

Agronomy

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

Department G, Division 750, 751

Superintendent - Lori Walla

Jr. Superintendent –

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.

Individuals in the Crop Production, Field Crops project may exhibit grain or plants or prepare an educational display representing their project.

Division 750 – Grain or Plant Exhibits

- A. **Important:** A two page (maximum) essay must accompany grain and plant exhibits. The essay 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 essay 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 essay counts as 50% of the total when judged. Essay must be the original work of the individual exhibitor. Attach the essay to the entry in a clear plastic cover such that it can be read without removing it from the cover. In addition to the essay, 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 SF259.
- 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. Display containers will be furnished.
- 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.
- 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.

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, 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 uses for a crop, such as food, feed, fuel, or other products.

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.

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. The book cover and 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

Display one plant on the book cover (no label required on cover specimen). Plants must be mounted on sheets that are no larger than 12" wide x 12" 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 five weeds that are a problem primarily in lawns.

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

Guidelines for Displays: 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" by 28" 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. **Each display must have a one page essay 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.

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