

PLANT SCIENCE

CHECK IN:

Wednesday, July 12, 2023 from 6:30 - 8:30 p.m.
& Thursday, July 13, 2023 from 7:30 – 8:30 a.m.

JUDGING TIME:

Thursday, July 13, 2023, 9:00 a.m. (closed to public)

HORTICULTURE

Horticulture

The purpose of Horticulture is to encourage participants to start and maintain vegetable and herb gardens. In addition, 4-H'ers can participate in planting, growing, and caring for flowers and houseplants. There is also a special gardening project in this category that 4-H'ers can participate in. For more resources and materials in this category refer to the resource section at the bottom of the page.

Class

FLORICULTURE / Division 770

Cut Flower Annuals and Biennials - 5 stems of a single variety (cultivar) unless otherwise noted in parenthesis.

Classes 1-23 -

Class 1 - Aster

Class 2 - Bachelor Buttons

Class 3 - Bells of Ireland

Class 4 - Browallia

Class 5 - Calendula

Class 6 - Celosia (crested or plume) (3 stems)

Class 7 - Cosmos

Class 8 - Dahlia

Class 9 - Dianthus

Class10 - Foxglove

Class11 - Gladiolus (3 stems)

Class12 - Gomphrena

Class13 - Hollyhock (3 stems)

Class14 - Marigold

Class15 - Pansy

Class16 - Petunia

Class17 - Salvia

Class18 - Snapdragon

Class19 - Statice

Class20 - Sunflower (under 3" diameter - 5 stems, 3" or more in diameter - 3 stems)

Class21 - Vinca

Class22 - Zinnia

Class23 - Any other annual or biennial (under 3" diameter - 5 stems, 3" or more in diameter - 3 stems) (do not duplicate entries in classes 1-22)

Cut Flower Perennials - 5 stems of a single variety (cultivar) unless otherwise noted in parenthesis.

Classes 30-46 -

Class 30 - Achillea/Yarrow

Class 31 - Chrysanthemum

Class 32 - Coneflower

Class 33 - Coreopsis

Class 34 - Daisy

Class 35 - Gaillardia

Class 36 - Helianthus

Class 37 - Hydrangea (3 stems)

Class 38 - Liatris (3 stems)

Class 39 - Lilies (3 stems) (Not Daylilies)

Class 40 - Platycodon

Class 41 - Rose (3 stems)

Class 42 - Rudbeckia/Black-eyed Susan

Class 43 - Sedum

Class 44 - Statice

Class 45 - Any other perennial (under 3" diameter - 5 stems, 3" or more in diameter - 3 stems) (do not duplicate entries in classes 30-44)

Class 46 - 4-H Flower Garden Collection of 5 different cut flowers. Flowers are to be cut, not potted. Each flower in the collection should be exhibited with the number specified for classes 1-45. Display in a box or other holder not more than 18" in any dimension. Do not duplicate entries in classes 1-45 with any in the group collection.

EDUCATIONAL EXHIBITS

Class 50 - Flower Notebook - (SF100) - Exhibit a notebook containing pictures of flowers grown in Nebraska. There must be at least 10 different species of annuals and/or biennials and 10 different species of perennials hardy to Nebraska. Bulbs may be included in a separate section. 4-H'ers may show more than one cultivar of the same species, but they will only count as one species. The notebook must be the result of the current year's work. Pictures from garden catalogs, hand drawn pictures, or photographs may be used. Each species/cultivar must be labeled with the correct common name and scientific name; the height and spread of the plant and the growing conditions (for example needs full sun and dry sandy soil) the species prefers. In addition to this information, bulbs should also be labeled as spring or summer flowering. Give proper credit by listing the sources of pictures and information used. The 4-H member's name, age, county, and years in the project(s) must be on the back of the notebook.

Class 51 - Flower Garden Promotion Poster - (SF103) - Individual poster promoting flower gardening, size 14" x 22" either vertical or horizontal arrangement. Poster may be in any medium: watercolor, ink, crayon, etc. as long as it is not 3-dimensional. Posters using copyrighted material will not be accepted. Entry card must be stapled to the upper right-hand corner. The 4-H member's name, age, county, and years in the project(s) must be on the back of the poster.

Class 52 - Educational Flower Garden Poster - (SF104)- Prepare a poster 14" x 22" x 2" (3-dimensional if needed) either vertical or horizontal arrangement illustrating a skill or project you

have done or learned about in a 4-H flower or houseplant project. One might show a special technique used or equipment incorporated in the garden. Refer to 4-H horticulture project manuals but use your own creativity. Entry card must be stapled to the upper right-hand corner. The 4-H member's name, age, county, and years in the project(s) must be on the back of the poster.

Class 53 - Flower Gardening History Interview - (SF105)- Neatly handwritten or typed account of a gardening history interview whose flower garden has inspired you. Maximum of 4 pages of text and 2 pages of pictures (include 1 picture of the person you interviewed) of their flower garden if the individual is still gardening. Protect with a clear report cover. The 4-H member's name, age, county, and years in the project(s) must be on the back of the report cover.

HOUSEPLANTS

Class 60 - Flowering potted houseplant(s) - (SF107) - that are blooming for exhibition. Container may have one or more houseplants in container. Label with name for each plant. Non-blooming plants will be disqualified.

Class 61 - Foliage potted houseplant(s) - (SF107) - one variety of tropical or cacti or succulent plant. Label with name of the plant.

Class 62 - Hanging basket - (SF107) - of flowering and/or foliage houseplants. Container may have one or more houseplants in container. Label with name for each plant.

Class 63 - Dish garden - (SF 107) - an open/shallow container featuring a variety of houseplants excluding cacti and succulents. Label with name for each plant.

Class 64 - Fairy or Miniature Garden – (SF107) - A miniature “scene” contained in an open container and featuring miniature or small, slow growing houseplants. The garden needs to have an imaginative theme and miniature accessories, i.e. bench, fence made from tiny twigs, small shell for a bath tub, etc. Label with name for each plant.

Class 65 - Desert garden - (SF107) - an open/shallow container featuring a variety of cacti and/or succulents grown as houseplants. Label with name for each plant.

Class 66 - Terrarium - (SF107) - a transparent container, partially or completely enclosed; sealed or unsealed. Label with name for each plant.

Rules

FLORICULTURE (CLASSES 1-46)

1. Classes 1-23: Cut Flower Annuals and Biennials - 5 stems of a single variety (cultivar) unless otherwise noted in parenthesis.

2. Classes 30-46: Cut Flower Perennials - 5 stems of a single variety (cultivar) unless otherwise noted in parenthesis.

3. The cultivar or variety name must be included on all entry cards. If a potted container with several cultivars or varieties identifies each individually within the pot. Failure to identify the cultivar or variety will drop the entry one ribbon placing. Proper identification is the responsibility of the exhibitor, not the Extension staff or office personnel. For Floriculture, punch a hole in the top center of the entry tag, use a rubber band to securely attach entry tag to containers.

4. Exhibits entered under an incorrect class number or containing an incorrect number of stems will be dropped one ribbon placing. In classes 23, 45 & 46, do not duplicate entries from the already listed classes or entry will be dropped one ribbon placing. For example, 4-H'ers with two cultivars or varieties of marigolds can only enter the marigold class and cannot enter the other cultivar or variety in any other class. A perennial is defined as a plant of which the crown overwinters. An annual is a plant that grows from seed each season, whether self-seeded or planted by the gardener. A biennial is a plant that germinates, grows, and overwinters as a

crown, blooms the following year and dies. Foliage will be considered when the exhibit is judged.

5. All 3 or 5 stems of cut flowers should be the same cultivar and color, do not mix cultivars and colors. Containers will not be judged; however, they should be clear glass containers that won't tip over (No plastic containers at State Fair) and of adequate size to display blooms. Any exhibit not in a clear glass container will be dropped one ribbon placing.

6. Follow the guidelines in [4-H Preparing Cut Flowers for Exhibits 4H227](#) (revised 2016) when preparing entries for the fair.

EDUCATIONAL EXHIBITS (CLASSES 50-53)

HOUSEPLANTS (CLASSES 60-66)

1. **Container Grown Houseplants:** The choice of container and soil quality will be considered in judging. Each houseplant must be identified by listing the names on the entry tag or on a card attached to the container. Identify each plant individually if there is more than one cultivar or variety. Houseplants should be grown in the display container for a minimum of six weeks. Plants grown as houseplants must be used. NebGuide G2205 "[Guide to Growing Houseplants](#)" and NebGuide G837 "[Guide to Selecting Houseplants](#)" includes a listing of common houseplants. **Containers of annual flowers or annual plants (i.e. petunias, geraniums, impatiens) will be disqualified and will not be judged.**

2. Entries in Classes 60-66 must have been designed and planted by the 4-H member.

3. Container grown houseplants shall be in pots no greater than 12" in diameter (inside opening measurement). Dish gardens, fairy or miniature gardens, desert gardens and terrariums may be up to 12" in diameter (inside opening measurement). Any container grown plant in Classes 60-66 that is greater than 12" in diameter (inside opening measurement) will be dropped one ribbon placing.

4. Classes 60-65 exhibitors must have and provide a saucer to catch drainage water. The 4-H members name, age, full address, county, and years in the project(s) must be on the bottom or back of the container and saucer.

Special Gardening Project / Division 775

Class 1 - Special Garden Project - (SF109)- Educational exhibit based on what was learned from the project. Present information on a poster 14" X 22" either vertical or horizontal arrangement or in a clear plastic report cover. The 4-H member's name, age, and county must be on the back of the poster or report cover.

Class 2 - Special Gardening Project Fresh Cut Flowers or Harvested Vegetables - (SF109)
- The current years' Special Gardening Project fresh cut flowers herbs or harvested vegetables should be entered in this class. Refer to classes 1-45 for quantity to exhibit if the Special Gardening Project is a fresh cut flower. Refer to classes 201-252 for quantity to exhibit if the Special Gardening Project is a vegetable. Flowers and herbs must be cut not potted.

The 2023 Special Gardening Project is focused on Mrs. Burns' Lemon Basil.

Vegetables, Herbs, Fruits & Educational Exhibits

VEGETABLES / Division 773

Vegetable, Number's to Exhibit

Classes 1-56 -

Class 201 - Lima Beans, 12

Class 202 - Snap Beans, 12

Class 203 - Wax Beans, 12
Class 204 - Beets, 5
Class 205 - Broccoli, 2
Class 206 - Brussels Sprouts, 12
Class 207 - Green Cabbage, 2
Class 208 - Red Cabbage, 2
Class 209 - Carrots, 5
Class 210 - Cauliflower, 2
Class 211 - Slicing Cucumbers, 2
Class 212 - Pickling Cucumbers, 5
Class 213 - Eggplant, 2
Class 214 - Kohlrabi, 5
Class 215 - Muskmelon/Cantaloupe, 2
Class 216 - Okra, 5
Class 217 - Yellow Onions, 5
Class 218 - Red Onions, 5
Class 219 - White Onions, 5
Class 220 - Parsnips, 5
Class 221 - Bell Peppers, 5
Class 222 - Sweet (Non-Bell) Peppers, 5
Class 223 - Jalapeño Peppers, 5
Class 224 - Hot (Non-Jalapeño) Peppers, 5
Class 225 - White Potatoes, 5
Class 226 - Red Potatoes, 5
Class 227 - Russet Potatoes, 5
Class 228 - Other Potatoes, 5
Class 229 - Pumpkin, 2
Class 230 - Miniature Pumpkins (Jack Be Little type), 5
Class 231 - Radish, 5
Class 232 - Rhubarb, 5
Class 233 - Rutabaga, 2
Class 234 - Green Summer Squash, 2
Class 235 - Yellow Summer Squash, 2
Class 236 - White Summer Squash, 2
Class 237 - Acorn Squash, 2
Class 238 - Butternut Squash, 2
Class 239 - Buttercup Squash, 2
Class 240 - Other Winter Squash, 2
Class 241 - Sweet Corn (in husks), 5
Class 242 - Swiss Chard, 5
Class 243 - Red Tomatoes (2" or more in diameter), 5
Class 244 - Roma or Sauce-type Tomatoes, 5
Class 245 - Salad Tomatoes (under 2" diameter), 12
Class 246 - Yellow Tomatoes (2" or more in diameter), 5
Class 247 - Turnips, 5
Class 248 - Watermelon, 2
Class 249 - Dry Edible Beans, 1 pint
Class 250 - Gourds, mixed types, 5
Class 251 - Gourds, single variety, 5
Class 252 - Any other vegetable, 2, 5 or 12 (do not duplicate entries in classes 201-251) that doesn't fit in any other class

Class 255 - 4-H Vegetable Garden Collection of five kinds of vegetables. Display Garden Collection in a box not more than 24" in any dimension. Showmanship will be considered in judging, but plastic grass, cotton, figurines, etc. should not be used in exhibit boxes. Each vegetable in the collection should be exhibited with the number specified for individual class (201-252). Do not duplicate entries in classes 201-252 with any in the group collection.

Class 256 - 4-H Cultivar Vegetable Collection - Vegetables entered in the collection are 5 cultivars from a single exhibit; for example, 5 cultivars of all types of peppers or squash or onions or tomatoes, etc. Display in a box not more than 24" in any dimension. Showmanship will be considered in judging; but plastic grass, cotton, figurines, etc. should not be used in exhibit boxes. Each vegetable in the collection should be exhibited with the number specified for individual class (201-252).

HERBS / Division 773

Classes 60-69 -

Class 260 - Basil, 5

Class 261 - Dill (dry), 5

Class 262 - Garlic (bulbs), 5

Class 263 - Mint, 5

Class 264 - Oregano, 5

Class 265 - Parsley, 5

Class 266 - Sage, 5

Class 267 - Thyme, 5

Class 268 - Any other Herb, 5 (do not duplicate entries in classes 260-267)

Class 269 - 4-H Herb Garden Display of 5 different cut herbs. Herbs are to be cut, not potted. Displayed in a box or other holder not more than 18" in any dimension. Each herb in the collection should be exhibited with the number specified for classes 260-268. Do not duplicate entries in classes 260-268 with any in the group collection.

FRUITS / Division 773

Classes 80-86 -

Class 280 - Strawberries (ever bearers), 1 pint

Class 281 - Grapes, 2 bunches

Class 282 - Apples, 5

Class 283 - Pears, 5

Class 284 - Wild Plums, 1 pint

Class 285 - Other small fruit or berries, 1 pint (do not duplicate entries in classes 280-284)

Class 286 - Other fruits OR nuts, 5 (do not duplicate entries in classes 280-284)

EDUCATIONAL EXHIBITS

Class 290 - Garden Promotion Poster - (SF103)- Individual poster promoting vegetable or herb gardening, size 14" x 22" either vertical or horizontal arrangement. Poster may be in any medium so long as it is not 3-dimensional. Posters using copyrighted material will not be accepted. Entry card must be stapled to the upper right-hand corner. The 4-H member's name, age, county, and years in the project(s) must be on the back of the poster.

Class 291 - Educational Vegetable or Herb Garden Poster - (SF104)- Prepare a poster 14" x 22" x 2" (3-dimensional if needed) either vertical or horizontal arrangement illustrating a skill or project the 4-H'er has done or learned about in a 4-H vegetable gardening project. One might

show a special technique used or equipment incorporated in the garden (e.g., drip irrigation system, composting, or special techniques learned). Refer to 4-H horticulture project manuals but use your own creativity. Entry card must be stapled to the upper right-hand corner. The 4-H member's name, age, county, and years in the project(s) must be on the back of the poster.

Class 292 - Vegetable and/or Herb Gardening History Interview - (SF105)- Neatly handwritten or typed account of a gardening history interview of someone whose vegetable or herb garden has inspired you. Maximum of 4 pages of text and 2 pages of pictures (include 1 picture of the person you interviewed) of their garden if the individual is still gardening. Protect with a clear report cover. The 4-H member's name, age, county, and years in the project(s) must be on the back of the report cover.

Class 293 - Vegetable Seed Display - (SF101)- Each display must include seeds representing the following families: Cucurbit, Brassica (cabbage), Solanaceous (nightshade), and Legume (pea) families, plus representatives from 5 other families. Group the seeds by family and type. Glue seeds or otherwise fasten clear containers of seeds to a board or poster mat board no larger than 22" x 24". Label each group and each individual vegetable type with the common and scientific names. Use only one variety or cultivar of each vegetable, except for beans where several examples of beans may be shown. Attach a card to the back of the display explaining why and how it is important to know which vegetables are related and cite references on where the scientific name information was found. The 4-H member's name, age, county, and years in the project(s) must be on the back of the display. Information on vegetable family members can be obtained from your Extension office.

Class 294 - World of Vegetables Notebook - (SF102)- Choose a favorite foreign cuisine and learn what vegetables and/or herbs are common to it (e.g. Mexican, African, Chinese, Italian, etc.). Include a report talking about a minimum of 5 vegetables and/or herbs from each country chosen. Include the scientific and common names; pictures of the plants from your garden or seed catalogs; tell how they are grown; and how the foods are used. Also list a source for buying the seed or plants. Favorite recipes using some or all the vegetables described may be included. Give proper credit by listing the source of pictures and information used. Protect in a clear report cover or 3-ring notebook. The 4-H member's name, age, county, and years in the project(s) must be on the back of the report cover or notebook.

Rules

1. The cultivar or variety name must be included on all entry cards. Failure to identify the cultivar or variety will drop the entry one ribbon placing. Proper identification is the responsibility of the exhibitor, not the Extension staff or office personnel. Exhibits entered under an incorrect class number or containing an incorrect number of vegetables will be dropped one ribbon placing. In classes 252, 255, 268, 269, 285 and 286 do not duplicate entries from any of the other classes or entry will be dropped one ribbon placing. For example: 4-H'ers with two cultivars or varieties of red tomatoes can only enter the red tomatoes class and cannot enter the other cultivar or variety in any other vegetable class.
2. Follow the guidelines in [Selecting and Preparing Vegetables, Herbs and Fruits](#) for Exhibit 4H226 when preparing entries for the fair.
3. Vegetables (Classes 1-56) Class, Vegetable, Number's to Exhibit
4. Herbs (Classes 60-69) Herbs will be judged using the same general criteria used for vegetables. Those grown mainly for their seed, such as dill and caraway, should be exhibited on a plate. Those grown for their leaves such as basil, parsley, etc. should be exhibited in a glass container of water. Potted herb plants will be disqualified and will not be judged.
5. Fruits (Classes 80-86) Fruits will be judged using the same general criteria used for vegetables. Fruit will be judged for the stage of maturity normal for that season and growing

location. Emphasis will be placed on how well fruit approaches market quality.

Resources

Annual Flowers

Plant, grow, and care for annual flowers

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/105

Everyone A Gardener

Choose a garden site; Plan a garden; Grow vegetables; Select and purchase garden supplies; Grow transplants

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/107

Gardening A

Plan and plant a garden; Find out how seeds germinate; Learn what different plant parts do; Harvest and use your vegetables

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/108

Gardening B

Transplant plants into your garden; Grow plants from plant parts; Feed your garden; Earn money by growing vegetables

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/109

Gardening C

Learn about succession planting; Grow an herb garden; Find out about photosynthesis; Identify pest damage

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/110

Gardening D

Use intercrop and double crop planting methods; Plant a computer-planned garden; Identify plant diseases; Learn about plant scientists

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/111

Houseplants

Grow foliage and bulb plants indoors; Learn what houseplants need to stay healthy

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/106

Special Garden Project

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/176

The World of Flowers

Learn about growing healthy plants; Grow flowers from seeds; Learn about caring for flowers

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/104