

SECTION I – IDENTIFICATION

What is identification?

- Participants will identify the following during this portion of the contest:
 - Common crop plants and seeds grown in Indiana
 - Common weed plants, seeds and seedlings that are problematic in crop systems in Indiana
 - Common diseases and damages found in corn, soybeans, or cereal grains such as wheat and rye
 - Common insects that are problematic in Indiana crop systems

What do participants need to provide?

- Participants will need the following tools for this portion of the contest:
 - Clipboard
 - Pencil (s)
 - Magnifying glass (optional)

What are participants provided with by contest officials?

- Answer sheets that have a complete list of plants, seeds, diseases, damages, and insects included. (pages 65-67)

Rules for this portion of the contest

- This portion of the contest is split into 3 separate areas:
 - 25 Plant specimens and seedlings(250 points)
 - Min 20 Adult plant mounts or live plants
 - Max 5 Seedling plant mounts, live plants or pictures
 - 25 Seed specimens (250 points)
 - 10 Diseases/Damages and Insects specimen or pictures(100 points)
- Participants will have 20 minutes per section. (total time: 60 minutes)
- Each specimen is worth 10 points, making this section worth 600 points of the total contest.
- Not all specimens/pictures will be used in the contest and some specimens/pictures may be repeated. Crops and weeds **will not** be separated in the contest.
- Some specimens will have specific details provided to participants if they are used in a contest. Please see footnotes on lists for more information (pages 6-8).

How to prepare students for this portion of the contest

- For details on how to identify plants and seeds, see page 39-40.
- For reference material to help with specific identification, see page 37.

The following list of crops will serve as the official list in preparing for any crops event.

Crop Plants

alfalfa	Kentucky bluegrass	smooth brome grass
alsike clover	Korean lespedeza	soybean
barley	oat	sudangrass
birdsfoot trefoil	orchardgrass	sweetclover
canola	red clover	tall fescue
corn	reed canarygrass	timothy
crownvetch	rye	wheat
grain sorghum	ryegrass	white clover
hairy vetch		

Crop Seeds

alfalfa	hairy vetch	soybean
alsike clover	Kentucky bluegrass	sudangrass
barley	Korean lespedeza	sweetclover
birdsfoot trefoil	oat	tall fescue
canola ³	orchardgrass	timothy
dent corn	red clover	triticale
sweet corn	reed canarygrass	durum wheat
popcorn	rice	hard red winter wheat
crownvetch	rye	soft red winter wheat
flax	ryegrass	white wheat
grain sorghum	smooth brome grass	white clover

Notes

1. Seed samples will be presented as actual seed samples. Samples used **MUST** correlate with the description given of the seed (see references)
2. Plant samples will be presented as plant mounts **OR** live samples. Samples used **MUST** correlate with the description given of the plant (see references)
3. In seed identification, canola will be provided either with a picture of the seed identification features **OR** participants will be informed that the hilum has “**3 ridges.**”

The following list of weeds will serve as the official list in preparing for any crops event.

Weed Plants

barnyardgrass	garlic mustard	perennial sowthistle
buckhorn plantain	giant foxtail ⁴	quackgrass
burcucumber	giant ragweed	redroot pigweed
Canada thistle	green foxtail ⁴	shepherdspurse tall
common cocklebur	hedge bindweed	tall morningglory
common lambsquarters	hemp dogbane	tall waterhemp ³
common ragweed	horsenettle	trumpetcreeper
curly dock	ivyleaf morningglory	velvetleaf
dandelion	jimsonweed	wild buckwheat
downy brome	johnsongrass	wild carrot
Eastern black nightshade	large crabgrass	wild garlic
fall panicum	marestail ⁷	wild mustard
field bindweed	oxeye daisy	yellow foxtail ⁴
field pennycress	Pennsylvania smartweed	yellow nutsedge

Weed Seeds

barnyardgrass	fall panicum	oxeye daisy
bindweed	field pennycress	Pennsylvania smartweed
buckhorn plantain	giant foxtail ⁶	perennial sowthistle
burcucumber	giant ragweed	quackgrass
Canada thistle	green foxtail ⁶	redroot pigweed
common cocklebur	hedge bindweed	shepherdspurse
common lambsquarters	hemp dogbane	trumpetcreeper
common milkweed	horsenettle	velvetleaf
common ragweed	jimsonweed	wild buckwheat
curly dock	johnsongrass	wild carrot
dandelion	large crabgrass	wild garlic
downy brome	marestail ⁷	wild mustard ⁵
Eastern black nightshade	morningglory	

Notes

1. Seed samples will be presented as actual seed samples and **MUST** correlate with the description given of the seed (see references)
2. Plant samples will be presented as plant mounts **OR** live samples. Samples used **MUST** correlate with the description given of the plant (see references)
3. Tall waterhemp will begin appearing in the contest during the **2017** season to allow adequate plant collection and preparation
4. In plant identification, foxtails will be provided either with a picture showing hair distribution **OR** participants will be informed that the plant contains no hairs (green), contains short hairs (giant), or contains long, sparse hairs (yellow) on upper leaf surface
5. In seed identification, wild mustard will be provided either with a picture of the seed identification features **OR** participants will be informed that the hilum has "**2 ridges.**"
6. In seed identification, participants will be informed that giant foxtail seed "**has lemma and palea attached**" and green foxtail "**has palea covering ½ the seed.**"
7. Horseweed has been changed to marestail.

The following list of weed plants will be eligible for identification as seedlings

common cocklebur	giant ragweed	redroot pigweed
common lambsquarters	marestail	velvetleaf
common ragweed	ivyleaf morningglory	wild carrot
	jimsonweed	

The seedlings will be presented as live plants, mounts or pictures. A maximum of 5 seedlings will be used at any contest.

The following list of diseases and damages will serve as the official list in preparing for any crops event.

<u>Disease or damage</u> ¹	<u>Crop</u>	<u>Type of Sample</u>
blacktip	wheat	grain sample
blue eye mold	corn	grain sample
Ergot	cereal	grain sample
green damage	soybean	grain sample
heat damage	all	grain sample
insect damage	all	grain sample
purple seed stain	soybean	grain sample
smut	wheat	grain sample
sprout damage	all	grain sample
wheat scab	wheat	grain sample
sound	all	grain sample
nitrogen deficiency	corn	Photo
phosphorus deficiency	corn	Photo
potassium deficiency	corn	Photo
manganese deficiency	soybean	Photo
gray leaf spot	corn	Photo
northern corn leaf	corn	Photo
white mold	soybean	Photo
brown spot	soybean	Photo
sudden death	soybean	Photo
brown stem rot	soybean	Photo
common rust	corn	Photo

The following list of insects will serve as the official list in preparing for any crops event.

<u>Insects</u> ²	
armyworm	adult
Japanese beetle	grub and adult
soybean aphid	adult
Western corn rootworm	larvae and adult
wireworms	adult

Notes

1. Samples used MUST correlate with the description given of the disease or damage. Samples may be photographs OR specimens. (see references)

2. Samples used MUST correlate with the description given of the insect. Insect samples

may be photographs OR specimens. (See references)