

display to enhance its educational value.

**CLASS 6** - Cross Section Display - A disc cut from a tree species listed in 4H 332. The sample must be collected, by the exhibitor, within one year of the state fair judging day (August 26, 2020). The disc must measure 6 to 12 inches in diameter and 1 to 3 inches thick. The bark should be firmly attached, which may be difficult if the tree was dead when the disc was cut. Sand at least one side of the disc so the grain can be easily seen. The disc may be treated with a clear finish, but treat both sides to minimize warping. As the disc dries, some cracking or checking can be expected and is allowed. SF

Labeling: The following parts must be clearly and accurately labeled on the cross section with pins, paper tags, or some other form of identification: a) pith, b) heartwood, c) sapwood, d) one growth ring (beginning and end), e) cambium, f) bark. A separate label attached to the back of the disc must include: 1) common name, 2) scientific name, 3) tree classification (softwood or hardwood), 4) age (of the cross section), 5) collector's name, 6) collection date, 7) collection location (be specific, including county, state and other relevant information).

**CLASS 7** - Parts of a Tree - This project is only for ages 8-11. Prepare a poster, no larger than 24 inches x 24 inches that clearly identifies the main external parts of any tree: a) trunk, b) crown, c) roots, d) leaves, e) flowers, f) fruit, g) buds, h) bark. Identifying other internal parts, e.g. phloem, xylem, cambium, annual ring, pith, etc. is optional. Attach a separate label on the back of the poster that includes the exhibitor's name and age. SF

**CLASS 8** - Living Tree - Display a living tree seedling grown by the exhibitor from seed in the display container. The seed must be from a species listed in 4H 332. The seedling must be 60 days to 1 year old on state fair judging day (August 26, 2020). The display container must contain at least 8 inches of soil (potting mix or suitable natural soil), have drainage hole(s), and a drain pan to catch drainage water. SF

Labeling: A waterproof label must be attached and include: 1) common name, 2) scientific name 3) seed treatments (if any) 4) planting date 5) emergence date, 6) collector's name.

Supplemental information about the tree: e.g. where the seed was collected, growth measurements, uses for that species, etc. may be included in an attached notebook, poster, etc. to enhance educational value. Supplemental information will be an important factor in judging.

**CLASS 9** - Educational Exhibit - prepare an educational exhibit informing the viewer about trees or forests. Exhibitors may use whatever means is most effective to show their key points. Photographs, drawings, samples, charts, posters, etc., may be used. The display should fit into an area no larger than 24"x24"x24". Enough information should be included to adequately explain the exhibit to the viewer. Be creative!

## **DEPARTMENT D - RANGE MANAGEMENT**

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 (EC 150), Common Grasses of Nebraska (EC 170) and Common Forbs and Shrubs of Nebraska (EC 118).

**DEPARTMENT D, DIVISION 330 - RANGE MANAGEMENT**

**Premiums: Purple, \$4.00; Blue, \$3.00; Red, \$2.50; White, \$2.00**

Guidelines for Books (Classes 1-6):

A) For books, plants must be mounted on sheets that are no larger than 14" wide x 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.

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

C) Each completed mount must have the following information 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.

**CLASS 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, Appendix Table 1 (EC150, Revised July 2016) starting on page 42. 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. SF

**CLASS 2** - Life Span Book - a collection of 6 perennial plant mounts and 6 annual plant mounts selected from grasses or forbs. SF

**CLASS 3** - Growth Season Book - a collection of 6 cool season grass mounts and 6 warm season grass mounts. SF

**CLASS 4** - Origin Book - a 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). SF

**CLASS 5** - Major Types of Range Plants Book - a collection of plant mounts of 3 grasses, 3 forbs, 3 grasslike and 3 shrubs. SF

**CLASS 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. SF

Guidelines for Displays (Class 7):

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.

**CLASS 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, including the scientific and common name of the plant. Put your name and 4-H county on the back of the poster. SF

Guidelines for Boards: (Classes 8-9)

Boards should be no larger than 30" wide by 36" tall. Boards should be adequately labeled.

**CLASS 8** - Special Study Board - A display of the results of a clipping study, a degree of use study, range site study etc. A short essay must accompany the display to explain the reason for the study, what was learned and study results and should be placed in a sheet cover attached to the board. SF

**CLASS 9** - 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. A short essay must accompany the display to explain the purpose of the rancher board, what was learned, etc. SF

## DEPARTMENT G - AGRONOMY

### DEPARTMENT G, DIVISION 750 - FIELD CROPS

**Premiums: Purple, \$4.00; Blue, \$3.00; Red, \$2.50; White, \$2.00**

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.

Grain or Plant Exhibits (Classes 1-5): A completed Crop Production Worksheet (available at: <https://cropwatch.unl.edu/Youth/Documents/Crop%20Production%20Project%20Worksheet%20Final.pdf>) must accompany grain and plant exhibits or it will automatically be deducted one ribbon placing. The worksheet must include the exhibitors name, 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), 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