

AGRONOMY

Division 750: Field Crops

A two page (maximum) essay must accompany grain and plant exhibits. The essay must include the exhibitor's 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), and quality of exhibit.

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.

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 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.)

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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. 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 of educational information about crop production aspects, such as crop scouting, alternative crops, etc.

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

G750008 - Crop End Use Display about the uses for a crop, such as food, feed, fuel, or other products.

G750009 - Water or Soil Display 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 to investigate a career in agronomy. Youth should interview one 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.

Division 751: Weed Science

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). Exhibits will be judged based on completeness of plant mount, accuracy of identification, label, neatness, and conformity to exhibit requirements.

Book Guidelines: Display one plant on the book cover (no label required on cover specimen). Plants must be mounted on sheets that are no larger than 14" wide by 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 cover. Each completed mount must have the following information (see example following) in the lower right corner of the mounting sheet: 1. Scientific name (in italic or underlined), with authority, 2. Common name, 3. County of collection, 4. Collection date, 5. Collector's name, 6. Personal collection number, indicating the order that plants were collected in your personal

collection, 7. Other information depending on class selected, i.e., noxious, life form. This information should be typed or printed neatly.

Scientific name: *Abutilon theophrasti* Medik.

Common name: Velvetleaf

County of collection: Hall County

Collection date: 6 July 2017

Collector's name: Dan D. Lion

Personal collection number: 3

Life cycle: Annual

G751001 - Weed Identification Book collection of a minimum of 15 plant mounts including at least two of the following prohibited noxious weeds (Canada thistle, musk thistle, plumeless thistle, saltcedar, 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 collection of 7 perennials, 1 biennial, and 7 annual weeds.

Display Guidelines: 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 original and creative exhibit that contains 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.

Division 330: Range Management

Individuals in the Reading the Range Unit 1 project may exhibit in Classes 1-5, and 8. Individuals in the Using Nebraska Range Unit 2 project may exhibit in Classes 1-8. Each exhibit must be properly identified with Unit and Class. All plant displays and display covers must be the result of the current year's work. Plant identification and lists of appropriate plants in each category (grasses, forbs, shrubs, and grass-like plants) can be found in the Range Judging Handbook and Contest Guide (EC150, Revised July 2009), Common Grasses of Nebraska (EC170), and Common Forbs and Shrubs of Nebraska (EC118). Exhibits will

be judged based on completeness of plant mount, accuracy of identification, labeling, neatness and conformation to project requirements.

For books, plants must be mounted on sheets that are no larger than 14" wide by 14" high. Plants should be glued rather than taped and the mounts should be protected with a clear cover. Proper plant mount should include root as well as stem and leaf tissue. Each completed mount must have the following information (see example above) in the lower right corner of the mounting sheet: 1. Scientific name (in italic or underlined), with authority. 2. Common name. 3. County of collection. 4. Collection date. 5. Collector's name. 6. Personal collection number, indicating order that plants were collected in your personal collection. 7. Other information, depending on class selected, i.e., value and importance, life span, growth season, origin, major types of range plants. This information should be typed or printed neatly.

Scientific name: <i>Schizachyrium scoparium</i> (Michx.) Nash Common name: Little bluestem County of collection: Hall County Collection date: 6 August 2017 Collector's name: Joe Smith Collection number: 3 Value and Importance: Livestock Forage: High, Wildlife Habitat: High, Wildlife Food: Medium <u>OR</u> Life Span: Perennial <u>OR</u> Season of Growth: War Season <u>OR</u> Origin: Native
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D330001 - Value and Importance for Livestock Forage and Wildlife Habitat and Food Book

collection of 12 different plant mounts, with four classified as high value, four as medium value, and four as low value for livestock forage, wildlife habitat, or wildlife food. Value and importance classifications can be found in the Range Judging Handbook and Contest Guide (EC150, Revised July 2009) on pages 3 through 6. Plants can consist of any combination of grasses, grass-like plants, forbs, or shrubs. Assemble plant mounts in order of high, medium, and low value and importance. Label each plant mount with its value and importance classifications for each of the three areas; Livestock Forage, Wildlife Habitat, Wildlife Food.

D330002 - Life Span Book collection of 6 perennial plant mounts and 6 annual plant mounts selected from grasses or forbs.

D330003 - Growth Season Book collection of 6 cool-season grass mounts and 6 warm-season grass mounts.

D330004 - Origin Book collection of plant mounts of 6 native range grasses and 6 introduced grasses. Introduced grasses are not from North America and often used to seed pastures.

D330005 - Major Types of Range Plants Book collection of plant mounts of 3 grasses, 3 forbs, 3 grass-like, and 3 shrubs.

D330006 Range Plant Collection Book collection of 12 range plant mounts with something in common (i.e. poisonous to cattle, or historically used as food by Native Americans, or dye plants, or favorite antelope forage, etc.) Include a short paragraph in the front of the book which describes what the plants have in common and why you have chosen to collect them.

D330007 Parts of a Range Plant Poster mount a range plant on poster board no larger than 28"x28". Label all the plant parts. Include the plant label in the lower right corner.

Display boards should be no larger than 30" wide by 36" tall or if hinged in the middle a maximum of 60" wide by 36" tall. Display boards should be adequately labeled.

D330008 - Range Plant Board which includes 25 range forage species important to a particular county.

D330009 - Special Study Board display of the results of a clipping study, a degree of use study, range site study, etc.

D330010 - Junior Rancher Board should include a ranch map with a record book or an appropriate educational display on some phase of rangeland or livestock management.