events. Members should adhere to this policy for all events. A ten percent reduction will be applied to all individual scores from a chapter if a participant from that chapter violates the dress code during that career event.

## **Procedures for Administering the Event**

Any communication between participants during the event will result in both individuals getting a zero on that phase of the event. If an individual is suspected of cheating, the participant will be given a personal quiet warning on the first offense and a zero on that phase of the event for any second offense in addition to the team being disqualified.

Participants are allowed and encouraged to bring and use clipboards in order to hold event score cards. Clipboards should be examined by an official prior to the event to determine that they are free of written materials.



## Regional Event Set-Up

The event coordinator will have the responsibility in setting up the career development event, choosing career development event officials, judges, and materials. Regions may purchase Horticulture CDE #105482 scan sheets for participants to use if they wish. Scan sheets will not be provided from the state for regional use. Students will also be given a copy of the plant list to reference the correct number for bubbling purposes. Students will not need to memorize the Plant ID #.

### Part 1: Identification - 60 points

- Twenty (20) minutes are allotted for this portion.
- Twenty (20) different plants will be chosen from the current PLANT IDENTIFICATION BASE list of ID plants and each plant will be numbered.
- Each participant will be assigned a plant to begin the identification portion of the event. Each participant will remain at each plant for one minute then progress on to the next plant.
- No participant will be permitted to return to a plant a second time.
- Each plant will be worth 3 points.
- Event officials will grade papers.
- Grading will be done by awarding 3 points for each plant correctly identified; if it is observed that a participant uses the same number twice, both numbers will be marked incorrect.

### Part 2: Knowledge Test - 25 points

- Twenty-Five (25) minutes are allotted for this portion.
- A written test will be made of questions from: Horticulture Today. Goodheart-Willcox.
- Chapters 7-12 will be used each year. The following rotation will be used for remaining chapters.
  - Even years - Chapters 13-17
  - Odd years - Chapters 29-33
- Copies of written tests will not be made available to teachers.

### Part 3: Practicum - 15 points

- Five (5) minutes are allotted for this portion.
- Each participant will be asked to identify 5 pests.
- Officials will rotate students through 5 pest identification stations.
- To expedite the practicum process, the event coordinator may provide more than one set of five pests to identify.
- Students may earn a maximum of 3 points per pest for a total of 15 points.

### Regional Event Scoring

<i>Maximum Score</i>	<i>100</i>
Identification	60
Knowledge Test	25
Practicum	15



## State Event Set-Up

The event coordinator shall be responsible for setting up the event, choosing event officials, judges, and materials. At the state level, students will use the Horticulture CDE #105482 scan sheet to bubble in their answers. Students will also be given a copy of the plant list to reference the correct number for bubbling purposes. Students will not need to memorize the Plant ID #.

### Part 1: Identification -120 points

- Forty (40) minutes are allotted for this portion
- Forty (40) different plants will be chosen from the current PLANT IDENTIFICATION BASE list of ID plants and each plant will be numbered.
- Each participant will be assigned a plant to begin the identification portion of the event. Each participant will remain at each plant for one minute then progress on to the next plant.
- No participant will be permitted to return to a plant a second time.
- Each plant will be worth 3 points.
- Grading will be done by awarding 3 points for each plant correctly identified; if it is observed that a participant uses the same number twice, both numbers will be marked incorrect.
- Teachers will grade the papers but should not grade papers of their own team.

### Part 2: Knowledge Test - 25 points

- Thirty (30) minutes are allotted for this portion.
- A written test will be made of questions from: *Horticulture Today*. Goodheart-Willcox.
- Chapters 7-12 will be used each year. The following rotation will be used for remaining chapters.
  - Even years - Chapters 13-17
  - Odd years - Chapters 29-33
- There will be 25 questions; each question will be valued at one point.
- Copies of written tests will not be made available to teachers.

### Part 3: Practicum - 55 points

- Thirty (30) minutes are allotted for this portion.
- The practicum will consist of the identification of ten pests, as well as five multiple-choice questions related to any of the pests identified on the practicum identification list.
- To expedite the practicum process, the event coordinator may provide more than one set of ten pests to identify.
- Questions will be based on pest management using the NC Chemical Manual. A digital manual may be used.
- Each identified pest is worth 3 points, and each multiple-choice question is worth 5 points.
- No participants will be given extra time.



## State Event Scoring

Maximum Score	200
Identification	120
Knowledge Test	25
Practicum	55

## Procedure for Determining the State Event Winner When Scores are Tied

In the event a tie score exists, apply the following methods in sequential order until the tie is broken:

1. Compare the alternate scores. The lowest team member score is the alternate score.
2. Compare the total team scores for the knowledge followed by the identification component. The higher scoring team will be determined the winner.
3. If these methods fail to break a tie, co-winners will be declared.

## State Awards

The awards for the state event will be presented annually at the state FFA convention to include a team 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place plaque. The high scoring individual will receive a plaque. The highest-placing middle school team will be recognized only if they are not already among the overall top three teams. If a middle school team places in the top three overall, they will not receive additional middle school-specific recognition.

## References

Riedel, Jodi Songer, and Elizabeth Driscoll. *Horticulture Today*. Goodheart-Willcox Company, Inc., 2017.



### Plant Identification - Base List

Plant #	Botanical Name	Common Name	Plant #	Botanical Name	Common Name
101	<i>Abelia x grandiflora</i>	Glossy Abelia	141	<i>Iris x germanica var florentina</i>	Bearded Iris
102	<i>Acer palmatum</i>	Japanese Maple	142	<i>Juniperus conferta</i>	Shore Juniper
103	<i>Acer rubrum</i>	Red Maple	143	<i>Juniperus horizontalis</i>	Creeping Juniper
104	<i>Ageratum houstonianum</i>	Ageratum	144	<i>Lagerstroemia indica</i>	Crepe Myrtle
105	<i>Ajuga reptans</i>	Carpet Bugle	145	<i>Leucanthemum x superbum</i>	Shasta Daisy
106	<i>Antirrhinum majus</i>	Snapdragon	146	<i>Ligustrum japonicum</i>	Japanese Privet
107	<i>Araucaria heterophylla</i>	Norfolk Island Pine	147	<i>Liquidambar styraciflua</i>	Sweetgum
108	<i>Asparagus densiflorus 'Sprenger'</i>	Sprenger Fern	148	<i>Liriope muscari</i>	Lilyturf
109	<i>Astilbe hybrida</i>	Astilbe Hybrids	149	<i>Magnolia grandiflora</i>	Southern Magnolia
110	<i>Aucuba japonica</i>	Japanese Aucuba	150	<i>Malus species</i>	Flowering Crabapple
111	<i>Begonia x semperflorens-cultorum</i>	Wax Begonia	151	<i>Maranta leuconeura</i>	Prayer Plant
112	<i>Berberis thunbergii</i>	Japanese Barberry	152	<i>Myrica cerifera</i>	Wax Myrtle
113	<i>Betula nigra</i>	River Birch	153	<i>Nandina domestica</i>	Dwarf Nandina
114	<i>Buddleia davidii</i>	Butterfly Bush	154	<i>Narcissus pseudonarcissus</i>	Daffodil
115	<i>Buxus sempervirens</i>	Common Boxwood	155	<i>Nephrolepis exaltata</i>	Boston Fern
116	<i>Camellia japonica</i>	Common Camellia	156	<i>Ophiopogon japonicus</i>	Mondo Grass
117	<i>Canna x generalis</i>	Canna	157	<i>Paeonia hybrid</i>	Peony
118	<i>Catharanthus roseus</i>	Vinca or Periwinkle	158	<i>Pelargonium peltatum</i>	Ivy Leaf Geranium
119	<i>Cercis canadensis</i>	Eastern Red Bud	159	<i>Pelargonium x hortorum</i>	Geranium
120	<i>Chlorophytum comosum</i>	Spider Plant	160	<i>Pennisetum species</i>	Purple Fountain Grass
121	<i>Chrysanthemum morifolium</i>	Florist Chrysanthemum	161	<i>Petunia hybrida</i>	Petunia
122	<i>Clematis x jackmanii</i>	Clematis	162	<i>Philodendron scandens oxycardium</i>	Parlor Ivy
123	<i>Cornus florida</i>	Flowering Dogwood	163	<i>Prunus serrulata 'Kwanzan'</i>	Japanese Flowering Cherry
124	<i>x Cupressocyparis leylandii</i>	Leyland Cypress	164	<i>Pyrus calleryana 'Bradford'</i>	Bradford Pear
125	<i>Dieffenbachia maculata</i>	Spotted Dumbcane	165	<i>Quercus palustris</i>	Pin Oak
126	<i>Dracaena species</i>	Dracaena	166	<i>Quercus phellos</i>	Willow Oak
127	<i>Echinacea purpurea</i>	Cone Flower	167	<i>Rhododendron catawbiense</i>	Catawba Hybrid Rhododendron
128	<i>Epipremnum aureum</i>	Golden Pothos	168	<i>Rhododendron kiusianum</i>	Azalea
129	<i>Euonymus alata</i>	Winged Euonymus	169	<i>Rosa species</i>	Shrub Rose/Landscape Rose
130	<i>Ficus benamina</i>	Benjamin or Weeping Fig	170	<i>Salvia splendens</i>	Salvia
131	<i>Ficus elastica 'Decora'</i>	Decora Rubber Plant	171	<i>Schefflera arboricola or S. actinophylla</i>	Schefflera
132	<i>Forsythia x intermedia</i>	Border Forsythia	172	<i>Sedum species</i>	Sedum
133	<i>Gardenia jasminoides</i>	Gardenia	173	<i>Solenostemon scutellarioides</i>	Coleus
134	<i>Hedera helix</i>	English Ivy	174	<i>Spathiphyllum cvs.</i>	Peace Lily
135	<i>Heimerocallis</i>	Day Lilly	175	<i>Tagetes species</i>	Marigold
136	<i>Hosta species</i>	Hosta	176	<i>Tradescantia zebrina</i>	Wandering Jew
137	<i>Hydrangea macrophylla</i>	French Hydrangea	177	<i>Tulipa species</i>	Tulip
138	<i>Ilex cornuta</i>	Chinese Holly	178	<i>Verbena hybrida</i>	Garden Verbena
139	<i>Ilex crenata</i>	Japanese Holly	179	<i>Viola x witrockiana</i>	Pansy
140	<i>Impatiens hybrid</i>	Impatiens	180	<i>Zinnia elegans</i>	Zinnia



## North Carolina FFA Association

### Introduction to Horticulture Practicum – State Pest ID List

Contestant Name \_\_\_\_\_ Contestant # \_\_\_\_\_ Score \_\_\_\_\_

Pest specimens will be numbered 1-10. Contestant uses the number beside the weed, disease or pest to identify each pest specimen. Each correctly identified pest is worth three points.

<b>Weed Identification</b>	
201	Buckhorn Plantain
202	Broadleaf Plantain
203	Crabgrass
204	Chickweed
205	Dandelion
206	Goose grass
207	Henbit
208	Oxalis
209	Spurge (prostrate)
210	White Clover
211	Wild Garlic
212	Yellow Nutsedge

<b>Disease Identification</b>	
213	Black Spot
214	Chlorosis
215	Damping off
216	Fire blight
217	Powdery Mildew
218	Root Rot
219	Rust

<b>Insect Identification</b>	
220	Aphid
221	Bagworms
222	Caterpillar
223	Japanese Beetle
224	Lacebug
225	Mealybug
226	Scale
227	Spider Mites
228	Thrips
229	White Fly



## HORTICULTURE

CDE# 105482

Incorrect Marks    Correct Mark  
☒ ☒ ☒ ☒    ☒

Team Name

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

Team Number
0 0 0 0
1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4
5 5 5 5
6 6 6 6
7 7 7 7
8 8 8 8
9 9 9 9

Code

0 0
1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9

State	Last Name	First Name
A	A A A A A A A A A A A A	A A A A A A A A
B	B B B B B B B B B B B B	B B B B B B B B
C	C C C C C C C C C C C C	C C C C C C C C
D	D D D D D D D D D D D D	D D D D D D D D
E	E E E E E E E E E E E E	E E E E E E E E
F	F F F F F F F F F F F F	F F F F F F F F
G	G G G G G G G G G G G G	G G G G G G G G
H	H H H H H H H H H H H H	H H H H H H H H
I	I I I I I I I I I I I I	I I I I I I I I
J	J J J J J J J J J J J J	J J J J J J J J
K	K K K K K K K K K K K K	K K K K K K K K
L	L L L L L L L L L L L L	L L L L L L L L
M	M M M M M M M M M M M M	M M M M M M M M
N	N N N N N N N N N N N N	N N N N N N N N
O	O O O O O O O O O O O O	O O O O O O O O
P	P P P P P P P P P P P P	P P P P P P P P
Q	Q Q Q Q Q Q Q Q Q Q Q Q	Q Q Q Q Q Q Q Q
R	R R R R R R R R R R R R	R R R R R R R R
S	S S S S S S S S S S S S	S S S S S S S S
T	T T T T T T T T T T T T	T T T T T T T T
U	U U U U U U U U U U U U	U U U U U U U U
V	V V V V V V V V V V V V	V V V V V V V V
W	W W W W W W W W W W W W	W W W W W W W W
X	X X X X X X X X X X X X	X X X X X X X X
Y	Y Y Y Y Y Y Y Y Y Y Y Y	Y Y Y Y Y Y Y Y
Z	Z Z Z Z Z Z Z Z Z Z Z Z	Z Z Z Z Z Z Z Z

Place	Class	Place
1 1234		1234 1
2 1243		1243 2
3 1324		1324 3
4 1342		1342 4
5 1423		1423 5
6 1432		1432 6
7 2134		2134 7
8 2143		2143 8
9 2314		2314 9
10 2341		2341 10
11 2413		2413 11
12 2431		2431 12
13 3124		3124 13
14 3142		3142 14
15 3214		3214 15
16 3241		3241 16
17 3412		3412 17
18 3421		3421 18
19 4123		4123 19
20 4132		4132 20
21 4213		4213 21
22 4231		4231 22
23 4312		4312 23
24 4321		4321 24

Team Activity
Team Ind.
0 0 0 0 0 0 0 0
1 1 1 1 1 1 1 1
2 2 2 2 2 2 2 2
3 3 3 3 3 3 3 3
4 4 4 4 4 4 4 4
5 5 5 5 5 5 5 5
6 6 6 6 6 6 6 6
7 7 7 7 7 7 7 7
8 8 8 8 8 8 8 8
9 9 9 9 9 9 9 9

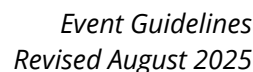
Practicums (Judges)
1 2 3 4 5 6
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9

Assessment and Solution
1 A B C D 6 A B C D 11 A B C D 16 A B C D 21 A B C D
2 A B C D 7 A B C D 12 A B C D 17 A B C D 22 A B C D
3 A B C D 8 A B C D 13 A B C D 18 A B C D 23 A B C D
4 A B C D 9 A B C D 14 A B C D 19 A B C D 24 A B C D
5 A B C D 10 A B C D 15 A B C D 20 A B C D 25 A B C D

Exam
1 A B C D 26 A B C D
2 A B C D 27 A B C D
3 A B C D 28 A B C D
4 A B C D 29 A B C D
5 A B C D 30 A B C D
6 A B C D 31 A B C D
7 A B C D 32 A B C D
8 A B C D 33 A B C D
9 A B C D 34 A B C D
10 A B C D 35 A B C D
11 A B C D 36 A B C D
12 A B C D 37 A B C D
13 A B C D 38 A B C D
14 A B C D 39 A B C D
15 A B C D 40 A B C D
16 A B C D 41 A B C D
17 A B C D 42 A B C D
18 A B C D 43 A B C D
19 A B C D 44 A B C D
20 A B C D 45 A B C D
21 A B C D 46 A B C D
22 A B C D 47 A B C D
23 A B C D 48 A B C D
24 A B C D 49 A B C D
25 A B C D 50 A B C D

Exam 2/Team
1 A B C D
2 A B C D
3 A B C D
4 A B C D
5 A B C D
6 A B C D
7 A B C D
8 A B C D
9 A B C D
10 A B C D
11 A B C D
12 A B C D
13 A B C D
14 A B C D
15 A B C D
16 A B C D
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19 A B C D
20 A B C D
21 A B C D
22 A B C D
23 A B C D
24 A B C D
25 A B C D



[illegible]



### Introduction to Horticulture – (REGIONAL) Scorecard

Name: \_\_\_\_\_ Chapter: \_\_\_\_\_ Contestant No: \_\_\_\_\_

Plant Identification			
Plant 1		Plant 11	
Plant 2		Plant 12	
Plant 3		Plant 13	
Plant 4		Plant 14	
Plant 5		Plant 15	
Plant 6		Plant 16	
Plant 7		Plant 17	
Plant 8		Plant 18	
Plant 9		Plant 19	
Plant 10		Plant 20	
<b>TOTAL SCORE (3 pts. each): _____ / 60 points</b>			



## Introduction to Horticulture - Pest ID List - (REGIONAL) Practicum

Contestant Name \_\_\_\_\_ Contestant # \_\_\_\_\_ Score \_\_\_\_\_

Pest specimens will be numbered 1-5. Contestant is to write the appropriate number in the space beside the name of the specimen. Each correctly identified pest is worth three points.

### Weeds

\_\_\_\_\_ Buckhorn Plantain  
\_\_\_\_\_ Broadleaf Plantain  
\_\_\_\_\_ Crabgrass  
\_\_\_\_\_ Chickweed  
\_\_\_\_\_ Dandelion  
\_\_\_\_\_ Goose grass  
\_\_\_\_\_ Henbit  
\_\_\_\_\_ Oxalis  
\_\_\_\_\_ Spurge (prostrate)  
\_\_\_\_\_ White Clover  
\_\_\_\_\_ Wild Garlic  
\_\_\_\_\_ Yellow Nutsedge

### Insects

\_\_\_\_\_ Aphid  
\_\_\_\_\_ Bagworms  
\_\_\_\_\_ Caterpillar  
\_\_\_\_\_ Japanese Beetle  
\_\_\_\_\_ Lacebug  
\_\_\_\_\_ Mealybugs  
\_\_\_\_\_ Scale  
\_\_\_\_\_ Spider Mites  
\_\_\_\_\_ Thrips  
\_\_\_\_\_ White Fly

### Diseases

\_\_\_\_\_ Black Spot  
\_\_\_\_\_ Chlorosis  
\_\_\_\_\_ Damping off  
\_\_\_\_\_ Fire blight  
\_\_\_\_\_ Powdery Mildew  
\_\_\_\_\_ Root Rot  
\_\_\_\_\_ Rust