

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
 - Common machinery and equipment used in raising the crops.

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 and machinery & equipment included. (pages 65-68)

Rules for this portion of the contest

- This portion of the contest is split into 4 separate areas:
 - 25 Plant specimens and seedlings (125 points)
 - Min 20 Adult plant mounts or live plants
 - Max 5 Seedling plant mounts, live plants or pictures
 - 25 Seed specimens (125 points)
 - 20 Diseases/Damages and Insects specimen or pictures (100 points)
 - 10 Machinery & Equipment pictures (50 points)
- Participants will have 20 minutes per section for the Plants, Seeds and Diseases. (total time: 60 minutes) The Machinery and Equipment pictures Identification will happen after Grain Grading and will have 15 minutes to complete.
- Each specimen is worth 5 points, making this section worth 400 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 crop and weed plants will serve as the official list in preparing for any crops event.

| | | |
|--------------------------------------|-----------------------------------|-------------------|
| Alfalfa | Giant ragweed | Redroot pigweed |
| Alsike clover | Grain sorghum | Reed canarygrass |
| Barley | Hairy vetch | Rye |
| Barnyardgrass | Hedge bindweed | Ryegrass |
| Birdsfoot trefoil | Hemp dogbane | Shattercane |
| Buckhorn plantain | Hophornbeam copperleaf | Shepherd's purse |
| Burcucumber | Horsenettle | Smooth bromegrass |
| Canada thistle | Ivyleaf morningglory | Soybean |
| Canola | Jimsonweed | Sudangrass |
| Cantaloupe | Johnsongrass | Sweetclover |
| Common cocklebur | Kentucky bluegrass | Tall fescue |
| Common lambsquarters | Korean lespedeza | Tall morningglory |
| Common ragweed | Large crabgrass | Tall waterhemp |
| Corn | Marestail | Timothy |
| Crownvetch | Mint (Spearmint or Peppermint) | Tomato |
| Curly dock | Oat | Trumpetcreeper |
| Dandelion | Orchardgrass | Velvetleaf |
| Downy brome | Oxeye daisy | Wheat |
| Eastern black nightshade | Palmer amaranth | White clover |
| Fall panicum | Pennsylvania smartweed | Wild buckwheat |
| Field bindweed | Perennial sowthistle | Wild carrot |
| Field pennycress | Prickly sida | Wild garlic |
| Field sandbur | Pumpkin | Wild mustard |
| Foxtail (Giant, Green, or Yellow) | Quackgrass | Yellow nutsedge |
| Garlic mustard | Red clover | |

Notes

1. Plant samples will be presented as plant mounts **OR** live samples. Samples used **MUST** correlate with the description given of the plant (see references)

The following weed plants will be eligible for identification as seedlings

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

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 crop and weed seeds will serve as the official list in preparing for and crops event.

| | | |
|--------------------------|-----------------------------------|-----------------------|
| Alfalfa | Flax | Reed canarygrass |
| Alsike clover | Foxtail (Giant, Green, or Yellow) | Rice |
| Barley | Grain sorghum | Rye |
| Barnyardgrass | Giant ragweed | Ryegrass |
| Bindweed | Hairy vetch | Shepherdspurse |
| Birdsfoot trefoil | Hard red winter wheat | Smooth bromegrass |
| Bitter wintercress | Horsenettle | Soft red winter wheat |
| Buckhorn plantain | Jimsonweed | Soybean |
| Burcucumber | Johnsongrass | Sudangrass |
| Canada thistle | Kentucky bluegrass | Sweetcorn |
| Canola | Korean lespedeza | Sweetclover |
| Common cocklebur | Large crabgrass | Tall fescue |
| Common lambsquarters | Marestail | Timothy |
| Common milkweed | Morningglory | Triticale |
| Common ragweed | Oat | Trumpet creeper |
| Crownvetch | Orchardgrass | Velvetleaf |
| Curly dock | Oxeye daisy | White wheat |
| Dandelion | Pennsylvania smartweed | White clover |
| Dent corn | Perennial sowthistle | Wild buckwheat |
| Downy brome | Popcorn | Wild carrot |
| Durum wheat | Quackgrass | Wild garlic |
| Eastern black nightshade | Red clover | Wild mustard |
| Fall panicum | Redroot pigweed | |
| Field pennycress | | |

Notes

1. Seed samples will be presented as actual seed samples and MUST correlate with the description given of the seed (see references)
2. 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**.” Canola will be provided with either a picture of the seed identification features **OR** participants will be informed that the hilum has “**3 ridges**”.

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

| | | |
|------------------|---------------------------|---------------------------|
| Aphid | European corn borer | Phytophthora root rot |
| Alfalfa weevil | Frogeye leaf spot | Potassium deficiency |
| Armyworm | Grasshopper | Purple seed stain |
| Blacktip | Gray leaf spot | Small grain smut |
| Black cutworm | Green damage | Sprout damage |
| Blue eye mold | Heat damage | Sound grain |
| Brown leaf spot | Insect damage | Southern corn leaf blight |
| Brown stem rot | Japanese beetle | Stinkbug |
| Common rust | Lady Beetle | Sudden death syndrome |
| Corn flea beetle | Leafhopper | Two-spotted spider mite |
| Corn smut | Manganese deficiency | Western corn rootworm |
| Downy mildew | Northern corn leaf blight | White mold |
| Ear rot | Nitrogen deficiency | Wireworm |
| Ergot | Phosphorus deficiency | |

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)

The following list of machinery & equipment will serve as the official list in preparing for and crops event.

| | | |
|---|--|-------------------------------|
| Anhydrous applicator with tank | Disk chisel | Hitch pin |
| Articulated tractor | Draper head for combine or | Hydraulic cylinder/hose |
| Auger platform head for combine | swather | Moldboard plow |
| Bale wagon (kick or flat) | Drawn planter | PTO shaft |
| Broadcast fertilizer spreader | Field cultivator | Rotary hoe |
| Chisel plow | Grain drill (includes no-till) | Round baler |
| Combine (may be displayed w/harvesting head attached) | Grain cart | Row crop cultivator |
| Conveyor/Elevator/Auger | Grain Head | Skid steer |
| Corn head for combine | Gravity wagon | Sprayer |
| Disk | Hay mower/conditioner (disk, reel/drawn or self-propelled) | Square baler (large or small) |
| | Hay rake (reel or wheel) | Vegetable transplanter |
| | Hay tedder | V-ripper |