

SECTION F – HORTICULTURE

GENERAL INFORMATION FOR HORTICULTURE EXHIBITS

- Endangered species are not allowed in any exhibit.
- Under Floral Design – Classes 25, 26 and 27 may use purchased or wildflowers.

PLANT COLLECTIONS

Developing a plant collection will help youth to learn to recognize and identify different plant species.

A. *Preserved*

- Plants must be pressed, dry, mounted and labeled. To press plant material, it is best to use the method described in: Pressed Flower Pictures (1982), 141-IB-34, find at <http://dSPACE.library.cornell.edu/handle/1813/3267>, or as described by a person who has experience collecting plant material.
- A clear protective overlay is helpful for many, but not all exhibits.
- Weeds and other specimens mounted green (not pressed or dry) will not be evaluated.
- Collections of plants may be on one side of ONE PIECE of poster board or like material, 22 x 28 inches in size, or in notebook binders with single specimens on pages 8 1/2 x 11 inches.
- Scrapbooks of accumulating years should have dividers between years. The current year's exhibit should be clearly marked. The current year exhibit will be judged.
- List sources used to identify plants and plant materials.
- Plants Identified by Common and Scientific Name.

Class No.

1. **LEAF, TWIG** (and fruit, flowers and seed, if possible) **OF TEN OR MORE ORNAMENTAL TREES.**

Class No.

2. **LEAF, TWIG** (and fruit, flower and seed, if possible) **OF TEN OR MORE ORNAMENTAL SHRUBS.**

Class No.

3. **LEAF, TWIG, AND ILLUSTRATION** of fruit or nut, of ten or more fruit or nut plants.

Class No.

4. **TEN WEEDS** common to lawns and flower beds.

Class No.

5. **TEN ANNUAL FLOWERS**

Class No.

6. **TEN PERENNIAL FLOWERS**

Class No.

7. **TEN WILDFLOWERS**

Class No.

8. **TEN SEEDS** (any single plant type, e.g., 10 ornamentals, 10 fruits, etc.)
 - Clean and dried (not green) Seeds must be harvested by the exhibitor.
 - A picture of the plant must accompany seeds.
 - List growing conditions required.

Class No.

9. MISCELLANEOUS COLLECTION

- Entries will be judged according to similar project criteria.

B. Horticulture Scrapbook (Collection of plant pictures)

- May be cut from magazines or garden center catalogs, illustrated by your own drawings, photographed or photocopies.
- Write in the front or back of the catalog where your images came from if you did not make them yourself (for example *Pictures are from W. Atlee Burpee 1998 seed catalog*).
- This scrapbook makes an excellent study guide for the Horticulture Knowledge Contest.
- Each plant should be represented on its own 8½ x 11-inch page.
- Catalog will be worth more if the picture (or perhaps more than one picture) shows different stages of growth (fruit and leaf, vegetable and flower, flower and leaf).
- Fasten pictures with clear tape, paper glue or rubber cement.
- Pages must be bound in a notebook binder.
- Label with a common name and brief description. Consult *NYS Horticulture Study Guide for Youth* <http://www.hort.cornell.edu/4hplants/index.html> for the plants required in each class.
- Beginners** must include the 15 plants specified from each group—flowers and indoor plants; ornamentals; fruits and nuts, vegetables.
- Intermediates** must include the 30 plants from each group.
- Advanced** participants must include all 45 plants from each group.
- NY Horticulture Contest Guidelines* are available from your 4-H Cornell Cooperative Extension Educator or at <http://www.hort.cornell.edu/4hplants>

BE SURE TO INCLUDE EXPERIENCE LEVEL

C. Photo Record Book

- Photos must be taken by 4-Her.
- A minimum of 20 photos. The collection of 20 plants can be a combination of several types of plants, such as trees, shrubs, weeds, annuals, perennials, fungi, etc.
- Identify common and scientific names
- List variety, growing requirements, location of the plant, where the photo was taken and identification sources.

EXPERIMENTS

The intent of this division is to generate an interest among young people in a science-based approach to horticulture. **Guidelines and suggestions for the exhibitor working with plants:**

Both how you plan your experiment and the final description for your display should include the following sections:

- Background.** Describe why you did this experiment and why it is important to you and other people?
- The Question** (or hypothesis). What specific question does your experiment try to answer? For example: “Does watering geraniums with coffee increase their growth?”
- Methods.** Outline how you did the experiment. Be sure to include:

- a) Treatments. Describe specifically what you are comparing as treatments. Remember that you should have a check treatment (what is usually done) and the 'test' treatment. From the above question: Check = watering with water, and treatment = watering with coffee.
- b) Measurements. Describe what you are measuring (weight, height, etc.) and why. Include observations of the plants over the course of the experiment.

Results.

- a) What did your measurements tell you about the treatment compared to the check? Was there a difference. and if so, why do you think so? Use tables, graphs or pictures to share what you learned.
- b) What other things did you notice in your observations?

Conclusions. What did you learn? What is important about your results to other people? What would you suggest to someone else, based on what you learned?

THE DISPLAY should be interesting, attractive and neat, so that people will want to stop and learn about what you did. It should:

- include actual examples of treated and untreated plants, if possible, otherwise use drawings or photographs.
- On sheets of paper, describe your study using the above 5 sections.
- Use big print so that it is easy to read from 3 feet away.
- Glue these sheets, along with any photos or graphs to heavy poster paper (14" x 22" minimum) for display.
"Strawberry Yields Forever" <http://www.gardening.cornell.edu/education/youth/activities/pdfs/strawberryyields.pdf>
4-H Fact Sheets are available from your 4-H Extension Educator.

Class No.

10. PROPAGATION

Class No.

11. BREEDING

Class No.

12. SOIL SCIENCE

Class No.

13. CULTURAL PRACTICES

Class No.

14. MISCELLANEOUS

- Entries will be judged according to similar project criteria.

GARDEN ENTRIES

This division offers an opportunity to display a garden item and gives participants an occasion to show the products of their gardening efforts.

- Exhibits that require it, must be grown by the exhibitors in their **individual, family, school or community gardens**, unless otherwise noted.
- Individual may display 10 entries in any one class, except where the number of entries is stated differently. Each exhibit must be of a distinctly different variety type.

- Exhibits and awards will be evaluated based on the standards below.
- Exhibit must be labeled with correct common name and variety name (i.e., snap beans, Blue Lake; or petunia, Red Picotee). **Otherwise, awards will be downgraded.**
 - □ For further information on preparing and exhibiting vegetables go to <http://www.hort.cornell.edu/gbl/pubs/index.html> Scroll down to “Vegetable Fare”.

- **Excellent** - clean; only very minor defects in general appearance; best market size and quality; true to varietal characteristics. For exhibits with more than one specimen: not more than 10 percent variation in sizes for fruits and vegetables and cut flowers; only slightly detectable variation, uniform in shape, color and degree of maturity.

- **Good** - clean; slight defects in general appearance; defective and unusable parts should not exceed 5 percent; good market size and quality. Exhibits with more than one specimen: not more than 25 percent variation in sizes for fruits and vegetables, and cut flowers; only slightly detectable variation in shape, color and degree of maturity.

- **Worthy** - fairly clean; some defects in general appearance; defective and unusable parts should not exceed 10 percent; fair market size and quality.

Exhibits with more than one specimen—not more than 100 percent variation in sizes for fruits and vegetables and cut flowers; noticeable variation in shape, color or degree of maturity.

- **No Award** - dirty, serious damage apparent; defective and unusable parts exceed 10 percent; unsatisfactory market size or quality. Exhibits with more than one specimen —more than 100 percent variation in sizes for fruits and vegetables; extreme differences in shape, color or degree of maturity.

Class No.

15. VEGETABLES –

UP TO 10 DIFFERENT ENTRIES MAY BE EXHIBITED IN THIS CLASS.

- Beans, lima, 5 green pods, edible beans
- Beans, snap, green, 5 pods
- Beans, snap, yellow, 5 pods
- Beans, snap, pole or vining type, 5 pods
- Beans, green shell, 5 pods, any variety including edible soy, Horticultural, Kentucky Wonder
- Beans, dry shelled, 1/2 cup in container, dry field bean variety including mung, adzuki, fava
- Beets, 3, tops trimmed to 1 inch, no green shoulders
- Broccoli, 1 head or bunch of small heads, 5 inches or more in diameter
- Brussels Sprouts, 1-pint basket
- Cabbage, 1 head, 2 to 4 pounds, with 3 to 4 wrapper leaves, any fresh market variety.
- Carrots, 3, tops trimmed to 1 inch, no green shoulders
- Cauliflower, 1 head, leaves cut just above head
- Celery, 1 plant, market quality, roots off
- Chard, 1 plant, roots and damaged leaves off
- Chinese Cabbage, 1 head
- Chinese Cabbage, loose leaf, roots off, 1 plant
- Corn, Sweet, 3 ears, husks removed completely, shank trimmed to 1/2 inch, display in transparent bag
- Cucumbers, 2 slicing types, 5 inches or longer, 2 inches or less in diameter
- Cucumbers, 3 pickling type, 3 to 5 inches
- Cucumbers, 3 pickling type, less than 3 inches
- Dill, bunch of 3 seed heads, tied or in transparent bag
- Eggplant, 1 large oval and oblong types such as Black Beauty, Black Magic, Black Enorma, Dusky
- Eggplant, 2 small, slender and round types such as Easter Egg, Ichiban, Long Tom, White Beauty
- Endive, 1 plant, roots off, good market size

- Garlic, 3 bulbs, dried, braided together or tops trimmed to 1 inch, cleaned, not peeled
 - Herbs, any kind, plant in a pot or tied bunch
 - Herbs, dried – show a minimum of 1 tablespoon. Exhibiting a larger amount is acceptable. Herbs must be appropriately prepared for use.
 - Kale, 1 plant, roots off
 - Kohlrabi, 2, tops and tap root trimmed to 2 inches
 - Leek, 3 large, trimmed
 - Lettuce, leaf, 1 plant, roots off, good market size
 - Lettuce, head, 1 plant, roots off, good market size
 - Muskmelon and honey dew melon, 1 good market quality
 - Mustard, 1 plant, roots off
 - Okra, 4, 1 1/2 to 3 inches' long
 - Onions, bulbs, 3 tops trimmed to 1/2 inch, well cured and dried, not peeled
 - Onions, 4, green bunching type, tops on but trimmed evenly
 - Parsley, 1 plant, roots off, good market size and quality
 - Parsnips, 3 tops trimmed to 1 inch
 - Peas, 5 pods
 - Peppers, 2, large types such as Bell, Cubanelle, Italian Sweet
 - Peppers, 3, small types such as Banana, Hungarian Wax, Cherry, Jalapeno
 - Potatoes, 3 tubers, 5 to 10 ounces
 - Potatoes, 1-pint basket, salt potato types, 3/4 to 1 1/4-inch diameter
 - Pumpkin, 1, ripe, any variety
 - Radishes, 4, tops trimmed to 1/2 inch
 - Rhubarb, 4 stalks, tops trimmed
 - Rutabaga, 1, tops trimmed off
 - Shallot, 3, tops trimmed to 1/4 inch, dried, not peeled
 - Spinach, common, 1/2 pound in a transparent bag
 - Spinach, New Zealand, 1/2-pound, bunch or tender tips 3 to 6 inches, tied or in a transparent bag
 - Squash, summer, 2, young, skin tender, such as zucchini, yellow, scallop
 - Squash, winter, 1, any large types such as Hubbard, Delicious, Banana
 - Squash, winter, 2, any small types such as Buttercup, Butternut, Spaghetti, Table Queen, Golden Nugget
 - Squash, 1, soft and round stem, such as Big Max, Big Moon, Mammoth
 - Sweet potatoes, 3 roots, any variety
 - Tomatoes, 2, ripe, stems off, medium and large fruited varieties including Roma types
 - Tomatoes, cherry ripe, 1/2 pint basket, stems off, also Presto and small fruited types
 - Turnips, 2, tops trimmed to 1 inch.
 - Watermelon, 1 mature, market size
- A collection of 3 related types, such as 3 varieties of pepper, or 3 vegetables that appear in an ethnic cuisine.
- Miniature Vegetables, 6 of one type, harvested at small or baby stage.
 - Ornamental Vegetables, 3, such as miniature pumpkins, gourds, decorative corn; ornamental kale (1 specimen)
 - Heirloom Vegetables, any variety from the Heirloom Garden bulletin, exhibited in the same manner as other vegetable classes
 - Miscellaneous, any other vegetable not listed, display the same number of specimens as similar crop listed.

Class No.

16. HORTICULTURE (PLANT) ART

- Vegetable character
- Sculpture
- Geometric design
- Neatness of assembly
- Number of Horticulture products used
- Imaginative use of plants and plant materials

- May purchase vegetables
- Overall appearance
- List plants used

Class No.

17. CUT FLOWERS –

UP TO 12 DIFFERENT ENTRIES MAY BE EXHIBITED IN THIS CLASS

Consist of 3 stems with the same color blooms except as noted:

- Gladiolus - ONE spike with at least 12-inch stem & other large spikes
- Roses - ONE stem of the type entered.
- Dahlias - THREE blooms of one color, or ONE bloom if over 6 inches.
- Any bloom 6" or larger – show ONE specimen, such as a 6"+ sunflower or dinner plate dahlia.
- Stems should be eight inches long, except where type of flower makes this impossible.
- Flowers that do not last as cut flowers (daylilies, hollyhocks, impatiens, portulaca, etc.) may not be entered.
- Blooms of weeds, wildflowers and shrubs will not be evaluated. If you would like to show a weed (or wildflower) you should enter it as a "Methods" project (Class 31, Example: How to grow wild geranium for cut flower) or as an "Experiment" (Class 13, 14, 15 or 16) where you might evaluate a weed for use as a cut flower.
- You may provide your own disposable container.
 - You may find further information on preparing and exhibiting cut flowers at <http://counties.cce.cornell.edu/oneida/4h/cutflowersfairbook.pdf>
 - Aster (annual)
 - Bachelor Button
 - Calla Lily – 3 stems
 - Calendula
 - Chrysanthemum (any form)
 - Cleome
 - Cosmo
 - Dahlia – 6" blossom, 1 stem; less than 6" blossoms, 3 stems
 - Flowering Tobacco
 - Gladiolus
 - Larkspur
 - Marigold
 - Delphinium
 - Asiatic Lily (one stem)
 - Nasturtium
 - Ornamental Grass (foliage and fully developed seed head)
 - Phlox-annual
 - Rose
 - Petunia
 - Rudbeckia (Coneflowers, Black-eyed Susan)
 - Snapdragon
 - Statice (fresh, not dried)
 - Stock
 - Strawflower (fresh, not dried)
 - Sunflowers

- Sweet Peas
- Zinnia
- Zinnia, large, over 4"
- Daisies
- Pansies
- Viola
- Carnation
- Miscellaneous, any other cut flower not listed, annual or perennial, display the same number of specimens as similar crop listed.

A collection of 6 (six) garden cut flowers, not used in other cut flower entries. One (1) specimen of each variety. Flowers named and variety listed. No wildflowers, weeds or shrubs.

Class No.

18. INDOOR GARDENING

- Please list plants and plant materials used.
- All items should follow recommended guides of balance, design, proportion, and harmony.
- No artificial or plastic plant materials allowed.
- Ribbon and bows as part of the design are allowed.
- Entries must be grown in display container prior to June 1 of the current year
 - Dish garden
 - Terrarium or closed eco system – no endangered species allowed.

Class No.

19. INDOOR GARDENING: HOUSE PLANTS

- Houseplants must be a single stem or crown in proportional container.
- No artificial or plastic plant materials allowed.
- Please list the plant name.
- Entries must be grown in display container prior to June 1 of the current year.
 - Potted house plant - flowering
 - Potted houseplant - foliage
 - Potted house plant - vine
 - Potted houseplant - hanging container. More than 1 plant accepted.
 - Miniature houseplant - 2 1/4"-3" pot maximum.
 - Example, miniature African Violet

Class No.

20. CONTAINER GARDENS

- No artificial or plastic plant materials allowed.
- Appropriate container and plant combinations.
- Please list plants included in the container.
- Entries must be grown in display container prior to June 1 of the current year.
- Clubs may enter an exhibit
- For container gardens not applicable to Division 4, Class 30 (Horticultural Methods
 - Container Gardening).
 - Perennial annual, vegetable, ornamentals.
- Theme Gardens only may have some artificial material These materials should not be a main focus of the exhibit. They should blend in. *Plants should be prominent.*

Class No.

21. FRUITS AND NUTS

- All fruits and nuts must be cared for by exhibitors.
- Nuts grown in the previous year may be entered.
- For more information on culture, consult: "Strawberry Yields Forever" - a day neutral strawberry 4-H project, available at [http:// www.gardening.cornell.edu/education/youth/activities/pdfs/strawberryyields.pdf](http://www.gardening.cornell.edu/education/youth/activities/pdfs/strawberryyields.pdf)
Other publications at this website may be useful.
 - Apples, 3, ripe, any single variety
 - Apricots, 3, ripe
 - Blueberries, ½ pint
 - Cherries, ½ pint basket, with stems, any single variety
 - Elderberries, attached to cluster, 1 quart.
 - Grapes, 1 bunch.
 - Nectarines, 3, ripe
 - Peaches, 3, ripe
 - Pears, 3, ripe, with stems, any single variety
 - Raspberries, 1/2 pint, any single variety
 - Strawberries, 1 pint, caps on
 - Other: minor fruits such as quince or persimmon, 3, ripe
 - Miscellaneous - any fruit not listed, display same number of specimens as similar crop listed
 - Nuts, all-ripe, dry, unshelled, ½ pint, any single variety.
 - A collection of 3 types, such as 3 different varieties of apples

Class No.

22. FLORAL DESIGN

- List plants and varieties.
- Dry or fresh flower corsage in transparent bag.
- Table arrangement of live or dry plant material - not over 12" in diameter and under 8" in height.
- Holiday decoration of live, dried or natural plant materials - no more than 18" in diameter or 24" long.
- Plaque of dried or pressed plant material; includes other craft projects made with *real* plant material (e.g. floral pictures). Plaques and pictures need to be signed.
- Large Arrangement of live or dried plant material – for arrangements over 12" in diameter and over 8" in height.
- List ID sources.
- More information can be found at 4-H Leaflet H- 7-3i Fresh & Dry Flower Arrangements <http://hdl.handle.net/1813/17533>

Class No.

23. MINIATURE ARRANGEMENT

- Arrangement of fresh or dried flowers
- Less than 6" in height and diameter – including container
- List plants used.

Class No.

24. OPEN CLASS EXHIBITS

- Exhibits deemed worthwhile but fall outside the categories described above. The decision to bring such exhibits is left to the discretion of the Extension 4-H Educator.

- List plants used. Includes wildflowers.
- Exhibits will be judged according to similar project criteria.
- Fall arrangements gourd arrangements and photo stories may be entered

HORTICULTURAL METHODS

This division gives young people a chance to an interesting, different approach to growing plants. This enhances gardening skills and encourages the participant to think creatively.

- Because of the difficulty of reproducing some of the horticultural methods for exhibiting purposes, a poster or poster series format may be used.
- Use heavy poster paper (14" x 22" minimum) as a background.
- Glue or tape photos and diagrams, along with sheets of white paper that include your description within these sections:
 - 1) *introduction*, 2) *growing method used*, 3) *what you learned or discovered*.
- Instead of a poster, an exhibit of the method itself (such as a small hydroponics set-up) can be displayed.

Class No.

25. HYDROPONIC GARDENING

Class No.

26. SEASON EXTENDER METHODS

Class No.

27. PROPAGATION

Class No.

28. MISCELLANEOUS - ANY HORTICULTURAL METHODS NOT LISTED

- Entries will be judged according to similar project criteria

LANDSCAPE PICTURES AND PLANS

This division is a category in which youth can display what they have learned about the elements of design and how plants can be grouped effectively for ornamental or edible purposes. It also offers an opportunity to display their garden record keeping.

- All collections, pictures and plans will be enhanced by a clear, protective overlay.
- Markers, colored pencils or paints may be used to embellish the landscape plan.

Class No.

29. HOME GROUNDS LANDSCAPE PHOTOGRAPHIC ALBUM

- Must have at least six "before" and six "after" pictures of current year's work.

Class No.

30. PLAN OR MAP OF HOME GROUNDS

- Drawn to scale.
- Show things as they were at beginning of project.
- A second map, with suitable and necessary notes, showing changes and improvements made.
- In different colors, show changes and improvements yet to be made.
- Indicate direction north on plan.

See "Young People's Guide to Landscaping." At <http://www.hort.cornell.edu/gbl/pubs/index.html>

Class No.

31. PLAN OR MAP OF APARTMENT DWELLING

- Drawn to scale, showing grounds as they are currently.

- A second map, showing proposed changes that would improve existing grounds.
- Where ground space is unavailable, a terrace or porch garden of containerized plants can be depicted.
- Indicate direction north on plan.

Class No.

32. PLAN OF ANNUAL AND/OR PERENNIAL FLOWER GARDEN

- Show varieties, name, placement, height and color.
- Use scale no smaller than 1 inch equals 4 feet.
- Indicate direction north on plan.

Class No.

33. PLAN OF HOME ORCHARD (tree fruit and/or berry crops)

- Show varieties, name, placement, height and time of fruiting.
- Use scale no smaller than 1-inch equals 4 feet.
- Exhibit should indicate current year's work.

Current year's work will be judged.

- Indicate direction north on plan.

Class No.

34. PLAN OF HOME VEGETABLE GARDEN

- Show varieties, name, placement, height and approximate harvest times.
- Succession of plants may be indicated by a tracing paper overlay.
- Use scale no smaller than 1-inch equals 4 feet.
- Indicate direction north.

Class No.

35. PLAN OF COMMUNITY SERVICE BEAUTIFICATION PROJECT

Class No.

36. GARDEN RECORD BOOK

- List plants chosen and varieties
- List reason for selection
- Garden design sketch, including lay-out, dimensions, and spacing
- Indicate direction north
- Photos showing before and after are helpful.

Class No.

37. HORTICULTURE OPEN CLASS

- Class is an option for exhibits deemed by the County to be worthwhile but fall outside the categories described above. The decision to bring such exhibits is left to the discretion of the Extension 4-H educator.
- Entries will be judged according to similar project criteria.
- Horticulture posters that do not qualify for other Horticulture classes may be entered here.

FIELD CROPS

Class No.

38. FIELD CROPS

- Sample of hay must be well cured, not moist.
- Grasses, legumes and silage crops will be judged on the basis of their values as forage or silage.
- Exhibits should be displayed in either tightly packed, clean baskets or slice of bale with

approximately dimension 8 x 10 x 14, or as described.

- Oats – 1 peck
- Wheat – 1 peck
- Any other small grains
- Field corn – 3 ears
- Haylage – quart jar with mixture names on entry card
- Corn silage – quart jar with mixture names on entry card
- Alfalfa
- Clover
- Birdsfoot trefoil
- Timothy
- Mixed hay –state mixture on entry card
- **Feeds suitable for a 4-H animal project. Project must be specified, feed sampler attractively displayed on a board. Nutritional value and use of each sample must be described.**

Miscellaneous entries will be judged according to similar project criteria.