CROPS & RANGE (AGRONOMY)
DEPARTMENT G
Premium Schedule B

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.

GENERAL INFORMATION: CROP PRODUCTION
A. Individuals in the Crop Production, Field Crops Projects 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, 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.), and 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.

C. Grain exhibits are to be one gallon per sample. Grain exhibits harvested in the fall (e.g. corn or soybeans) may be from the previous year's project.

D. 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 inches 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.

FIELD CROPS
GRAIN OR PLANT EXHIBITS
Department G - Section 750

*1. Corn (includes yellow, white, pop, waxy or any other type)
*2. Soybeans
*3. Oats
*4. Wheat
*5. Any other crop - (includes grain sorghum, alfalfa, millets, barley, rye, triticale, amaranth, dry beans, sugar beet, mung bean, canola, forage sorghum safflower, etc).

Dakota County 4-H (402)987-2140 Thurston County 4-H (402)385-6041
DISPLA YS
Department G - Section 750

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.

*6. 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.

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

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

*9. 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.

*10. Career Interview Display - The purpose of this class is to allow youth 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.

*Denotes that entries are eligible for State Fair, after earning that privilege at the Dakota~Thurston Fair.

WEED SCIENCE
Department G - Section 751

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 project 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).

A. 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.

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

C. 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.

EXAMPLE:
Scientific name: *Abutilon theophrasti Medic.*
Common name: Velvetleaf
County of collection: Hall County
Collection date: 6 July 2016
Collector’s name: Dan D. Lion
Collection number: 3
Life cycle: Annual

**CLASSES**

*1. **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, or spotted knapweed, bohemian knotweed, giant knotweed sericea lespedeza or phragmites), and at least five weeds that are a problem primarily in lawns.

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

*3. **Weed Display Book** - 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 used for weeds.

**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.

*4. **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 species, the effects of weed control, herbicide resistant weeds, what makes a weed a weed, or uses for weeds.

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**RANGE MANAGEMENT**
DEPARTMENT D
Premium Schedule B

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) may exhibit in Classes 1-8.
C. Each exhibit must be properly identified with Unit and Class.
D. All plant displays and display covers must be the result of the current year’s work.
E. 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 Contest Guide (EC-150 revised July 2010), Common Grasses of Nebraska (EC-170) and Common Forbs and Shrubs of Nebraska (EC-118).

**RANGE MANAGEMENT**
Department D—Section 330

**BOOKS**
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 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 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.

EXAMPLE:
Scientific name: *Schizachyrium scoparium* (Michx.) Nash
Common name: Little Bluestem
County of collection: Hall County
Collection date: 6 August 2016
Collector’s name: Joe Smith
Collection number: 37

*1 Value and Importance for Livestock Forage and Wildlife Habitat and Food Book* - A collection of 12 different plant mounts, 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 2010) 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.

*2 Life Span Book* – A collection of 6 perennial plant mounts and 6 annual plant mounts selected from grasses or forbs.

*3 Growth Season Book* – A collection of 6 cool-season grass mounts and 6 warm-season grass mounts.

*4 Origin Book* – A collection of 6 native range grass mounts and 6 introduced grasses. Introduced grasses are not from North America and often used to seed pastures.

*5 Major Types of Range Plants Book* – A collection of plant mounts of 3 grasses, 3 forbs, 3 grass-like, and 3 shrubs.

*6. Range Plant Collection Book* - A 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.

DISPLAYS
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*7. PARTS OF A RANGE PLANT POSTER* - Mount a range plant on a poster board. Label all the plant parts. Include the plant label in the lower right corner. Put your name and 4-H county on the back of the poster.

BOARDS
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.

*8. Range Plant Board* – Will include 25 range forage species important to a particular county.

*9. Special Study Board* – A display of the results of a clipping study, a degree of use study or a range site study, etc.

*10. Junior Rancher Board* – This exhibit should include a ranch map with a record book or an appropriate educational display on some phase of rangeland or livestock management.