

Agronomy

Including projects related to Field Crops, Weed Science & Range
Plant Science

Department G, Division 750, 751

Superintendent – Ashtyn Vivion

Individuals in the Crop Production, Field Crops project may exhibit grain or plants or prepare an educational display representing their project. The purpose of these exhibits is to demonstrate to the public the benefits from the study and application of crop, weed, range and soil sciences to solving problems in management, conservation, sustainability and environmental protection. For guidelines on specific projects, refer to appropriate project manuals.

Division 750 – Grain or Plant Exhibits

- A. **Important:** A completed Crop Production Worksheet must accompany grain and plant exhibits or it will be automatically be deducted one ribbon placing. The worksheet must include the exhibitors name and address, county, plant hybrid or variety, plant population, whether crop production was irrigated or dryland, and general information including farm cropping history, soil type and weather effects. **The worksheet also must include an economic analysis of the project, listing individual expenses and income, on a per acre basis.** Other topics to discuss are the selection of variety or hybrid, impacts of tillage and conservation practices, inputs (fuel, fertilizer, irrigation, labor, pesticides, etc.), any observations made during the growing season, and what you learned from your crops project. The worksheet counts as 50% of the total when judged. **Worksheet must be the original work of the individual exhibitor or it will be deducted one ribbon placing.** Attach the worksheet to the entry in a clear plastic cover such that it can be read without removing it from the cover. In addition to the worksheet, grain and plant exhibits will be judged on condition, appearance (i.e. disease and insect damage, grain fill), uniformity (size, shape, color, maturity), quality of exhibit. Refer to Scoresheet SF264.
- B. Grain exhibits must be one gallon per sample. Grain exhibits harvested in the fall (e.g., corn or soybeans) may be from the previous year's project.
- C. Plant exhibits, with the exception of ears of corn, must be the result of the current year's project.
- Corn 10 ears or 3 stalks (cut at ground level with no roots or soil and bound together)
 - Grain Sorghum – 4 stalks (cut at ground level with no soil and bound together)
 - Soybeans - 6 stalks (cut at ground level and bound together)
 - Small grains - (oats, barley, wheat, triticale) - sheaf of heads 2 inches in diameter at top tie with stems about 24" long
 - Other crops (alfalfa, millet, etc.) - sheaf of stems 3 inches in diameter at top tied with stems cut at ground level or half size small square bale.

G750001* **Corn** (includes yellow, white, pop, waxy, or any other type)

G750002* **Soybeans**

G750003* **Oats**

G750004* **Wheat**

G750005* **Any Other Crop** (includes grain sorghum, alfalfa, millets, barley, rye, triticale, amaranth, dry beans, sugar beet, mung bean, canola, forage sorghum, safflower, etc)

Displays

- A. The purpose of the display is to tell an educational story to those that view the display. The display is a visual representation (pictures, charts, graphs) no larger than 28" wide by 28" tall on plywood or poster board. The display should be neatly titled. Make sure to label display with exhibitor's name, address, and county on back side. Explain pictures and graphs clearly and concisely. Consider creativity and neatness. Scoresheet SF259.
- B. **Each display must have a one-page essay (minimum) explaining why the exhibitor chose the area of display and what they learned from their project.** Include any references used. The essay should be in a clear plastic cover with the exhibitor's name outside. **If the display does not have an essay, it will automatically be deducted one ribbon placing.**
- C. **NEW: Special Agronomy Project** - Youth experience a crop that is grown, was grown or has the potential to be grown in Nebraska by growing it, researching traits of that crop and determine viability of that crop in the part of the state they live. Each year seeds will be mailed to extension offices or aged classrooms across the state, as ordered by that location. Offices will distribute to youth on a first, come – first serve basis. A different seed will be selected every year. Youth will grow seeds in their garden or pots. Written resources materials will be available for youth, in addition to virtual, live or recorded videos/field trips. Youth will be eligible to enter an exhibit at both the county and/or state fair in the agronomy project area.

G750006* **Crop Production Display** - The purpose of this class is to allow original and creative exhibits that contain educational information about crop production aspects, such as crop scouting, alternative crops, pest management, etc.

G750007* **Crop Technology Display** – Display information about aspects of technology used in crop production, such as genetic engineering, crop breeding, GPS, yield mapping, computers, etc.

G750008* **Crop End Use Display** – Display information about the final product or end uses for a crop, such as food, feed, fuel, or other products. (i.e. corn can be processed into livestock feed, ethanol, plastics, etc. or soybeans can be processed into bio-diesel, pet bedding, crayons, oil, etc.)

G750009* **Water or Soil Display** – Display information about water or soils, such as how soils are being used for crop production, range, conservation, wildlife, or wetland use, or ways to protect or conserve water and soil resources

G750010* **Career Interview Display** - The purpose of this class is to allow youth to investigate a career in agronomy. Youth should interview 1 person that works with crops about such topics as, what parts of their job do they enjoy or dislike, why did they choose that career, what was their education, etc. Include a picture of the person interviewed.

G750011* **Special Agronomy Project-Educational Exhibit (SF259)** - Educational exhibit based on what was learned from the project. Present information on a poster 14" X 22" either vertical or horizontal arrangement or in a clear plastic report cover. The 4-H member's name, age, full address, and county must be on the back of the poster or report cover. Refer to Scoresheet SF259 Each display must have a one-page essay (minimum) explaining why the exhibitor chose the area of display and what they learned from their project. Include any references used.

- G750012* **Special Agronomy Project – Video Presentation** - 4-H exhibitor designs a multimedia presentation related to the crop. This could include narration of the growing process, presenting facts about the crop or any other innovative multimedia practices. The presentation should be at least 2 minutes in length and no more than 5 minutes in length, appropriate graphics, sound and either a video clip, animation or voice over and/or original video clip. Any of the following file formats will be accepted: mp4, .mov, .ppt, or .avi.
- G750013* **Special Agronomy Project (Freshly Harvested Crop)** - Plant exhibits must be the result of the current year's project.

County Only Exhibits

G750015 Wheat Project

Exhibitors must be enrolled in the 4-H Wheat Project to exhibit in this area. Exhibit will include a sample of each of the five wheat varieties included in the project. A sheaf of wheat three inches in diameter at the center tie and a one quart sample of the grain are to be displayed for each of the five varieties. Exhibit should be labeled with the variety name, member's name, and club.

Youth Sugar Beet Project: Exhibitors must be enrolled in the Youth Sugar Beet Project to exhibit in this area. Exhibit will include sample of beets and exhibition card. Information on the exhibition card will include stand counts, percent of early sugar, variety, etc. Exhibition cards are available at the Extension Office. Sugar beets should be prepared in the following manner. Hand dug (not pulled), tops cut square off and washed (do not brush or tip roots).

G750016 **Youth Sugar Beet Project** (3 uniform type sugar beets)

G750017 **Three Best Type Sugar Beets over 2-1/2 pounds**

G750018 **Three Best Type Sugar Beets under 2-1/2 pounds**

G750019 **Largest Sugar Beet** (single specimen)

Division 751 - Weed Science

- A. Any individual in the Conservation, Environment 1,2 or 3, Range, Reading the Range 1 or Using Nebraska Range 2, or Crop Production, Field Crops projects may exhibit a weed book or weed display. At least 15 of the specimens must represent this year's work. For assistance identifying plants, participants can use the Nebraska Department of Agriculture's Weeds of Nebraska and the Great Plains (1994) or Weeds of the Great Plains (2003).
- B. Exhibits will be judged based on completeness of plant mount, accuracy of identification, label, neatness, and conformity to exhibit requirements. Refer to Scoresheet SF261.

Books

Plants must be mounted on sheets that are no larger than 14" wide x 14" high. Proper plant mount should include root as well as stem and leaf tissue. Plants should be glued rather than taped and the mounts should be protected with a clear clover. Each completed mount must have the following information (see example below) in the lower right corner of the mounting sheet: 1. Scientific name (in italics or underlined), with authority, 2. Common name, 3. County of collection, 4. Collection date, 5. Collector's name, 6. Collection number, indicating the order that plants were collected. 7. Other information depending on class selected, i.e., noxious, life form. This information should be typed or printed very neatly.

Scientific name: *Abutilon theophrasti* Medik.
Common name: Velvetleaf
County of collection: Hall County
Collection date: 6 July
Collector's name: Dan D. Lion
Collection number: 3
Life cycle: Annual

G751001* **Weed Identification Book** – A collection of a minimum of 15 plant mounts including at least two of the following prohibited noxious weeds (Canada thistle, musk thistle, plumeless thistle, salt cedar, leafy spurge, purple loosestrife, diffuse knapweed, spotted knapweed, Japanese knotweed, bohemian knotweed or phragmites), and at least three weeds that are a problem primarily in lawns.

G751002* **Life Span Book** - A collection of 7 perennials, 1 biennial, and 7 annual weeds.

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G751003* **Weed Display** - The purpose of this class is to allow original and creative exhibits that contain educational information about weeds, such as interesting information about a weed species, the effects of weed control, herbicide resistant weeds, what makes a weed a weed, or uses for weeds.

*State Fair eligible