2010 Nebraska State Fair

Crops & Range (Agronomy)

Including projects related to Field Crops, Weed Science & Range

Co-Superintendents- Aaron Nygren & Susan Hansen, Schuyler

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.

DEPARTMENT G-CROP PRODUCTION

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

B. 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, covering income and expenses per acre.** 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. Refer to Scoresheet SF259.

C. 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.
Plant exhibits: Corn 10 ears or 3 stalks (cut at ground level with no 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. All plant exhibits, with the exception of ears of corn, must be the result of the current year's project.

Division 750, CLASSES

G-750-001 Corn (includes yellow, white, pop, waxy, or any other type)
G-750-002 Soybeans
G-750-003 Oats
G-750-004 Wheat
G-750-005 Any other crop (includes grain sorghum, alfalfa, millets, barley, rye, triticale, amaranth, dry beans, sugar beet, mung bean, canola, forage sorghum, safflower, etc)
G-750-006 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, bioenergy, etc,
G-750-007 Crop Technology Display – Display information about aspects of technology used in crop production, such as genetic engineering, crop breeding, GPS, yield mapping, computers, etc,
G-750-008 Crop End Use Display – Display information about the uses for a crop including examples of products.

G-750-009 Water or Soil Conservation Display – Display information about ways to protect or conserve water and soil resources

G-750-010 Soils Display - The purpose of this class is to allow original and creative exhibits that contain educational information about soils, such as how soils are being used for crop production, range, conservation, wildlife, or wetland use.

Guidelines for all 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 24" by 24" 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.

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 majority of specimens must represent this year's work. For assistance identifying plants, participants can use 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.

C. Display one plant on the book cover (no label required on cover specimen). Plants must be mounted on sheets that are 11" wide x 14" high or 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 italic or underlined), with authority, 2. Common name, 3. County of collection, 4. Collection date, 5. Collector's name, 6. Collection number, indicating order that plants were collected, 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 September 2010

Collector's name: Dan D. Lion

Collection number: 3

Life cycle: Annual

Division 751, CLASSES

G-751-001 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, saltcedar, leafy spurge, purple loosestrife, diffuse knapweed, spotted knapweed, or phragmites), and at least five weeds that are a problem primarily in lawns.

G-751-002 Life Span - A collection of 6 perennial, 1 biennial, and 6 annual weeds.

G-751-003 Weed Identification Board - This exhibit should display a collection of 20 weed species important to a particular county. The display board should be hinged in the middle with the total open width of 60” and height of 36”. This display should be adequately labeled.

G-751-004 Weed Display – The purpose of this class is to allow original and creative exhibits that contain educational information about weeds, such as the effects of weed control, herbicide resistant weeds, what makes a weed a weed, or uses for 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 24” by 24” 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.

DEPARTMENT D-RANGE MANAGEMENT

A. Individuals in Reading the Range Unit 1 project may exhibit in Classes 1-5, and 8.
B. Individuals in the Using Nebraska Range Unit 2 project may exhibit in Classes 1-8.
C. Each exhibit must be properly identified with Unit and Class. Exhibits will be judged based on completeness of plant mount, accuracy of identification, labeling, neatness and conformation to project requirements. Refer to Scoresheet SF260. All plant displays and display covers must be the result of the current year's work.
D. 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).
E. Plants must be mounted on sheets that are 11" wide x 14" high or 12” wide x 12” 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 below) 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. Collection number, indicating order that plants were collected. 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: *Schizachyrium scoparium* (Michx.) Nash

Common name: Little bluestem

County of collection: Hall County

Collection date: 6 September 2010

Collector's name: Joe Smith

Collection number: 3

Value and Importance: Livestock Forage: High, Wildlife Habitat: High, Wildlife Food: Medium

DEPARTMENT D-RANGE MANAGEMENT

DIVISION 330, CLASSES

D-330-001 Value and Importance for Livestock Forage and Wildlife Habitat and Food – A collection of 12 different plants, with 4 classified as high value, 4 as medium value, and 4 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.

D-330-002 Life Span – A collection of 6 perennial plants and 6 annual plants selected from grasses or forbs.

D-330-003 Growth Season – A collection of 6 cool-season grasses and 6 warm-season grasses.

D-330-004 Origin – A collection of 6 native range grasses and 6 introduced grasses. Introduced grasses are not from North America and often used to seed pastures.

D-330-005 Major Types of Range Plants – A collection of 3 grasses, 3 forbs, 3 grass-like, and 3 shrubs.

D-330-006 Range Plant Board – Will include 25 range forage species important to a particular county. The display board should be hinged in the middle (total open length is 60" and height is 36"). This display should be adequately labeled.

D-330-007 Special Study Exhibit – A display of the results of a clipping study, a degree of use study or a range site study. The boards in this class should be 30" X 36" or if hinged in the middle, may be 60" X 36". The display should be adequately labeled.

D-330-008 Junior Rancher Exhibit – This exhibit should include a ranch map with a record book or an appropriate educational display on some phase of rangeland or livestock management. The overall size of the exhibit should not be larger than 30" wide and 36" high.