



Pi Alpha Xi

Horticulture Crops Judging Manual



Prepared by

Pi Alpha Xi National

The National Honor Society for Horticulture

Twelfth Edition – January 2021

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Twelfth Edition
2021

Prepared by

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The National Honor Society for
Horticulture

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Forward

With the growing desire to show one's abilities at growing horticultural crops by both amateurs as well as professional gardeners, horticultural crop judging has evolved into an assessment of the work of others in two separate forms. For a large Standard Flower Show, the specimen form of judging is used. Written standards regarding the shape, color, and form of the ideal plant or flower are used as guidelines by which every entry is judged against perfection and given awards only when merited. This form of judging is one of elimination, one entry at a time, until only a few remain. From the reduced number of exhibits, more detailed scoring is then undertaken. Elimination continues until a final decision regarding an overall winner is made. In this form, the actual plant material is evaluated and compared.

Comparative judging is the process by which individual specimens are staged in a class upon which a set value of faults and merits determines their placement. The competing judge is then challenged to recognize these merits and faults and rank the class accordingly. It is from this method of judging that national collegiate judging competitions evolved. With comparative judging, the knowledge and observational skills of the individual judge are put to the test as opposed to the plant material itself, as in specimen judging.

Pi Alpha Xi judged floral crops for decades. Early in the development of the judging contests, standards of judging were deemed necessary. The score card for the National Flower Show was often used as a guide with the judging standards specified by several flower societies. Several compilations of judging information were used as guides with that by Marlin Rogers, University of Missouri, being the most frequently cited.

More precise standards for floriculture products were still needed and at the 1956, Fifteenth Intercollegiate Flower Judging Contest held at Fort Collins, CO, a committee was named to prepare such material. At the 1957, Sixteenth contest held at the University of Illinois, Urbana-Champaign, the committee met with the coaches of the various teams and mutually worked out final or suggested changes in the committee's proposals. Slight revisions and updating of the original material have occurred in 1963, 1970, 1975, 1987 and 1998.

This judging manual thus represents the combined efforts on many people over a period of years during which actual experience and observations in the broad field of floriculture, as well as actual flower judging, were brought together in the pages that follow.

The primary purpose of this manual is to serve as a guide in teaching the principles of judging the quality of floricultural products and improving the standards of the Intercollegiate Flower Judging Contests. The principles could guide the commercial producer of flowers in the production of quality and in grading of products.

Pi Alpha Xi National in publishing this manual is grateful to the many individuals who have contributed over the years to the principles of flower judging. Credit is given to Mr. Joe L. Bennett, University of Missouri, for the section entitled *Giving Reasons* and to Virginia Walter, California Polytechnic State University, San Luis Obispo, for the section entitled *How to Conduct a Judging Contest*. Particular credit is due the following members of the Pi Alpha Xi Judging Standards Committee in whose hands was placed the task of preparation of the first edition of this manual: Griffith J. Buck (Chairman, Iowa State University), Elwood W. Kalin (Washington State University), R. E. Odom (The Agricultural and Mechanical College of Texas, now Texas A&M

University), P.B. Pfahl (Pennsylvania State University), James E. Smith, Jr. (University of Missouri), and Kenneth Reisch (The Ohio State University).

During the years of 1938 to 1997, a total of forty-nine institutions entered teams in the fifty-six Intercollegiate Flower Judging (Floral Crop Quality Evaluation) Contests sponsored jointly by the American Floral Endowment and Pi Alpha Xi National. Earlier contests were held in conjunction with the National Flower Shows sponsored by the Society of American Florists in various cities throughout the country. In recent years, judging contests have been hosted by competing universities on a rotating basis.

This is the first edition to include produce (fruits and vegetables) and nursery stock.

First Edition, November 1957

Second Edition, November 1963

Third Edition, January 1970

Fourth Edition, August 1975

Fifth Edition, January 1981

Sixth Edition, March 1983

Seventh Edition, July 1987; Reprinted September 1990

Eighth Edition, January 1998

Ninth Edition, January 2005

Tenth Edition, September 2007

Eleventh Edition, September 2008; Reprinted in 2012 and 2016

Twelfth Edition, January 2021

Preface

The Pi Alpha Xi Horticulture Crops Judging Manual is built on the shoulders of those who came before us. Hence, this section preserves the history of the manual as the Preface from each of the editions is retained.

PAX no longer sponsors a national contest. The 66th Annual National Intercollegiate Floral Crop Quality Evaluation and Design Competition was the last contest sponsored at Oklahoma State University, spring 2007 with Oklahoma State, California Polytechnic State University, University of Illinois at Urbana-Champaign, The Pennsylvania State University, South Dakota State University, University of Wisconsin-Platteville, and University of Wisconsin-River Falls participating. The manual is used primarily by high school agriculture FFA and 4-H programs.

Late fall 2019, ASHS, our managing partner, notified the officers that the current supply of manuals was getting low and asked if they should reprint or review and revise. President Ryan Contreras initiated a conversation with the officers and others. The global Covid-19 pandemic delayed the publication until January 2021. Mary Lewnes Albrecht (University of Tennessee), Karen Panter (University of Wyoming), James DelPrince (Mississippi State University), and Chad Miller (Kansas State University) agreed to work on the *Twelfth Edition, 2021*. Changes include the separation of roses into standards and sprays, the addition of *Phalaenopsis* orchids, and *Hydrangea* cut flowers, to reflect changes in the floral industry, and adding produce (fruits and vegetables) and nursery stock. The produce standards are based on *Selecting and Showing Produce*, Bulletin B-684 Revised 2008, original bulletin by Jim Cook and revised by Karen L. Panter, Extension Horticulture Specialist, Department of Plant Sciences, University of Wyoming. Updated information for alstroemeria was provided by Mark Bridgen (Cornell University) and chrysanthemums was provided by Kimberly Williams (Kansas State University).

At the 54th National Intercollegiate Floral Crop Quality Evaluation and Design Contest the coaches recommended that revisions be made to the Flower Judging Manual. Jack Buxton (University of Kentucky), President of Pi Alpha Xi National, appointed Terry Ferriss (University of Wisconsin – River Falls), Will Healy (Ball Horticultural, Inc.), and Virginia Walter (California Polytechnic State University, San Luis Obispo) to coordinate the process of revisions and reprinting. Coaches from all teams made suggestions for revisions and new chapters were added for Annual Statice, Bird of Paradise, Liatris Flowers, Hybrid Lily flowers, Hanging Flower Containers and/or baskets, and Lisianthus Flowers. Credit is given to the efforts of Heidi L. Hechtman and Marcelle F. Hicks, two students at California Polytechnic State University, San Luis Obispo, who under the supervision of Virginia Walter wrote the new chapters. The revisions were approved by the coaches at the 1997 National Intercollegiate Contest. Printing was coordinated by Terry Ferriss (University of Wisconsin-River Falls). *Eighth Edition, January 1998; Ninth Edition, January 2005, Tenth Edition, September 2007.*

At the 43rd Intercollegiate Flower Judging Contest held at Pennsylvania State University in 1984, President James Klett (Colorado State University) appointed a committee composed of Joe Love (North Carolina State University), Will Healy (Ball Horticultural, Inc.), Terry Ferriss (University of Wisconsin – River Falls), and Virginia Walter (California Polytechnic State University, San Luis Obispo) to review the Manual for changes and possible new chapters. Alstroemeria, Gerbera, and

Freesia chapters were suggested. Revisions were discussed at both the 44th and 45th Contests and finalized by the coaches in attendance at the 46th Contest held at Texas A&M in 1987.

The Seventh Edition was necessitated by the dynamic changes in the floriculture industry, evidenced by the significant introduction of new potted and fresh cut products into the marketplace during the last 30 years since the first edition appeared. This edition has come about primarily due to the efforts of Will Healy (University of Maryland). He took on the job of accumulating, editing, and organizing the revisions provided by various coaches and maintained his enthusiasm for the task over a three-year period. *Seventh Edition, July 1987.*

The use of *A Manual for Flower Judging* has remained useful for those individuals and groups interested in learning how to judge quality in cut flowers and potted plants. Since the last revision of the manual in 1975, the use of it for the many at high schools around the country that are training teams for competition in state and national competitions, especially related to 4-H and FFA activities has increased greatly. The number of teams competing at the collegiate level has also increased so that the average number of teams over the past five years is at an all-time high of 22 teams.

For the manual to be at the highest level of value to its users, Roy Larson (North Carolina State University), President of Pi Alpha Xi, appointed a committee during the 38th Intercollegiate Flower Judging Contest held at Callaway Garden, Georgia to revise, update and make additions to the manual. The committee was composed of Virginia Walter (California Polytechnic State University, San Luis Obispo), Joe Love (North Carolina State University), Alan Stevens (New Mexico State University), Dennis Wolnick (Pennsylvania State University), Marlin Rogers (University of Missouri), and Elwood W. Kalin (Chairman, Washington State University). *Sixth Edition, March 1983, Fifth Edition, January 1981.*

The increased interest and concern of the world's population in the environment has increased the demand for plant materials especially adapted for growing in and around the home. Consequently, greenhouse growers and retail florists have increased the kinds and varieties of flowers and plants available to their customers. Therefore, for those people involved in producing, handling, and evaluating these new, and some which were grown many years ago but had fallen out of favor, plant materials new sets of judging standards are needed. Also, in any publication of this kind, periodic up-dating is always needed. Louis Berninger, University of Wisconsin, President of Pi Alpha Xi appointed the following committee, at the 33rd International Flower Judging Contest held at The Ohio State University, to add the new plant material and make required changes. The committee was composed of Peter Pfahl (Pennsylvania State University), Paul Smeal (Virginia Polytechnic Institute and State University), Joe Love, (North Carolina State University), Marvin Carbonneau (University of Illinois), Richard Widmer (University of Minnesota) and Elwood W. Kalin (Chairman, Washington State University). *Fourth Edition, August 1975.*

The continued use of *A Manual for Flower Judging* has again shown a necessity for some revisions to up-date the included material. Jack Gartner (University of Illinois) and President of Pi Alpha Xi appointed the following committee at the 28th Intercollegiate Flower Judging contest held at the University of Minnesota, to make the required changes: John Culbert (University of Illinois), Peter Pfahl (Pennsylvania State University), Harold Wilkins (University of Minnesota), Ray Houston (California Polytechnic Institute) and Elwood W. Kalin (Chairman, Washington State University). *Third Edition, January 1970.*

The enthusiastic reception of the First Edition of *A Manual for Flower Judging* has shown that it has and is filling a great need for people interested in improving flower quality and judging standards. Garden club people, flower societies and training of collegiate students have made wide use of the manual. To date, in the years from 1938 to 1963, a total of thirty-five institutions have entered in the 22 Intercollegiate Flower Judging Contest which have been jointly sponsored by Pi Alpha Xi and the Society of American Florists. Continued use of the manual has emphasized the need for a few minor revisions and the inclusion of some additional kinds of plant materials. The second edition, then, is an attempt to fill this need and perhaps increase the use of the manual.

During the 21st Intercollegiate Flower Judging Contest held at the University of Maryland, Peter B. Pfahl (Pennsylvania State University), President of Pi Alpha Xi, appointed a committee consisting of John Culbert (University of Illinois), Richard Widmer (University of Minnesota), George B. Goddard (University of Massachusetts), and Elwood W. Kalin (Chairman, Washington State University) to revise and add to the manual. The revised edition is a result of the committee's combined work and thinking, *Second Edition, November 1963*.

Photograph Credits

The Twelfth Edition, 2021, is our first edition including photographs. We thank the following individuals and corporate partners for graciously providing the photographs used in this manual. We thank each for their support of this effort. We received 288 photographs for the 99 entries needed. After each person is the list of photos, if used, in this manual.

Mary L. Albrecht, Professor Emerita, Department of Plant Sciences, University of Tennessee, Institute of Agriculture: jicama

Jenny Boxell, All American Selections: photographs on pages geranium, basil, beans, beets, broccoli, cabbage, cauliflower, corn, eggplant, kohlrabi, mustard, okra, peppers, radishes, spinach, summer and winter squash, small tomato, turnip, and watermelon

James DelPrince, Assistant Professor, Coastal Research and Extension Center, Mississippi State University: color potted plants, foliage plant, and cut iris

Brian Dennison, Director of Business Development, Sierra Flower Trading: annual statice, carnation (spray), chrysanthemum (standard), freesia, gerbera, gladiolus, hybrid lily, liatris, lisianthus, rose (spray), rose (standard), and snapdragon

Kirsten Earley, Staff Photographer, Johnny's Selected Seeds: asparagus, Brussels sprouts, carrots, celeriac, collards, cucumbers, dill, endive, kale, leeks, head lettuce, leaf lettuce, mint, muskmelon, green onions, parsley, parsnips, peas, potatoes, raspberries, rhubarb, rosemary, rutabaga, salsify, shallots, Swiss chard, thyme, and winter radishes – daikon

Samantha Flowers, Extension Assistant, Department of Plant Sciences, University of Tennessee, Institute of Agriculture: garlic and strawberry

Richard Harkess, Professor, Department of Plant and Soil Sciences, Mississippi State University: African violet, alstroemeria, annual statice, azalea, bird of paradise, bulbous cut flowers (tulip and daffodil), bulbous potted plants (tulips and hyacinths), calceolaria, carnations (standards), chrysanthemum (cut spray and standards; potted), cineraria, cyclamen, Easter lily, exacum, hanging flower containers and/or baskets, hydrangea (potted), kalanchoe, phalaenopsis, poinsettia, primula,

Rieger begonia, stocks (cuts), produce judging, celery, Chinese cabbage, chives, onions (dry), pumpkin (pie), sweet potatoes, and tomatoes (large ripe, green)

William E. Klingeman, III, Professor, Department of Plant Sciences, University of Tennessee, Institute of Agriculture: pot-in-pot nursery production

Alice LeDuc, Adjunct Professor, Department of Agricultural Sciences, Texas State University: ball-and-burlap nursery production

Dave Lockwood, Professor, Department of Plant Sciences, University of Tennessee, Institute of Agriculture: grapes (cover page)

Diane Doud Miller, Associate Professor, Department of Horticulture and Crop Science, The Ohio State University: apple

Susan Morgan, eat|breathe|garden: freesia, cut hydrangea, and grow-bag nursery production

W. Garrett Owen, Assistant Extension Professor, Department of Horticulture, University of Kentucky: gloxinia

Christina Salwitz, The Personal Garden Coach, and author: grapes

Terri Starman, Professor, Department of Horticultural Sciences, Texas A & M University: graciously provided images; however, they were not included.

Staging Classes for Judging Floral Crops

The objective in staging a class is to set up one in which there are *real* and *defendable* differences between the entries, but differences are not so great that placement of the class is obvious. Staging is essentially the grading process commercial growers go through when preparing their products for market. A properly staged class should contain identifiable faults positioned; if the judge sees them and properly weighs them a logical decision can be made which would result in their correct placement. Proper staging is just as valuable as judging practice in helping a judge become familiar with standards of quality for floriculture crops. Practice staging whenever possible.

A careful examination of plant material must be made so no faults or important points are overlooked when staging. Faults must be properly identified and given proper value or worth. The number of times a fault appears is considered; however, resist the temptation to identify a fault and then try to say that it is present in one or more containers, yet *worse* on one more than the other. A *fault is a fault*, and a judge needs to identify the fault properly and give it a proper relative value.

Another temptation to resist is the mixing of faults of all values both major and minor in all four containers or plants. If a stager does this than the judge must get into a counting game to sort the containers. The mixing of values clouds the decision-making process and makes it more a guessing game. When possible, the best cut flowers or potted plant is in the number one place, the next best in the second place, and so forth. Excellent stems should not be sprinkled throughout all four cut flower entries. The final sorting by the stager should compare the best of the second place with the worst of the first place and exchange them if appropriate. The same process is used to upgrade the quality of each entry on down to the fourth place.

Potted Plant Classes

Look over the available material, keeping in mind the point values of each of the major *positive* characteristics on the score card (cultural perfection, floriferousness, size of plant, etc.) to select plants in which there are real differences in one or more of these characteristics. At this point, you are beginning to establish a firm basis for staging and judging the class. Select the plant most nearly perfect in at least the *major* points on the score card, as the first-place plant. Concentrate on the *positive* while at the same time do not forget the *negative*. The first-place plant should not be demonstrating *major* faults shown on the “relative value of faults” table.

If all the available plants have a cultural perfection fault (slight marginal burn on a few of the leaves), try to have the least damaged plant in the first place and do not determine the placement solely on this cultural imperfection. Make the *major* distinctions between placements based on the highest value characteristics from the score card. For example, the first place African Violet is symmetrical while the second-place plant is not. If you cannot do that, then you may have to combine merits in two or more of the lower valued qualities to overcome some slight problem in cultural perfection. For example, the first-place African violet is more floriferous and has strong, compact petioles compared to the second-place plants.

The poorest plant in the class should show some clearly definable deficiency and/or a greater number of the more severe faults from the *Relative Value of Faults* table. The second and third place plants are intermediate between the other two.

Cut Flower Classes

Setting up a cut flower class requires slightly different thinking than setting up a potted plant class. Uniformity of specimens within the placing entry becomes the most important single characteristic that must be considered. This means uniformity of the entire scored characteristic (condition, form, color, stem and foliage, size, etc.).

Study the material carefully to determine the qualities in which there are real differences. If all the flowers are consistently uniform in color, that quality, in actual practice, is more or less ignored in establishing proper placing of the class, and differences will have to be based on other qualities (form, stem, and foliage).

The first-place vase should score high in several of the major point value qualities. Carnations, for example, usually vary significantly from each other in flower form (roundness symmetry of petal placement) and major defendable differences can be developed on this basis. Select individual flowers uniform in these major qualities, do not have ten good flowers and two poor flowers in each vase. There should not be any poor flowers in the first-place vase. If the material available is such that you cannot sort out 5 to 10 exceptionally good flowers per vase, then that class is thrown out.

Summary

Concentrate on the positive. Try to organize the class so that the major differences are between the higher value qualities or combinations of two or more of the lower value qualities whose composite value exceeds the former (a case where color plus stem and foliage were clearly superior in a situation where condition might show some slight faults). Consciously try to exclude faults from the top of the *Relative Value of Faults* table in the top 2 places. If there are stems showing these kinds of problems, they are placed in the third or fourth place vases.

Giving Reasons

Giving oral reasons can be a valuable tool in training the judge whether such procedure is part of the contest or not. Systematically administered instructions on notetaking aids the individual in organizing his thoughts for an accurate and substantiated decision.

There are four essential characteristics of a good set of reasons whether written or given orally. These are: accuracy, completeness, clearness, and proper emphasis.

- **Accuracy** is of utmost importance. This will depend on the accuracy of observations and the discrimination exercised in making comparisons. Accurately record notes.
- **Completeness** means that no important reasons for the placing are omitted. The most important aid in this will be the knowledge which the student has of the important features of the class being judged and the clearness with which the individual keeps in mind the important points and the order of their presentation.
- **Clearness** of statement is essential. A means to this end is logical organization, always following an outline and discussing the points in systematic order.
- **Proper emphasis** means that the important differences and the more fundamental points of the individuals of the paired entries being contrasted be given the principal attention. Avoid long discussion of trivial points or slight differences.

Presentation of reasons can only be successful if the student

- 1) keeps systematic notes by following the order of points for the class when writing the notes;

- 2) notes the important differences between individual flowers or vases, or plants of the class; and
- 3) delivers the reasons in a precise manner.

Consideration now will be given to the plan of exercise in which the reasons are written. These reasons necessarily must be brief because of the limitations of time and the space in which to record them. Every statement is one of comparison. Pure description should not be indulged in because of limited time and because the inference to be drawn from it is not always clear. Only the important differences or reasons are mentioned and just the right word or words used to express them. It is necessary that only three paragraphs be written to state the reasons.

The following plan indicates the proper organization for presentation either written or oral:

1. State the placing of the class.
2. Reasons for placing the first over the second.
 - a. State what points placed first over second.
 - b. Give good points of second, or,
 - c. If placing is close give faults of second instead of advantages.
3. Reasons for placing second over third.
 - a. Give admissions in favor of second placing over third, provided the differences are of considerable importance. Do not give too much emphasis to this.
 - b. Give important advantages of second over third. This should constitute the main part of the reasons for this second pair.
4. Reasons for placing third over the fourth.
 - a. Give admissions in favoring third over fourth, if any of importance.
 - b. Tell the important points where the third excels the fourth.
 - c. Point out outstanding faults of fourth place entry.

Example

“My placing of the class of red carnations was A B D C.” “I placed A first because it had better color, stronger stems and better substance than B. B, however, had better form and larger size.”

“In comparison of the second to the third place, I grant that D had better color and form, yet I considered B to have larger size, stronger stems, better substance and in more prime condition.”

“In the last pair, I considered D an easy one over C because of better color, size, substance and form. I faulted C because of a split calyx, weak stems and poor substance.”

Judging of Floriculture Crops

The judging of floriculture crops is horticultural perfection carried to its logical termination. The skilled judge is concerned with sorting floral materials into groups according to previously determine standards. Judging is the evaluation of grading consistency and an assessment of quality. Judges must be familiar with the standards of quality for each floriculture crop. Where quality standards are lacking, the judge's familiarity with the crop and its cultural requirements allows making valid judgments on quality.

In setting up the standards of quality which follow, an attempt has been made to reconcile perfection with commercial acceptability. Accordingly, those faults which reduce commercial desirability whether due to cultural or inherent causes, have been penalized most severely, A table of faults, in which each fault has been assigned a numerical value according to its severity, has been included for each plant material. Note these placings are on a relative basis only. A score card is included to aid the coach in assessing the various features to be considered in judging any class.

Scale of Points of Cut Flowers

(Multiple specimen entry)

Condition	25	Uniformity 10, freedom of bruises and blemish 5, substance 10
Form	20	Uniformity 5, maturity 5, correct shape 5, regular petals 5
Stem & Foliage	20	Uniformity 5; strength and straightness 5; foliage quality 5; size and proportion 5
Color	20	Uniformity 5, intensity 5, clarity 5, trueness to variety 5
Size	15	Uniformity 5, deduct points in relation to development and condition of oversized or undersized 10

(Note: Uniformity counts 30 points out of 100)

This scale makes allowance for uniformity of condition, form etc., for the group when considering each of these qualities of the individual specimens.

Scale of Points for Flowering Pot Plants

Condition	20	Uniformity 10, freedom from bruise and blemish 5, substance 5
Form	20	Uniformity 5, maturity 5, correct shape 5, regular petals 5
Floriferous	20	Uniformity 10, distribution around plant 5, ratio of open flowers to buds 5
Plant Size	20	Uniformity 10, deduct points in relation to development and condition of oversized or undersize 10
Color	10	Uniformity 5; intensity and clarity 5
Bloom Size	10	Uniformity and proportion 5, trueness to variety 5

(Note: Uniformity counts 50 points out of 100)

This scale makes allowance for uniformity of condition, form etc., for the plant when considering each of these qualities of the individual stems or flowers.

Scale of Points for Foliage Plants

Foliage	35	Uniform progression of leaf sizes 10, leaf shapes 10, strong growth 10, symmetrical placement of leaves 5
Color	25	Bright vivid green or uniform variegation in variegated forms 10, color typical of type 10, overall attractive appearance 5
Plant Form	25	Full compact, bushy growth with short internodes 10, uniformity of size & development of multiple plants in a container 10, symmetry 5
Size	15	Size in proper proportion to container 15

(Note: Uniformity counts 20 points out of 100)

This scale makes allowance for uniformity of condition, form etc., for the plant when considering each of these qualities of the individual specimens.

Special Note on Insect Pests and Diseases

The presence of or damage from insect pests and diseases constitutes a serious fault when judging any crop. The presence of one or even a few insects should not be justification for placing the entry automatically in last place. Live insects move about and may not be apparent to all judges. Insect injury is permanent injury and is strongly faulted. Either presence of or damage from disease organisms is strongly faulted.

Special Note on Plant Material Not Described in This Manual

The Manual for Judging Horticulture Crops was never intended to be an encyclopedia of judging considerations for the dynamic collection of plant material used in modern Floriculture. Rather, the authors intended to provide specific criteria for only the major floricultural crops. Using the basic information in this manual, coaches can develop judging criteria for new crops or those not included. For example, delphinium and tuberose are spike flowers like snapdragons and would be judged using the snapdragon judging criteria. When in doubt refer to the **Judging of Floricultural Crops** section for guidance.

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Using the Scoring Chart

With this scoring scheme, if the correct order of placings in any given class is A-B-C-D, it is graded 100 points. There are 24 possible combinations of these letters. The same number of combinations is possible, of course, with any other arrangement of the letters, designating perfect scoring, or 576 different combinations in all. This arrangement will prove a great time saver in scoring the contest.

Find the combination of letters used in the alphabet column at the left which indicates correct placings, as A-B-C-D for 100 points in column No. 1 at the top; starting with 100. Then, all the other 23 possible combinations with relative values are found in the same perpendicular column No. 1.

Or, if the correct placings of another set of samples is C-A-B-D, the various combinations with relative values will be found in column No. 13, starting with 100 and going up and down.

Chart for Computing Scores on Classes Judged

Grade for Placings

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	ABCD	100	87	88	75	76	63	75	62	70	56	57	44	57	43	45	31	38	25	38	25	26	12	13	0
2	ABDC	87	100	76	63	88	75	62	75	57	44	70	56	38	25	26	12	13	0	57	43	45	31	38	25
3	ACBD	88	75	100	87	63	76	57	43	45	31	38	25	75	62	70	56	57	44	25	38	13	0	26	12
4	ACDB	76	63	87	100	75	88	38	25	26	12	13	0	62	75	57	44	70	56	43	57	38	25	45	31
5	ADBC	75	88	63	76	100	87	43	57	38	25	45	31	25	38	13	0	26	12	75	62	70	56	57	44
6	ADCB	63	76	75	88	87	100	25	38	13	0	26	12	43	57	38	25	45	31	62	75	57	44	70	56
7	BACD	75	62	70	56	57	44	100	87	88	75	76	63	45	31	57	43	25	38	26	12	38	25	0	13
8	BADC	62	75	57	44	70	56	87	100	76	63	88	75	26	12	38	25	0	13	45	31	57	43	25	38
9	BCAD	57	43	45	31	38	25	88	75	100	87	63	76	70	56	75	62	44	57	13	0	25	38	12	26
10	BCDA	38	25	26	12	13	0	76	63	87	100	75	88	57	44	62	75	56	70	38	25	43	57	31	45
11	BDAC	43	57	38	25	45	31	75	88	63	76	100	87	13	0	25	38	12	26	70	56	75	62	44	57
12	BDCA	25	38	13	0	26	12	63	76	75	88	87	100	38	25	43	57	31	45	57	44	62	75	56	70
13	CABD	70	56	75	62	44	57	45	31	57	43	25	38	100	87	88	75	76	63	12	26	0	13	38	25
14	CADB	57	44	62	75	56	70	26	12	38	25	0	13	87	100	76	63	88	75	31	45	25	38	57	43
15	CBAD	45	31	57	43	25	38	70	56	75	62	44	57	88	75	100	87	63	76	0	13	12	26	25	38
16	CBDA	26	12	38	25	0	13	57	44	62	75	56	70	76	63	87	100	75	88	25	38	31	45	43	57
17	CDAB	38	25	43	57	31	45	13	0	25	38	12	26	75	88	63	76	100	87	56	70	44	57	75	62
18	CDBA	13	0	25	38	12	26	38	25	43	57	31	45	63	76	75	88	87	100	44	57	56	70	62	75
19	DABC	56	70	44	57	75	62	31	45	25	38	57	43	12	26	0	13	38	25	100	87	88	75	76	63
20	DACB	44	57	56	70	62	75	12	26	0	13	38	25	31	45	25	38	57	43	87	100	76	63	88	75
21	DBAC	31	45	25	38	57	43	56	70	44	57	75	62	0	13	12	26	25	38	88	75	100	87	63	76
22	DBCA	12	26	0	13	38	25	44	57	56	70	62	75	25	38	31	45	43	57	76	63	87	100	75	88
23	DCAB	25	38	31	45	43	57	0	13	12	26	25	38	56	70	44	57	75	62	75	88	63	76	100	87
24	DCBA	0	25	12	31	44	56	13	38	26	45	57	70	25	43	38	57	62	75	63	75	76	88	87	100

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Conducting A Judging Contest

Principles of staging and practicing judging are best applied in a contest that consists of numerous classes each staged to challenge the skill of the judges. The ideal contest consists of 20 and 30 classes equally split between potted plants and fresh flowers. Judging over 30 classes becomes an endurance contest; that said, the judges need to be challenged. A contest with many simple classes such that any one off the street could do well misses the mark of a challenging experience for well-prepared judges.

A key to a successful contest is a plentiful supply of good quality judging material. Using commercial quality material, obtain approximately twice the material needed for staging a class. For example, if each entry in the judging class contains 10 stems, then provide a minimum of 80 stems to examine to set up a well-staged class.

Basics for Establishing Classes

Fresh flowers typically judged with 10 stems per vase: roses, standard carnations, bulbous iris, narcissus, snapdragons, stock, and tulips.

Fresh flowers typically judged with 5 stems per vase: gerbera, chrysanthemum, spray carnation, alstroemeria, and gladiolus.

Other kinds of fresh flowers should have sufficient stems per entry to provide a challenge judging, yet not so crowded as to confuse the class. For example, 10 stems of lisianthus or spray roses would be too cluttered for a judge to separate out individual characteristics. Similarly, 5 stems of marguerite daisies would not be as challenging as 10 stems per entry.

Vases are sized to allow full, open display of the stems, but not so large as to interfere with stem strength evaluation. Use uniform vases that are *invisible* to the judge and not come into account during the judging process.

Provide a minimum of 8 superficially identical pots for each potted class.

Remember to have stems or pots of the same color, age, length, cultivar, size, same number of stems per pot, etc. for each class.

Staging devices such as string, picks, or wire may be desirable and readily available to those doing the staging.

Setting the Room

Label each entry with ABCD's placed on both sides of the table is helpful to avoid confusing judges who are looking at the entries from either side. When possible stage the classes so that the lettering or numerical identification system runs from left to right as the judge faces the class.

Use a quiet area, large enough to allow judges the freedom to circle each table without bumping into nearby contestants.

The room should have indirect, natural light if possible. If artificial light is used, diffused light is best so as not to cast shadows.

Maintain a cool room to discourage opening of flowers in classes such as tulips or roses or wilting of pots such as hydrangeas.

Select table height that allows each judge to view the entries (both top and bottom) easily. Some classes such as large foliage plants may be judged more properly on the floor. Other entries may have to be placed on partially collapsed tables to reduce the height.

Classes of Potted Plants and Cut Flowers (Flowers)

African Violet

Saintpaulia ionantha cultivars

Definition of Terms

Crown. A short stem, terminating in a whorl of leaves.

Judging Considerations

Plant: A well-grown single crown plant consists of concentric circles of leaves radiating from a common stem, the crown.

When seen from above, the plant is symmetrical with the leaf pattern circular, with no large gaps. Large gaps suggest immaturity, poor grooming, or inadequate growing space.

When seen from the side, the plant is dome shaped with each circle of leaves overlapping slightly the leaves below. The lowest or outermost leaves extend beyond the rim of the pot and arch downward slightly. The hemispherical form of the plant is determined somewhat by variety and plant health.

The presence of lateral shoots, with or without an accompanying whorl of foliage, interrupts the symmetrical foliage pattern of the single-crown plant and is a severe fault.

Flowers. Abundant flowers are in prime condition borne on strong stems long enough to hold them above the foliage. For best flowering effect, the flowers are concentrated around the center of the plant. Floriferousness is an indicator of grower ability and is given more weight in judging than the size and color of blooms which are generally variety dependent. A mature show plant may carry 20 to 30 blossoms with at least one-third of the flowers open and evenly distributed over the plant. Flowers and foliage are balanced when neither visually outweighs the other.

Sparse blooms or flowers of poor quality may result from insufficient light, excessive nitrogen, or insects. The flowers are free of mechanical injury, uniform in color and size, free from blotching, and fresh. Old flower stems are removed cleanly.

Foliage. Though foliage color, shape, and size may vary with variety, the foliage is sturdy, vigorous, and clean. The foliage will be free of disease or insect injury, spray residues, water spotting, mechanical injury, and nutritional deficiencies. Leaf petioles are strong enough to support the leaves, and not excessively elongated.

Merits

- Symmetrical foliage development; concentric circles, no voids, uniform.
- Lush foliage characteristic for the variety.
- Foliage and flowers free from blemishes.
- Flowers held upright above foliage and in center of plant.
- Clean, bright, uniform flower color.
- Abundance of blossoms in good condition.
- Strong leaf petioles not excessively stretched.



Faults

- Lack of symmetry.
- Presence of lateral stems.
- Overcrowding or irregular leaf arrangement.
- Flowers hidden by foliage.
- Weak flower stem.
- Sparse flowering.
- Blemished flowers or foliage.
- Weak, off-color foliage.
- Poor grooming leaving broken petioles and flower stalks.
- Plant too large or small for pot.

Relative Value of Faults

- 10 Injury from insects or disease.
Lack of symmetry.
Presence of lateral crowns in single-crown class.
- 9 Blemished, off-color foliage.
- 8 Poor proportion of plant to pot.
Excessive crown development in multiple-crown classes.
- 7 Flowers in poor condition.
- 6 Flowering down in foliage.
Flowers poorly centered around plant.
Mechanical damage to foliage.
- 5 Weak, elongated leaf petioles.
- 4 Petiole or flower stalk stubs.
- 3 Weak flower stems.
Sparse flowering.
Mechanical damage or residue on flowers.

Alstroemeria (Peruvian Lily), Cut Flowers

Alstroemeria cultivars

Alstroemeria cultivars are intraspecific hybrids developed for cut flower production.



Definition of Terms

Cyme: The inflorescence consists of a compound cyme upon which the flowers are borne. Each cyme is sympodially branched (when the terminal bud ceases to grow, usually because a terminal flower has formed, and the bud below begins to grow forming a new branch in the inflorescence) with the potential for primary (first order), secondary (second order), tertiary (third order), and quaternary (fourth order) flowers. The flowers within an order will open synchronously with the next higher order opening as the previous order flower begins to senesce (age).

Judging Considerations

Inflorescence: The individual cymes in the whorl are radially arranged with the flowers facing outward. A minimum of 3 cymes are required to be judged; 5 or more is preferred with secondary flower buds present, with tertiary flowers preferable. The presence of aborted flowers is a sign of imperfect culture. Excessively long or short peduncles distract from the floral display and is a fault.

Flowers – Select stems with primary flowers fully open with adequate substance and color intensity for the cultivar. Secondary flowers are still green. Dull colors, translucent petals and partially open flowers are indicative of incorrect stage of harvest and post-harvest handling procedures. Clear and uniform petal markings are evident among all flowers in the class. Anthers present without pollen shedding, and the pistil is elongating, but not split.

Foliage and Stem: The leaves, which normally are twisted 180, are present on the stem. The presence of leaves will increase the post-harvest life of the cut stem. The leaves are turgid but may be hanging downward due to the handling procedure. Chlorotic or necrotic foliage is a sign of cultural imperfection. The stem is straight and of sufficient strength to support the floral display.

Merits

- Five or more cymes per stem.
- Radially arranged, outward facing flowers.
- Presence of secondary and tertiary flowers.
- Proper stage of opening.
- Flower color, intense and typical for cultivar.
- Foliage turgid and present on the stem.
- Stem of sufficient strength to support inflorescence.

Faults

- Dull, faded or off colored flowers.

- Translucent petals.
- Primary flowers which have not fully expanded.
- Aborted flower buds.
- Excessively short or long peduncles.
- Flaccid leaves.
- Absence of leaves from the stem.
- Pistil fully elongated and split.
- Flowers facing into the whorl.
- Anthers with shed pollen
- Stigma split
- Crooked Stems.
- Asymmetrical floral display
 - uneven opening
 - primary flower missing
 - flower facing into whorl
 - lack of uniform spacing
 - non-circular in display

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Translucent petals
 - Primary flowers not fully open
 - Aborted secondary or tertiary flower buds
- 8 Flaccid or absent foliage
 - Pistil fully elongated and split
 - Pollen present on anthers
 - Tripartite stigma opened (separated)
- 7 Asymmetrical floral display
 - a. uneven opening
 - b. primary flower missing
 - c. flower facing into whorl
 - d. lack of uniform spacing
 - e. non-circular in display
- 6 Weak stems
 - Crooked stems
 - Broken secondary flower
- 5 Broken tertiary or quaternary flowers (mechanical)
- 4 Mechanical damage to primary flowers
 - Excessively long or short peduncles
- 3 Chlorotic foliage
- 2 Irregular petal markings

Annual Statice, Cut Flowers

Limonium sinuata

Statice is typically field grown. Although Statice is commonly used as a fresh flower, it also dries very well. The dried Statice manages to keep its vibrant color. Only fresh statice is considered for judging.

Definition of Terms

Stem: A typical stem consists of 3 plus branches. Each branch contains several flower spikes. The stems themselves are winged. The leaves are small and opposite on the stem.

Spikelets: The name of the structure which holds 3 to 4 flowers. Each branched spike contains many spikelets.

Flowers: The flowers consist of 2 parts; an outer papery envelope which is the calyx (sepals) and an inner part, the corolla (petals), which is a shade of white. The calyx is generally blue-violet, but also come in white, yellow, pink, peach and purple. The flowers are borne individually within a compound corymb (a short and broad, more or less flat-topped indeterminate flower-cluster where the outer flowers open first). In the case of annual statice, there are several spikes of flowers borne so that they are within a horizontal plane of each other.

Judging Consideration

Stem: The stem is of sufficient strength to support the flower in an upright position. The stems are at least 12 inches in length.

Form: There are several branches per stem, each containing several spikes. Generally, the statice branches are in the same vertical plane. The tops of the spikes are on a flat plane with the other spikes. When judging, the whole stem and spikes are considered.

Flowers: All the flowers along the spike are fully open without signs of overmaturity. An open calyx is evident when the corolla is visible. An immature flower does not have the calyx sufficiently open to see the corolla. On the other hand, the flower is overmature when signs of deterioration are present. Signs of deterioration include faded flowers, browning of the calyx and a wrinkling of the calyx and the corolla.

Spikelet Spacing: The spikelets are evenly spaced without any apparent spaces between them. The pedicel should not be so elongated as to distort the spike shape.

Color: There will be slight variations within each color variety, since Statice is grown from seed. Yellow and some others may not conform to the vertical plane.

Merits

- Long strong straight stem.
- Flower spikes 2 inches or longer.
- Proper stage of maturity.



- Flowers all within the same vertical plane.
- More than 4 flower branches per stem.
- 10 or more spikelets per spike.
- Spikelets evenly spaced.
- Good foliage condition.
- Vibrant flower color.
- Flattened top.
- Fresh, clean winged stems.

Faults

- Discolored or faded flowers or other signs of overmaturity.
- Too few spikelets on a spike.
- Flowers are not within the same vertical plane.
- Overmature flowers.
- Missing spikelet.
- Crooked stem.
- Too few spikes per stem.
- Poor foliage condition.
- Deterioration of winged stems.
- Uneven plane of spikes.

Relative Value of Faults

- 10 Injury from insect pests or disease
Too few branches per stem
- 9 Flowers too immature
Broken or missing branch on a stem
- 8 Flowers overmature
Poor color for variety
- 7 Too few or too small spikelets per spike (lack of floriferousness)
Uneven plane of spikes
Irregular spacing of spikelets
Flowers not within vertical plane
- 6 Stretched pedicels
Poor foliage condition
Damage or poor condition of winged stem
- 5 Mechanical damage to spikelet
Too short stems
- 4 Crooked stems
Mechanical damage to winged stem

Azaleas

Rhododendron hybrids

In the past, azaleas commonly were grown with one plant in a pot and were pinched several times. Plant shapes were more easily defined with this growing method and cultivar distinctions were clear. Many potted florist azaleas being grown today are with multiple plants clumped together in a pot. This growing style influences shape, but strict adherence to a perfectly symmetrical plant will likely never be possible. Natural irregular growth of azaleas compounded by the presence of many plants in a pot will promote irregular shapes.



Judging Considerations

Plant: There may be one or more plants in a pot, but number must be consistent within a class.

The plant(s) are symmetrical in shape and vigorous in growth. The plant(s) are shaped and sturdy enough to display the flowers to the best advantage. The most popular form is dome shaped. Evenness of stem length is desirable. When viewed from above, the form is round. The plant is in proper proportion to its container.

Flowers: Flowers and flower bud potential is equal to the leaf area. Vegetative growth around the flower buds is undesirable. Flowers and buds are distributed uniformly over the plant with one-third to one-half of the flowers open, the rest in bud. The flowers are in prime condition, showing no signs of age or mechanical injury.

Foliage: The foliage is sufficient to cover the framework of branches, dark green, lustrous, and free from blemishes, spray residues, and insect or disease pests. There should be no evidence of nutrient deficiencies.

Merits

- Flower and flower bud potential equal to leaf area.
- Proper proportion of plant to pot.
- Symmetrically balanced plant form.
- No vegetative growth around buds.
- Uniform distribution of flowers and buds over plant.
- Floral effect well displayed.
- Dark green foliage.
- Abundant foliage.
- Strong stems.

Faults

- Uneven development of plants in one container.
- Sparse flower and flower bud development.
- Poor flower condition.
- Sparse leaf cover.
- Irregular flower distribution.

- Poor shape.
- Vegetative growth around flower buds.
- Over one-half of flower buds open.
- Weak stems, poor support for flowers.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poor plant shape
Uneven development of plant(s) in container
- 8 Poor proportion of plant to pot
Sparse flowers and flower buds
Flowers irregularly dispersed over plant
- 7 Pale, yellowish foliage
Weak stems
- 6 Vegetative growth around flower buds
More than one-half of flowers open
- 5 Poor flower condition
- 4 Poor position of plant in relation to pot
Sparse leaf coverage
Less than one-third of the flowers open
- 3 Spray or water residue
Mechanical injury to foliage

Bird of Paradise, Cut Flowers

Strelitzia reginae

Definition of Terms

Bird is the name given to one set of orange-yellow upright sepals and bright, light to dark blue petals (referred to as the tongue) that stand up out of the large tubular leathery bract.

Inflorescence consists of one or more birds borne from a boat-shaped leathery bract.

Chilling injury is areas of water-soaked tissues of petals or sepals with damage manifested from store between freezing and 45 degrees F.



Judging Considerations

Inflorescence: It is desirable for one inflorescence to contain one or more birds. The sepals and petals (or tongue) have a full healthy color display. Pale coloring is usually due to under-maturity. The birds can sometimes become ragged and the color darkens due to overmaturity. One or more inflorescence developed above the first on the same stem is highly undesirable. This is called a double flower. The most desirable sized inflorescence will have a bract that is about 8 inches in length. Bracts are usually green, like the stem, but the red-colored ones are also desirable. Inflorescence are slanted upward at a 20 to 25-degree angle if measured from flat plane below the bird. The inflorescence is not askew to the stem.

Stem: Medium length (25 to 30 inches) are the most desirable. The stem is slender, straight but firm enough to support the desirable inflorescence. The stems are green, although red-colored upper stems are also desirable. Any physiological or weather-beaten damage is avoided. Crooked or twisted stems are not desirable. It is not necessary to display leaves with the stems. Stem cracking immediately below the angle of the flower may cause the flower to break off more readily.

Merits

- Two or three birds per inflorescence.
- Straight, slender, but sturdy flower stems.
- Medium sized inflorescence.
- Green or red-colored upper stems.
- Correct angle of inflorescence.
- Strong orange-yellow and bright, light to dark blue birds.

Faults

- Second or third inflorescence developed above the first on the same stem.
- Twisted or crooked stems.
- Immature or overmature condition of inflorescence.
- Pale coloring of birds.
- Chilling injury present.

- Disease or weather damaged stems and inflorescence.
- Weak, long stems.
- Stem cracking.
- Askew inflorescence.

Relative Value of Faults

- 10 Injury from insect pests or disease
One or more inflorescence borne above the first on the same stem
- 9 Overmaturity of inflorescence
Stem cracking
Weather damage
Chilling injury
- 8 Weak stems
Immaturity, fewer than two birds
- 7 Poor, pale coloring
Twisted and crooked stems
- 6 Tears in sepals and petals
Askew inflorescence
- 5 Poor inflorescence angles
- 4 Heavy stems
Mechanical damage

Bulbous Flowers, Cuts

Tulipa species (tulips) and *Narcissus* species (daffodils, jonquils, and narcissus)

Definitions of Terms

Perianth: The term for the floral envelope used generally when the sepals (calyx) and petals (corolla) cannot be distinguished from each other.

Corona (*Narcissus*): A tubular extension of the perianth resembling a trumpet.

Crown (*Narcissus*): A synonym for short corona.

Cup (*Narcissus*): A synonym for corona which is commonly used when the length of the corona is shorter than that of the perianth segments.

Trumpet (*Narcissus*): A synonym for corona which is commonly used when the length of the corona is greater than that of the perianth segments.

Scape: The flower stem.

Sheath: A membranous bract at the base of the perianth which is analogous to the calyx in other flowers.



Judging Considerations

Flower and Stem

Narcissus: The perianth segments are broad, of similar size, flat, overlapping slightly, not reflexed, forming a relatively flat disk. The corona is cylindrical with the base tapered smoothly into the perianth. The edge of the trumpet may be notched, curled, or entirely recurved. However, notching of the margin should not extend into the body of the trumpet. The longitudinal axis of the trumpet is at right angles to the longitudinal axis of the perianth segments. The size of the corona is proportionate to the size of the perianth and typical of the class, i.e., trumpet, large cup, short cup.

The flowers are firm, crisp, and free from crepiness (lightly wrinkled) with intense, uniform color. The flower stem is strong enough to hold the flower erect. The top half of the flower is held above the tallest leaves. The flower is at right angles to the stem or slightly facing upward. Enough leaves accompany the flower to avoid a bare appearance.

Tulip: The flower is large with perfect petal development, uniform, and intense color, free from blotching, streaking, and blemishes. The petals are crisp, firm, and free from signs of age. Flowers are not more than one-fourth to one-half open. The stem is strong enough to support the flower and long enough to hold the flower above the tips of the foliage. The flower is placed squarely on the stem. Some cultivars will have multiple buds on the flowering stem. This is not a fault.

Foliage: In general, the foliage is dark green, free from blemishes and disease and insect pests. In bulbous iris, less than one-eighth of an inch of dry, brown leaf tip is permitted.

Merits

General

- Intense, uniform flower color.
- Flowers free from blemishes.
- Leaves dark green.
- Flowers held above leaves.
- Flowers firm and crisp.
- Proper placement of flower.

Narcissus

- Perfect development of crown and perianth.
- Flower diameter 3-3/4 inches or over.

Tulips

- Flower well-colored.
- Flower not over one-fourth to one-half open.

Faults

General

- Poor flower color.
- Poor foliage color.
- Weak stems.
- Malformed petals.
- Small flowers.
- Poor substance or condition.
- Poor placement.

Narcissus

- Poorly shaped trumpet.
- Reflexed perianth segments.
- Narrow, slender, bending leaves.
- Foliage tips equal to or above tallest point of flower.
- Flower facing distinctly upward.

Tulips

- Very large, weak leaves.
- Flower surrounded by foliage.
- Flowers more than one-half open.
- Flower stem distorted by multiple buds.

Relative Value of Faults

- 10 Injury from insect pests or disease
 - Poor flower condition
 - Malformed flowers
- 9 Torn or damaged flower petals
- 8 Flowers open and showing pollen (Tulip)
 - Stem distortion due to multiple buds (Tulip)
- 7 Deformed foliage
 - Small flower size
 - Weak stems
 - Flowers borne down in foliage
 - Flowers borne upright or nodding (Narcissus)
- 6 Poor placement or crooked stem
 - Poor flower color
 - Immature flowers
- 4 Mechanical damage to foliage

Bulbous Plants, Potted

Tulipa species (tulips) and *Narcissus* species (daffodils, jonquils, and narcissus)

Potted hyacinth (*Hyacinthus*) can be judged using the following general criteria as well.

Judging Considerations

Plant: Tulips and narcissus are grown in 5- to 8-inch azalea or three-quarter flowerpots. The number of bulbs in each pot is determined by size and kind of bulbs being grown. More tulip bulbs are used per pot than narcissus since tulips are generally smaller in size. The bulbs are planted so the top of the bulbs is plainly visible because the bulbs are basal rooting. They are generally planted about a 1/2-inch distance apart with the top and completely filling the pot. Tulips are planted with the flat side of the bulb facing toward the outside of the pot. The first leaf to appear will develop on the flat side of the bulb and produce a series of leaves which will uniformly cover the rim of the pot. Ideally, the leaves and flowers finish at 2 1/2 to 3 1/2 times the height of the flowerpot. The flowers should clear of the foliage and be of a similar height having a flat-top appearance from the side. When viewed from the top, the flowers and foliage are uniformly distributed.



Flower and Stem

Tulip: The flower is large with perfect petal development, uniform, and intense color, free from blotching, streaking, and blemishes. The petals are crisp, firm, and free from signs of age. Flowers are not over one-fourth to one-half open. The stem is strong enough to support the flower and long enough to hold the flower above the tips of the foliage. The flower is placed squarely on the stem. Some cultivars will have multiple buds on the flowering stem. This is not a fault.

Narcissus: The perianth segments are broad, of similar size, flat, overlapping slightly, not reflexed, forming a relatively flat disk. The corona is cylindrical with the base tapered smoothly into the perianth. The edge of the trumpet maybe notched, curled, or entirely recurved. However, notching of the margin should not extend into the body of the trumpet. The longitudinal axis of the trumpet is at right angles to the longitudinal axis of the perianth segments. The size of the corona is proportionate to the size of the perianth and typical of its class, i.e., trumpet, large cup, short cup. The flowers should be firm, crisp, and free from crepiness with intense, uniform color. The flower stem is strong enough to hold the flower erect. The top half of the flower is held above the tallest leaves. The flower is at right angles to the stem or slightly facing upward.

Foliage: The foliage is dark green and an appropriate size for the size and type of bulb. Leaves are free from mechanical cuts and crushing damage. The plants are free of disease, insect, or pest damage; also spray residues, water spotting, and nutritional deficiencies. The vigor of the foliage should indicate cool temperature forcing conditions and minimal stretching (elongation) of the individual leaves.

Merits

General

- Intense, uniform flower color.
- Flowers free from blemishes and true to variety.
- Leaves dark green.
- Flowers held above leaves.
- Flowers firm and crisp.
- Proper placement of flower.
- Bulbs, and subsequent plants, uniformly distributed in and around the flowerpot.
- Bulbs planted at correct depth.

Tulips

- Flowers well-colored.
- Flower not over one-fourth to one-half open.

Narcissus

- Perfect development of crown and perianth.
- Flower diameter 3-3/4 inches or over.
- Flowers facing in all directions.

Faults

General

- Poor flower and/or foliage color.
- Weak stems.
- Malformed petals.
- Small flowers.
- Poor substance or condition of flowers.
- Poor placement of flowers.
- Flowers failing to clear foliage.
- Poor distribution of plants and/or flowers in pot.
- Bulbs planted too shallow or too deep.
- Bulblet with foliage.

Tulips

- Very large, weak leaves.
- Flower surrounded by foliage.
- Flowers more than one-half open.

Narcissus

- Poorly shaped trumpet.
- Reflexed perianth segments.
- Narrow, slender, bending leaves.
- Foliage tips equal to or above tallest of flowers.
- Flowers facing distinctly upward or pendulous.

Relative Value of Faults

- 10 Injury from insect pests or disease
 - Poor flower condition
 - Malformed flowers
- 9 Torn or damaged flower petals
 - Lack of uniform flower maturity
- 8 Flowers open and showing pollen (Tulip)
 - Lack of uniform flower height
 - Poor proportion of plant to pot
 - Asymmetrical flower display, poor facing (Narcissus)
- 7 Deformed foliage
 - Small flower size
 - Weak stems
 - Flowers borne down in foliage
 - Flowers borne upright or pendulous (Narcissus)
- 6 Crooked stems
 - Poor plant and/or flower placement in pot
 - Poor flower color
- 5 Immature flowers
 - Dead or undeveloped bulbs in pot
- 4 Mechanical damage to foliage
- 3 Stretched/elongated foliage
- 2 Foliage from bulblet

Calceolaria

Calceolaria Herbeohybrida group, pocketbook plant

Judging Considerations

Plant: Calceolarias are grown as a single plant centered in a 5- to 6-inch azalea pot or, in a 4-inch pot. Early in development, the calceolaria plant is a rosette with leaves close to the soil and evenly spaced around a central stem. Mature leaves are large and may extend several inches over the edge of the pot. Several upright branching stalks rise above the foliage and support loose clusters of flowers. The overall effect of the blooming plant is round with a plant height of 1 1/2 to 2 times the pot height, and with a diameter of 1 1/2 to 2 times the diameter of the pot.



Generally, flower and bud potential typically equal leaf area and are uniformly distributed. The leaves are well-spaced and uniform in size.

Flowers: Calceolarias are seed propagated and the flowers vary in color, size, and shape. Colors are bright and may be yellow, red, orange, or a mixture of colors. Conspicuous spots of contrasting color are often present on flowers.

The flowers are held upright on stiff stems above the foliage and uniformly distributed over the entire plant. The individual florets typically are at right angles to the stem. Individual florets are typically puffed or slipper-shaped, giving the calceolaria its common name “pocketbook plant.” The first floret in the inflorescence may be tubular, but the presence of such flowers is not considered a serious fault. Some growers remove the tubular florets for a uniform flower display. If flowers are removed, the pedicel is removed neatly so it is not evident.

Individual florets are in prime condition showing no signs of age or blemishes. Color is clear, intense, and uniform. One-half of the flowers are developed at the time of judging. Missing, collapsed, and faded florets usually indicate an aged plant, a moderate to serious fault. Size of florets is not indicative of cultural perfection, although florets should be uniform in size. It is difficult to discount flower size as a consideration when comparing plants in a class. For judging purposes, select the plants for the class of like flower color and plant habit. Flowers of somewhat larger size than typical for a variety is given extra credit, provided the overall plant form is not distorted.

Foliage: Medium to dark green, healthy looking foliage enhances the overall effect of this plant. Regular spacing of leaves around the pots and over the rim of the pot is ideal. Missing leaves or large gaps in the foliage pattern is a fault. Foliage under stress can be light in color (chlorotic) or faded. Leaves may have burned margins and can be stunted or stretched. All these blemishes reduce plant appeal and are faulted according to severity. Plants with long-standing cultural problems, including the presence of insects, disease, and their injuries are more severely faulted than tears or bruises that suggest only temporary carelessness. Plants free of spray residue and insect, disease, or mechanical injury are ideal.

Merits

- Plant neither too large nor small for pot.
- Symmetrical with proper balance of flowers to foliage.
- Flowers evenly spaced, loosely arranged, and well-supported.
- Flower color clear, bright, and uniform.
- One-half of the flowers developed with no signs of overmaturity.
- Medium to dark green foliage extending evenly over edge of the pot.
- Strong, vigorous growth with no weak stems, and no staking required.

Faults

- Plants aged with missing or faded flowers.
- Flowers or foliage damaged from insects, disease, or long-term cultural problems.
- Irregular plant form, asymmetrical, poor placement, missing foliage.
- Too few flowers for plant size.
- Poor proportion.
- Twisted or elongated leaves.
- Mechanical damage to foliage, tearing, bruising.
- Poor grooming, presence of pedicels after flower removal; dead foliage and flowers; dirty; dry soil.
- Flowers non-uniform, faded, tubular, collapsed.

Relative Value of Faults

- 10 Injury from insect pests or disease
Poorly proportioned plant
Lack of symmetry
- 9 Poor flower condition, dried, wilted
- 8 Gaps or holes in the foliage
Gaps or holes in the floral display
- 7 Chlorotic or necrotic foliage
- 6 Too few flowers for plant size
Poor flower color
- 5 Damaged foliage
Lack of uniformity in flower size and color
Spray or water residue
- 4 Plant poorly centered in pot
- 3 Immaturity, too few flowers open
Numerous tubular flowers
- 2 Presence of broken pedicles

Carnation, Cut Standard Flowers

Dianthus caryophyllus

Definition of Terms

Split Calyx: Splitting at junction of calyx lobes due to excess number of petals or other flower parts. The degree of splitting varies from a slight, short separation to a long separation to the base of the calyx with petals extending.

Sleepy Flowers: A condition resulting from physiological and environmental factors such as high temperature, overmaturity, or exposure to ethylene gas. The tips of the flower petals curl toward the center and the whole flower appears cup-shaped or partially closed. Petals lack turgidity.



Disbud: Buds and shoots borne in the axils of the leaves are removed before they become too large. Proper disbudding includes the removal of the pedicels of these buds also. Leaves should not be torn or removed in the process of disbudding.

Judging Considerations

Flower Placement: The plane of the outer petals is at right angles to the stem.

Flower Form: The flower is hemispherical shaped with petals well-placed to form a full, rounded center. Preferably the outer petals are at right angles to the median line of the calyx, forming a relatively flat base on the flower. In some varieties, the outer petals are characteristically lower than a right angle and is not faulted. Optimum stage of openness is the flower approaching maturity with some of the center florets not fully developed.

Flower Petal Arrangement: The petals regularly overlap each other and be of similar size in each ring or row. A flower composed of concentric rings or rows as in the garden forms of *Dianthus* are not desirable. The size and texture of petals varies with variety; however, in a flower of any one variety, the petal size and shape are uniform. No large, irregular voids are present in the face of the flower.

Flower Calyx: The calyx is strong, not split, and of sufficient size to contain all lower petals. The sides of the calyx are ideally nearly parallel or slightly funnel shaped. The bracts at the base closely adhere to the calyx.

Three degrees of splitting are recognized:

1. Slight splitting of the calyx to less than one-half its length, with no resultant flower deformation, is considered a slight fault.
2. Splitting of the calyx down to the base, without flower deformation, is considered a medium fault.
3. Splitting of the calyx to any extent with the protrusion of petals, and a resultant deformation of flower shape, is considered a serious fault.

Size: Flowers are an appropriate size for the cultivar.

Stem: The stem is of sufficient strength to support the flower in an upright position without excessive bending. Stems are straight. Side shoots are neither present, nor evidence of recent or incomplete disbudding.

Color: The color of the flower is at the optimum stage of clarity and brilliance for the variety. Color is even throughout the flower unless the flower is naturally variegated.

Merits

- Hemispherical flower with a relatively flat base.
- Plane of flower at right angles to stem.
- Petals of uniform size and regularly overlapped in even rings or rows.
- Petals firm and of good substance.
- Well formed, strong calyx that is not split.
- Stem strong, straight, with no side shoots or disbuds.
- Leaves of good color and turgidity.

Faults

- Sleepiness or other signs of maturity or post optimum maturity such as dark coloration of petal tips, flaccid petals, dull faded colors.
- Split calyx (see Flower Calyx above):
 - Type 1: slight -less than one-half length of calyx.
 - Type 2: medium, no petals extending.
 - Type 3: serious, petals extending.
- Weak stems.
- Irregularity of petal size and arrangement, resulting in voids on flower faces.
- Insects, disease, or mechanical injury on foliage, flowers, or stems.
- Color not optimum for variety.
- Flower does not open to optimum stage.

Relative Value of Faults

10 Injury from insect pests or disease	Weak stems
9 Sleepiness	5 Spray or water residue
Over-ripe, poor condition, damage	Recent or faulty disbudding
Split calyx, Type 3, poor form	Short or broken stem
8 Voids in flower face, poor form	4 Crooked stems
7 Small flowers	3 Flat flower tops
Poor color for variety	Injured foliage
Cut too tight	1 Outside petals are not in flat plane
6 Split calyx, type 2	Split calyx, type 1
Flower not at right angle to stem	

Carnation, Cut Spray Flowers

Dianthus caryophyllus

Spray or miniature carnations have a cluster of blooms produced by lateral growth, the terminal flower disbudded or intact. The stem is at least 24 inches overall in length. The size of the individual flowers does not exceed 2 1/2 inches in diameter.



Definitions of Terms

Flower Placement: The plane of the outer petals is at right angles to the stem.

Flower Form: The flower is hemispherical shaped with petals well-placed to form a full, rounded center. Preferably the outer petals are at right angles to the median line of the calyx, forming a relatively flat base on the flower. In some varieties, the outer petals are characteristically lower than a right angle and is not faulted. Optimum stage of openness is the flower approaching maturity with some of the center florets not fully developed.

Disbudding: In this class, disbudding is for a different purpose. The terminal flower bud is removed to create a loose spray of flowers. The bud is normally removed at a relatively early stage to make a clean break and to encourage strong stem elongation of the auxiliary flower buds. No calyx remains on the disbudded tip.

Judging Considerations

Flower Placement – A strong but loose spray has four to six flowers and flower buds uniformly distributed along the main stem. At least two of the top flowers are fully opened with the remaining buds showing varying degrees of color.

Form: The entire spray is considered, including size, shape, and placement of flowers.

Flower Petal Arrangement: The petals should regularly overlap each other and be of similar size in each ring or row. A flower composed of concentric rings or rows as in the garden forms of *Dianthus* is not desirable. The size and texture of petals varies with variety; however, in a flower of any one variety, the petal size and shape best be uniform. Large, irregular voids present in the face of the flower is a fault.

Flower Calyx: The calyx is strong, not split, and of sufficient size to contain all lower petals. The sides of the calyx are ideally nearly parallel or slightly funnel shaped. The bracts at the base closely adhere to the calyx.

Three degrees of splitting are recognized:

1. Slight splitting of the calyx to less than one-half its length, with no resultant flower deformation, is considered a slight fault.
2. Splitting of the calyx down to the base, without flower deformation, is considered a medium fault.
3. Splitting of the calyx to any extent with the protrusion of petals, and a resultant deformation of flower shape, is considered a serious fault.

Size: Flowers are an appropriate size for the cultivar.

Stem: The stem has strength to support the flower in an upright position without excessive bending. Stems are straight.

Color: The color of the flower is at the optimum stage of clarity and brilliance for the variety. Color is even throughout the flower unless the flower is naturally variegated.

Merits

- Hemispherical flower with a relatively flat base.
- Plane of flower at right angles to stem.
- Petals of uniform size and regularly overlapped in even rings or rows.
- Petals firm and of good substance.
- Well formed, strong calyx that is not split.
- Stem strong and straight.
- Leaves of good color and turgidity.

Faults

- Sleepiness or other signs of maturity or post optimum maturity such as dark coloration of petal tips, flaccid petals, dull faded colors.
- Split calyx (see Flower Calyx above):
 - Type 1: slight, less than one-half length of calyx.
 - Type 2: medium, no petals extending.
 - Type 3: serious, petals extending.
- Poor spray formation.
- Weak stems.
- Irregularity of petal size and arrangement, resulting in voids on flower faces.
- Insects, disease, or mechanical injury on foliage, flowers, or stems.
- Color not optimum for variety.
- Flower is not open to optimum stage.

Relative Value of Faults

10	Injury from insect pests or disease	5	Too few buds
9	Sleepiness		Flowers not at right angles to stem
	Over-ripe, poor condition, damage		Spray or water residue
	Split calyx, Type 3		Weak stems
8	Spray formation clubby	4	Recent or faulty disbudding
	Spray formation too loose		Short or broken stems
	Lack of uniformity among sprays		Flat topped flower
7	Voids in flower face, poor form	3	Crooked stems
	Poor color for variety		Mechanical injury to foliage
6	Split calyx, Type 2	1	Outside petals are not in flat plane
	Missing flower or bud		Split calyx, Type 1
	Cut too tight		

Chrysanthemum, General Information

Chrysanthemum X morifolium (syn. *Dendranthema X grandiflorum*)

Chrysanthemums are produced as potted plants and cut flowers. Below is information for the potted chrysanthemum, and cut flowers produced as sprays and standards. Regardless of the way the plant is produced, the flowers and inflorescences have the same definitions.

Definition of Terms

Chrysanthemum Flower

What is considered the individual chrysanthemum flower is an inflorescence or may be referred to as a capitulum (capitula, plural). Each capitulum may contain one of two flower types or both flower types: ray flowers and disc flowers.

Ray flowers are asymmetrical with a strap-like or extended corolla which resemble a single petal. The disk flowers are symmetrical, with five small petals. In the daisy, the ray flowers surround the disk flowers.

Chrysanthemums are classified based on the arrangement, presence, and size of ray and disk flowers (the older versus newer terminology, respectively) and are called pompon or button, anemone or duet, single or daisy, and decorative or cushion.

1. **Pompon or Button:** This flower is the smallest type of flower, typically smaller than 1 1/4-inch in diameter. The hemispherical inflorescence has the ray florets evenly spaced and spirally arranged. The center of the flower is mounded, not flat, and circular when viewed from the top. No disk florets should show at full maturity.
2. **Anemone or Duet:** There are two distinct types of florets. The one to five rows of outer ray florets are arranged in a flat plane and overlapping at regular intervals. The tubular disk florets are tightly arranged to form a prominent cushion in the center and are usually a different color from the rays. The flower is circular from a top view.
3. **Single or Daisy:** Outer ray florets radiate from a close-cropped group of yellow or brown disc florets. The one to five rows of ray florets are in a flat plane, evenly arranged, and overlapping at regular intervals. The simple disk florets are conspicuous and arranged in a tight, flat cluster in the center, and is circular when viewed from above.
4. **Decorative or Cushion:** The inflorescence is greater than 1 1/2-inch in diameter and has no eye (as in the single or daisy). The outer ray floret is evenly arranged in a flat plane and overlapping at regular intervals. The center ray florets gradually become shorter than those in the outer rows as they approach the center of the inflorescence. Few, if any, disk florets show at full maturity and is circular when viewed from above.

Crown Bud

A crown bud forms early, usually fails to develop, and is surrounded by vegetative shoots. Morphologically it is no different than a terminal bud except that development is arrested by an environmental factor such as high temperatures.

Terminal Bud

A terminal bud forms under short day conditions and is surrounded by other flower buds. It develops normally into a mature flower usually near the same level as surrounding flowers.

Spray Flowers (Potted and Cut)

Terminal Spray: The terminal bud is surrounded by flower buds. Peduncles (the main stem of the inflorescence) are not branched.

Crown Spray: The terminal bud is surrounded by vegetative shoots. Peduncles may be branched. The spray type is considered poor if the terminal flower is noticeably below the level of the other flowers.

Clubby Spray: The lateral flowering pedicels are short, forming a tight, elongated, poor spray.

Standard Flowers

Typically cut flower cultivars recommended to be grown with one flower per stem. With a standard flower, the lateral buds are removed during production resulting in one very large terminal flower.

Faults

Shattering is the detachment of ray florets

Promiscuous ray arrangement is when ray florets are irregularly oriented or massed together in a disordered fashion. Ray florets may simply be out of place which destroys the geometric form of the composite flower.

Chrysanthemum, Cut Spray Flowers

Chrysanthemum X morifolium (syn. *Dendranthema X grandiflorum*)

Judging Considerations

Spray Formation: The arrangement of flowers in the spray will vary with variety from poor to good. Undesirable spray types are crown, clubby, or loose.

A terminal spray is desirable. The flowers are borne in a flat or slightly convex plane so that all flowers are visible to fullest advantage. The center flower of each spray is the most open with the other flowers progressively smaller and less mature from the center of the spray outward. The center bud may or may not be present; if absent, early removal provides for an inconspicuous pedicel stub; no penalty is assessed against center bud removal if done properly. Flowers or buds developing below the spray, and which do not contribute to the spray, normally are removed early and are not obvious. Broken pedicels should not be present.

Individual Flower Form (See Definitions under Chrysanthemum, General Information)

1. Pompon or Button
2. Anemone or Duet
3. Single or Daisy
4. Decorative or Cushion

Foliage: The leaves are turgid, dark green, and of good substance with no evidence of insect, disease, mechanical damage, nutritional deficiency, or improper water relations during growth. The presence of spray or water residue is a fault.

Stem: The stem is straight, and strong enough to hold the chrysanthemum spray upright. There is no evidence of insect, disease, or mechanical damage.

Flower Color: Flower color is typical of the cultivar with no evidence of fading, purpling, or bronzing. The presence of pollen or purpling of white cultivars or bronzing of yellow cultivars, is an indication of overmaturity.

Merits

- Good spray formation.
- Well-shaped and good-colored inflorescences.
- Flowers opening progressively from center of spray outward.
- Foliage dark green and turgid.
- Strong, straight stem.

Faults

- Poor spray formation.



- Clubby.
- Too loose.
- Irregular.
- Crown spray.
- Many flowers not in main spray.
- Faded, purpled, or bronzed flowers.
- Damage on flowers, foliage, or stems.
- Light green foliage.
- Weak or crooked stem.
- Broken pedicels.
- Flowers in poor condition, too open.
- Flowers too tight.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poor spray formation
 - Overmature inflorescence
- 8 Presence of broken pedicels
 - Lack of uniformity among sprays
 - Poor order of opening
 - Poor flower condition
- 7 Cut too tight
 - Lack of floriferousness
 - Foliage too small or lacking vigor
- 6 Weak stems
 - Missing or wilting foliage
- 5 Spray or water residue
 - Presence of flowers or buds along stem
 - Foliage blemished or off color
 - Crooked Stem
- 3 Crooked peduncles
 - Mechanical injury to foliage
 - Blemishes on individual petals
- 2 Recent or faulty removal of center bud or laterals

Chrysanthemum, Cut Standard Flowers

Chrysanthemum X morifolium (syn.
Dendranthema X grandiflorum)

(Japanese, Hairy, Anemone, and other unusual forms are not considered.)

Judging Considerations

Flower Size: The size of a variety will vary with the number of flowers permitted to mature on the plant. The largest size consistent with good quality is desired.

Flower Form: Standard chrysanthemums are fully double, globular, with the ray petals regularly distributed to produce a firm, closely overlapping surface, i.e., no promiscuous rays. Flowering on a crown bud or a terminal bud may account for considerable variation in flower type within a given cultivar. The crown is preferable for some, while the terminal produces the better flowers for others.

Flower Maturity: The flowers are considered at prime condition when some center florets are not fully developed. Blooms mature enough to show fully developed ray flowers in the center or immature to the point of greenness are equally faulted.

Flower Color: The color is clear, bright, intense, and typical of the cultivar. Off-colored ray florets, streaked, and/or faded florets are faults.

Stem: The horizontal axis of the flower head should be perpendicular to the vertical axis of the stem. The stem is in proportion to the flower it bears and long, strong, and straight. Disbudding done early enough so that the wounds are healed and cleanly so not to leave stubs.

Foliage: The foliage is typical of the cultivar, dark green, free from mechanical, insect or disease, free from water or spray residue, and show no evidence of nutritional disorders.

Merits

- Large size, consistent with quality.
- Double, globular flowers.
- Flower head placed squarely on top of the stem.
- Flower approaching full maturity with nearly developed center.
- Stem long, strong, and straight.
- Neat, early disbudding.
- No side shoots.
- Clean, intense color.



- Dark green, healthy foliage.

Faults

- Flowers either overmature or immature.
- Color faded, dull, or off-color due to age.
- Flower form lopsided, open-centered, or has promiscuous ray arrangement.
- Stem too weak or too heavy.
- Presence of side shoots.
- Recent of faulty disbudding as indicated by stubs showing.
- Foliage too small or lacking vigor.
- Foliage too small or lacking vigor.
- Wilting of flower, foliage, or stem.
- Evidence of nutritional deficiencies.
- Mechanical injury to flower-and leaves.
- Shattered ray florets.
- Missing foliage.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Overmature or immature flower
Poor flower condition
Falling ray florets
- 8 Promiscuous ray arrangement
Poor flower form
- 7 Presence of side shoots
Poor flower placement on the stem
Small flower size
Foliage too small or lacking vigor
- 6 Chlorotic foliage
Off colored flowers
Missing or wilting foliage
Weak or thin stem
- 4 Recent or faulty disbudding
Spray or water residue on foliage
Crooked stem
Blemishes on flowers
- 3 Mechanical injury to foliage
- 1 Off colored florets

Chrysanthemum, Potted

Chrysanthemum X morifolium (syn. *Dendranthema X grandiflorum*)

Definitions of Terms

Plants: As used in commercial practice, a plant shall consist of one to eight individual plants grown in a single container to produce the effect of one plant. For contest purposes, each pot must contain the same number of plants.



Judging Considerations

Proportion between Plant and Pot: There should be good balance between the size of the plant and pot, and the plant is not so large as to be top heavy. The pot should be full and not leggy (tall, spindly stems). The shape of the plant will vary according to variety and the number of individual plants composing the specimen. A quality specimen is symmetrical, compact, foliage to the base, slightly rounded head, and maximum distribution of the flowers resulting in a good appearance from all sides and appear circular when viewed from above.

Foliage: The foliage exhibits good color, giving no evidence of nutritional deficiencies, disease, and/or insect damage, spray residues and/or mechanical injury. In addition, aged foliage at the base of the stem is at the minimum, and dead or malformed leaves were removed.

Stems: The stems are uniform length and well-spaced, contributing to the shape of the plant and the floral display. They are strong enough to support the flower or floral spray, Willowy or weak stems which require staking are either varietal faults or indicate poor cultural methods.

Flowers: The flowers are uniform in size and development. The desired stage of development is that approaching full maturity without showing an open center. Hard, green centers, mechanical damage due to poor handling, careless or poorly timed disbudding are faults, as are evidence of spray residues or injury by insects or disease. There should be no evidence of recent or incomplete disbudding. The individual flowers are as large as varietal characteristics will permit. The color is fresh, bright, and true to the variety without evidence of fading or browning of the petal edges.

Floriferousness refers not only to the number of flowers in good condition at the time of judging, displayed by the specimen, but also to the effect of the flowers. A smaller number of flowers so spaced as to permit their maximum development without crowding is more desirable than many flowers crowded into a tight, confused floral display.

Merits

- Compact, symmetrical plants, 1 1/2 to 2 times the height of the pot.
- Foliage dark green and turgid.
- Floral display slightly rounded.
- Individual flowers uniform in development, well-spaced, not crowded, well-colored.
- Stems strong enough to hold flowers.

Faults

- Poor floral display:
 - Too crowded
 - Too loose
 - Irregular level of flowers
 - Voids resulting in lack of symmetry
- Faded flowers.
- Poor development of centers or lopsidedness of individual flowers or sprays.
- Damage to flowers, stems, and foliage by disease or insects.
- Mechanical injury to flowers, stems, and foliage.
- Weak or willowy stems.
- Legginess of plant.
- Careless or poorly timed disbudding.
- Lack of uniform development of stem and flower.
- Failure to disbud.

Relative Value of Faults

- 10 Injury from insects or disease
Poor proportion of plant to pot
- 9 Poor condition of flowers and foliage
Poor plant shape
Overmaturity of flowers
- 8 Presence of broken peduncles
- 7 Poor floral display (crowded, poor distribution about plant)
Lack of floriferousness
Non-uniform flower development
Plant too immature
- 6 Poor spray or flower development (lopsided, asymmetrical centers)
Leggy plants
- 5 Spray or water residue
- 3 Recent or faulty disbudding
- 1 Minor mechanical damage to foliage

Cineraria

Pericallis hybrida (formerly *Cineraria hybrida*)

Judging Considerations

Plant. Cineraria is grown one plant, properly centered, per 5- or 6-inch azalea pot. Dwarf and standard size varieties are available; each type should be grown in a pot that is in proportion to the size of the plant. The plant exhibits symmetrical and vigorous with evenly spaced leaves on short petioles. The overall shape of the plant with flowers is hemispherical. The flowers are daisy-like, displayed in a large dome-shaped cluster above the foliage with no apparent break between flowers and leaves.



Flowers. Cineraria is seed grown so flower color and size will vary from plant to plant. In all cases, the best flower color is bright and clear with no streaking, blotching, running, or fading. It is best to have a class with one flower type and color, so judges do not make a choice on color preference.

Cineraria flowers like other composites. The center part of the flower spray opens before the outside flowers. Since cineraria is rarely disbudded, there will be flowers in all stages of development. A vigorous flower display is composed of one highly branched inflorescence and may almost cover the foliage with blooms. The entire inflorescence is loosely compact, having no gaping holes and no overlapping flowers. Loose, airy plants with weak flower stems are not as desirable as compact plants.

Quality plants exhibit inflorescences without foliage emerging through the inflorescence. Flowers should be in prime condition, showing no sign of age, blemishes, or mechanical injury. Aging flowers will have faded ray florets, and disk florets shedding bright yellow pollen that becomes dry and off colored with age.

Top quality plants are sold 1/3 to 1/2 of the flowers open. Since the cineraria are an annual to be discarded after bloom, overmature plants are a major fault.

Foliage. The foliage of cineraria is large and dark green. The largest leaves are at the base of the plant, with smaller leaves subtending the flowers. Large and small leaves are evenly spaced around the plant for best effect. Dried leaf edges and light-colored foliage indicate improper moisture or fertility levels or may be chemical damage. These blemishes, along with insect or disease damage, reflect poor culture and are faulted according to their severity. Mechanical damage such as tearing, creasing, and bruising do not suggest long-term cultural problems and are not heavily faulted.

Merits

- Proper proportion of plant to pot (see *Calceolaria*).
- Proper balance of flowers to foliage.
- Symmetrical with even distribution of foliage and flowers.

- Open flowers throughout the inflorescence; spray 1/3 to 1/2 open.
- Flowers supported upright by strong peduncles.
- Flower color uniform throughout the inflorescence.
- Dark green foliage regularly distributed throughout the plant.
- Foliage and flowers are blemish and injury free.

Faults

- Plant too large for container.
- Plant irregularly shaped or one-sided.
- Too few flowers for amount of foliage.
- Flowers overripe: fading, wilting, shedding pollen, falling off.
- Stretched, drooping foliage.
- Spray, disease, insect, or mechanical injury to flowers or foliage.
- Uneven distribution of flowers

Relative Value of Faults

- 10 Injury from insects, pests, or disease
Lack of symmetry
- 9 Poorly proportioned plant
Open inflorescence
Flowers on weak peduncles
- 8 Gaps in floral display
Poor flower condition
Gaps in foliage effect
Too few flowers open
- 7 Stretched leaf petioles
Drooping foliage
Uneven distribution of flowers
- 6 Dried leaf margins
Chlorotic foliage
Immaturity
- 4 Mechanical injury to foliage
Spray or water residue on foliage

Color Potted Plants

A color pot is any flowering plant grown to maturity in a 4-, 5-, or 6-inch pot. The pot should contain one or more well branched plants with the pot size determining the finished plant size. Ranunculus, impatiens, begonias, petunia, marigold, and ageratum are common plants used for color pots.

Perennial plants such as day lilies or bleeding hearts can also be judged, but plant considerations may differ. Perennial plants may be grown in nursery containers, they may not be continuously in flower, and they may be more irregular in growth habit. Consequently, judging considerations may differ from those used in this chapter to describe annual plants.

Judging Considerations

Plant: A flowering plant properly proportioned to its pot will be roughly twice the size of the pot and is stable. The plant is symmetrical and well branched; the flowers and expanding buds roughly equal the leaf area. No obvious breaks or spaces occur between flowers and foliage. The flowers are held on strong stems. The high-quality plant has foliage to the rim of the pot and the foliage is a clear, healthy color. Flowers and leaves are uniform in color, size, shape, and distribution according to variety and species.

Floriferousness and cultural perfection carry 70 percent of the weight when judging color pots. The remaining 30 percent includes plant and flower size and foliage quality. Plants are groomed to eliminate dead leaves and flowers, broken stems, and soil debris. Obvious pinching to repair damage or induce branching is not acceptable.

Flowers: Flowers make an abundant, showy display since quantity and quality of the flowers is more important than foliage characteristics. The more flowers, the better, provided they are well distributed, uncrowded, and in good condition. Flower color is clean, intense, and typical for variety and species. Flowers are free of blemishes from handling, cultural stress, insects, or disease.

Foliage: Foliage is abundant, dark green and free from spray residue and insect and disease injury. Mechanical injury is a minor fault, but chlorosis, marginal necrosis, and leaf loss from cultural stress are serious faults.

Merits

- Plant symmetrical and well placed in pot.
- Plant properly proportioned to pot.
- Foliage to rim of pot.
- Abundant flowers in prime condition.
- Foliage dark green and free from injury.
- Flowers well distributed and uniform in color, size, and shape.



- Flowers borne above foliage on strong stems.
- Clear, intense flower color typical of variety.

Faults

- Lack of symmetry.
- Plant too large or small for pot.
- Foliage chlorotic, injured by disease, insects, cultural stress, or handling.
- Flowers faded, blemished, or in otherwise poor condition.
- Sparse flowering.
- Flowering down in foliage.
- Weak stems.
- Sparse foliage.

Relative Value of Faults

- 10 Injury from insects, pests, or disease
- 9 Poor symmetry
Malformation due to improper growth regulator use
- 8 Poor proportion of plant to pot
Poor shape or form for variety of plant
Leggy
- 7 Sparse flowering
Lack bud potential
- 6 Flowers in poor condition, overmature, faded, diseased
Foliage chlorotic or necrotic
- 5 Flowers lack uniformity in color, size, shape, or distribution
- 4 Weak stems
Centering of plant in pot
- 3 Mechanical injury to foliage
Immaturity of flowers
- 2 Spray residues on foliage

Cyclamen

Cyclamen persicum

Judging Considerations

Plant: A well-grown cyclamen plant consists of a cluster of leaves originating from a single, dark red corm at the soil surface. The plant is hemispherical and uniformly full. None of the outside ring of leaves fall below the pot rim. The flowers are a uniform level above the leaves.



Flowers: Flowers and advanced flower buds are reasonably abundant and loosely clustered in the center of the plant in a symmetrical or ring pattern. For optimal effect, 1/3 to 1/2 of the flowers are fully open and 1/2 to 2/3 of the flower buds are in advanced stages of development. The flower stems must be strong enough to hold the flowers erect above the leaves. Flowers at an appropriate distance above the foliage (may vary by cultivar) provide the proper aesthetic effect. The flowers are bright, clear, intense, and uniform or typical for the cultivar. The flowers are without injury, streaking, or drying of edges, but a dark colored “eye” is normal for some cultivars. Flower petals are reflexed to give the typical “windblown” effect. Single and double flowered plants are staged in separate classes.

Foliage: The foliage of cyclamen is variable in size and pattern on the upper surface, however, specimens used in the class are as uniform as possible. The leaves have a rich, often dark green color with varying degrees and patterns of silvery green markings on the upper surface. The true indication of cultural perfection is firm, stocky growth without excessive stretch in the leaf petioles. A quality plant can support itself if turned upside down and set on a flat surface. Dried leaf edges, yellowish or pale colored leaves and soft, limp, or drooping petioles indicate improper moisture, fertility, or possibly temperature levels. Mechanical injury to the leaves is possible because of their tendency toward brittleness. The presence of spray or water residue on the foliage is also considered a fault.

Merits

- Proper proportion of plant to pot.
- Symmetric plant form.
- Flowers and flower buds uniformly distributed in a loose cluster in the center of the plant.
- Optimal floral effect with 1/3 to 1/2 of flowers open and 1/2 to 2/3 in the advanced bud stage.
- Flowers carried on straight, erect “stems” at an appropriate level above the foliage.
- Fresh, clear, bright, intense flower color without streaking or blotching and free of injury or drying of petal edges.
- Uniform and abundant dark green leaves which are evenly distributed.
- Plant firm and turgid.
- Minimum of 6 open flowers, total of 12 to 18 flowers and buds.

Faults

- Plant too large or too small for container.

- Plant asymmetrical, misshapen, or floppy.
- Irregular, malformed, or damaged flowers.
- Flower stems are weak, excessively long, or too short.
- Too few flowers and/or no advanced flower buds present.
- Overmature flowers.
- Small leaves or stretched petioles.
- Too few leaves.
- Foliage blemished by mechanical injury, insects, disease, spray residue, or improper nutrition.
- Stubs of removed flowers or leaves present.
- Multiple plants in the container.

Relative Value of Faults

- 10 Injury from insect pests or disease
Multiple plants in container
Lack of plant symmetry
- 9 Plant too small
Stretched leaf petioles, sparse foliage
- 8 Misshapen or drooping foliage
- 7 Weak or excessively long or short flower stalks
Too few flower buds or flowers present on plant
- 6 Flowers asymmetrically distributed around plant
Flowers densely clustered around plant
Flowers undersized, malformed, off color, or not reflexed
Oversized flowers
- 5 Plant too large
- 4 Poor flower condition
Blemishes on foliage
Too few flowers open
Flowers not in one plane (level)
- 3 Spray or water residue on foliage and/or flowers
Presence of leaf and/or flower stubs

Easter Lily

Lilium longiflorum

Hybrid lilies such as Asiatic or Orientals can be judged using the information in this chapter, but hybrid lilies generally are grown with more than one bulb in a pot. These plants develop and flower uniformly, nonetheless. Use the judging criteria found in the bulbous plant chapter as a guide.



Judging Consideration

Plant: The typical Easter lily is one of the cultivars of *Lilium longiflorum* with ‘Nellie White’ being the most common cultivar grown.

The preferred plant is from a single-nosed bulb (producing one flowering stalk) which is usually planted in a 5- or 6-inch standard pot producing a symmetrical, vigorous plant, attaining a preferred height of 12 to 18 inches above the pot rim and centered in the pot.

Flowers: The number of flowers and buds present is an important consideration of plant value in Easter lilies. An acceptable Easter lily plant has from four to eight flowers and buds. At the time of judging, 1/3 to 1/2 of the potential flowers are fully open and in prime condition without blemishes or showing any sign of age. Flowers are of sufficient size and proper form for the cultivar. The anthers are removed as soon as the bud opens to prevent pollen shed on the trumpet. The flowers and flower buds are at the top of the stem to form a uniform, regular pattern in all directions of the compass.

Foliage: Leaves are present from the top of the stem to the top of the pot with large, glossy, deep green foliage and free from blemish and spray residue. Lack of foliage at the pot indicates improper forcing temperatures, nutrition, and general culture. Presence of tip burn indicates improper nutrition and water relations. Excessively curled leaves are a result of improper use of temperature and is faulted.

Merits

- Single-nosed bulb, one stem per pot.
- Four to eight or more flower buds and flowers per plant.
- Height of plant in scale with pot, usually a height of 12 to 18 inches above the pot.
- Flowers and buds distributed in an equal radial pattern at the top of flower stem.
- Flowers well-formed and of sufficient size.
- Dark, glossy green foliage.
- Blemish-free foliage.
- One-third to one-half of the flowers in full bloom.
- Upright, sturdy stem centered in the pot.

Faults

- More than one growing stem per pot.
- Height of plant too tall or extremely short.
- Less than four flowers and buds per pot.

- Flowers and buds improperly formed or injured.
- Flowers in poor condition.
- Flowers and buds asymmetrically arranged on stem.
- Sparse, light green foliage.
- Foliage missing or yellowed near rim of pot.
- Excessively curled leaves.
- Tip burn or leaf scorch on foliage.
- Crooked stem.
- Excessively curled leaf tips.
- Pollen smeared on flower petals.
- Old flowers removed.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poorly proportioned plant
- 8 Flowers overmature
- 7 Low flower and bud count
 - Poor flower distribution (not symmetrical)
 - Torn, blasted, or misshapen flower or bud
- 6 Sparse foliage
 - Pale foliage
 - Tip-burn on foliage
 - Excessive curling of leaf tips.
- 5 Too few flowers open
 - Old flowers removed
 - Weak stem
 - Lack of foliage at rim of pot
- 4 Crooked or leaning stem
 - Plant not centered in pot
- 3 Pollen smeared flower
 - More than one flower stem or bulb per pot

Exacum (Persian Violet)

Exacum affine

Judging Considerations

Plant: *Exacum affine*, the Persian violet or exacum, is commercially grown from either seed or cuttings. They generally are grown in 4- to 6-inch pots with one plant centered in the pot, or for faster commercial production three plants equally spaced per 6-inch pot. There are both dwarf and standard sized plants and plants typically are grown in a pot in proportion to their size. The plant is symmetrical, erect, and vigorous in appearance. Due to its opposite leaved, two-ranked growth habit, exacum appears somewhat mounded in appearance when seen from the side, and when viewed from above it should be symmetrical and somewhat cross-shaped. Exacum is a freely branching plant and with an upright growth habit displaying its flowers. While seedling variation is expected, avoiding excessively compact plants that are out of proportion to its pot or so tall and loose as to be weak and too open in appearance is possible.



Flowers: The abundant flowers in prime condition are borne uniformly over the entire plant. Having flowers in all stages of development from buds to open flowers is ideal. Inconspicuous removal of overmatured or faded flowers is permitted.

Flower Color and Size: Exacum flowers range in color from off-white to dark blue and typically remain uniform in color on the individual plants. The flowers are fragrant and up to 1/2-inch in size. Faded flowers are a fault.

Foliage: The abundant foliage, covering the entire plate, is glossy and medium to dark green in color. Plants free from blemishes, residues, mechanical damage, disease or pest damage, and nutritional problems. Extreme puckering or cupping of the foliage is a serious fault.

Merits

- Symmetrical, well-branched plant.
- Abundant flowers and buds, borne uniformly over entire plant.
- Lush green, abundant foliage.
- Proper proportion of plant to pot.
- Strong, erect plant in center of pot or uniformly positioned if three plants per pot.
- Foliage and flowers free from blemishes and properly shaped.
- No evidence of disease and insect/mite or mechanical damage.
- Good uniform flower color, no faded flowers.

Faults

- Injury from disease, insects, or mites.
- Uneven growth habit, not symmetrical.
- Spindly, open growth.
- Uneven flower and flower bud development and/or poor flower display.
- Weak plant, wobbly in pot.
- Poor proportion of plant to pot.

- Faded flowers or nonuniform color.
- Off-color foliage, sparse foliage, misshapen foliage.
- Blemished flowers and/or foliage.
- Plant not centered in pot.
- Mechanical damage, broken flower stalks, etc.
- Residue on foliage or flowers.

Relative Value of Faults

- 10 Injury from insects and disease
Lack of symmetry
- 9 Improper plant shape
Uneven flower or flower bud development
- 8 Sparse flower or flower bud development
- 7 Weak plant
Poor proportion of plant to pot
- 6 Misshapen foliage
- 5 Off-colored foliage
Sparse foliage
- 4 Plant not centered in pot
Faded flowers or non-uniform color
- 3 Mechanical damage
- 2 Blemished flowers and/or foliage
- 1 Residue on flowers or foliage

Foliage Plants

Definitions of Terms

Foliage Plant: Any plant produced for the beauty of its foliage and shape.

Size: Size is only a relative matter since some specimens growing in their native habitat may reach 100 feet in height (*Ficus elastica*) Plants grown for table display should be in proportion to their intended use. Plants grown as large specimens for floor display may be considerably larger.



Judging Considerations

Cultural Perfection: The physical appearance of the plant reflects the skill of the grower. The size of the plant is in proper balance with the container. A plant which is either too small or too large for its container is not a good commercial specimen. The plant which is too small for its container is more severely faulted than the plant which is too large. Some foliage plant species may have flowers at the time of judging; this is ordinarily a minor fault. In most foliage plant species, the flowers produced are small, inconspicuous, and obscured by the foliage. In a few cases, (such as coleus or Swedish ivy) the presence of large conspicuous flowers or inflorescences would actually be considered a fault, because these flowers or inflorescences are ordinarily pinched off when they first appear to keep plant in lush vegetative growth.

Plant Form

Upright Types: The shape of the plant will vary according to species and variety. In general, plants need to display symmetry, have ample foliage from the top of the pot to its full height and a full appearance from all sides. This may not be true for some types such as *Monstera deliciosa* (split leaf philodendron, Swiss cheese plant) and others trained on poles of fern or bark. The stem or stems are sufficient in size and strength to properly support the plant from ground level to top. Special support such as bamboo, osmunda fern pole, sphagnum, is acceptable if the plant needs and is enhanced by such a support.

Height of plants in pots with multiple stems such as Dracaenas, may be intentionally stair-stepped (stems at different heights); other specimens of the same species and cultivar may be grown multi-stemmed at the same height. Regardless, specimens used in the class should be approximately the same height, the same characteristics (multi-stemmed stair-stepped or same height), and uniform stage of development.

Trailing Types: Certain foliage plants such as English ivy (*Hedera helix*) and heart-leaf philodendron (*Philodendron oxycardium*) have a trailing habit of growth. The physical appearance of the plants grown in hanging containers is in proper balance, symmetry, and harmony between the size and shape of the container and the growing plants. The plant displays the natural form of the species and variety without gaps in the foliage cover and uniformly drapes over the edge of the container cascading to a length that is in scale with the container.

Foliage: Since the leaves, in general, are the most effective part of the plant, they must be given considerable attention and weight. Plants display clean foliage with good color and sheen, having

no evidence of nutritional deficiencies, spray, or water residues and insect, disease, or mechanical injury. The size and number of leaves are appropriate to the variety or kind of plant and fully covers the plant without leaving any gaps in the foliage cover. The foliage gives the appearance of continued and vigorous growth. Foliage polishes may be used to clean and brighten the leaves.

Merits

- Correct form for variety of plant.
- Symmetry of form.
- Proper proportion of plant to pot.
- Strong and proportionate stem or stems.
- Proper cascading or trailing of foliage.
- Abundant glossy, green foliage.
- Bright, clear, and vivid colored foliage.
- Foliage free of insects and/or disease damage.
- Abundant, vigorous foliage free from residues and mechanical damage.
- Support pole of good character and scale.

Faults

- Poor form for the variety of plant.
- Lack of symmetry.
- Plant too large or too small for pot.
- Weak stem or stems.
- Sparse foliage.
- Foliage dull.
- Blemished foliage.
- Water spots, spray residues, disease, or insect damage present.
- Improper support.
- Excessive flowers present.
- Improper development of multiple stem plants
 - uneven development in height of table
 - improper variation in height
 - lack of proper tiering of floor specimen

Relative Value of Faults

10	Injury from insect pests or disease Poor shape for the variety of plant	Blemished foliage Gaps in foliage cover
9	Lack of symmetry Poor facing of round plants Sparse foliage Improper development of multiple stem plant	7 Weak stems 6 Soiled or dirty foliage 5 Mechanical injury to foliage
8	Plant too small for pot Plant too large for the pot	4 Improper support 3 Leaves smaller than normal for variety Presence of flowers

Freesia, Cut Flowers

Freesia cultivars

Definition of Terms

Scape: A scape is a leafless, flowering stalk (also called the peduncle).

Lateral Spike: Some scapes, depending upon the variety, will develop lateral scapes that are also called spikes to distinguish from the main scape.

Thumbing: The term used to describe the excessive space between the first and second florets due to high temperatures during floral initiation.

Angle in the scape: The floral scape bends where the first floret is attached so that the florets are held at a 90-degree angle to the scape below. A completely vertical scape is caused by high temperatures during production and is undesirable.

Judging Considerations

Florets: The petals are turgid, not showing signs of age or damage. The florets display good, uniform flower color typical of the cultivar without fading or streaking. One or two florets are fully opened. A top-quality scape will have ten or more florets. The scape bends where the first floret is attached to the floral scape, so the florets are held at a 90-degree angle to the scape.

Floret Spacing: The florets are evenly spaced without any apparent spaces between them. Thumbing, if present, is an indication of cultural imperfection.

Floret Facing: All florets face approximately upward.

Floral Scape: The floral scape is straight and strong enough to support the florets.

Lateral Spikes: If lateral spikes are present, they are strong with a minimum of 4 to 5 florets. The absence of lateral spikes does not indicate poor quality of the primary scape.

Merits

- Ten or more florets per scape.
- One or two florets fully opened.
- Strong, straight scape that holds the florets at approximately a 90-degree angle to the subtending scape.
- If present, lateral spikes are strong with a minimum of 4 to 5 florets.
- Florets evenly spaced on the scape / spike and facing in an upward direction.

Faults

- Florets show signs of age including flaccid (limp) and discolored.



- More than two florets opened.
- Florets facing different directions.
- Florets unevenly spaced.
- Thumbing.
- Crooked and/or weak scape.
- Too few florets on scapes.
- Weak lateral spikes.
- Florets too tight.
- Deformities, misshapen flowers
- Crooked flower scapes; florets not in a straight line

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poor condition or overmaturity
 - Tip missing
 - Deformities, misshapen flowers
- 8 Poor spacing
 - Thumbing
 - Missing floret
- 7 Poor facing
 - Too few florets in scape
 - Greater than 90-degree angle on the scape
 - Crooked flower scapes; florets not in a straight line
- 6 Weak scapes
 - Off-colored florets
- 5 Mechanical damage to florets
 - Cut too tight
- 4 Weak laterals (if present)
 - Crooked scape

Geranium

Pelargonium species and cultivars

Judging Considerations

Plant: Geraniums are usually classified under three categories or types:

1. *Pelargonium X hortorum*, the garden or zonal geranium.
2. *Pelargonium X domesticum*, the Martha (Lady) Washington geranium.
3. *Pelargonium X peltatum*, the trailing ivy geranium.

In all cases, the plant are symmetrical and vigorous. The plant is in proper proportion to the container and looks stable with the plant about 1 1/2 to 2 times the height of the pot. Plants are grouped for judging by size: 4-inch pot, and over 4-inch pot; and then grouped by growth habit:

- a. Self-branching.
- b. Pinched.
- c. Trailing (ivy types).



Flowers

***Pelargonium X hortorum* and *P. peltatum*:** Flowers make an abundant, showy display with at least 3 to 6 inflorescences per plant with one-third of the inflorescences presenting open florets. The inflorescence terminates flowers arranged as a sphere (flower head). The flower heads extend at least two inches above the foliage with bud clusters coming out in a symmetrical pattern from the plant. The peduncles (inflorescence stem) are not excessively elongated giving a naked stem appearance, nor are they so short as to cause the flowers to be hidden by the foliage.

The individual florets in the inflorescence are uniform, with no blemishes nor signs of aging. At least 25 percent of the florets within an inflorescence are open. Select specimens that are all single or double flowered in the same color. Color intensity of the variety is important being clear, intense, and uniform.

***P. X domesticum*:** The flowering habit of this plant is different from the zonal and ivy geraniums. Flowering is controlled environmentally due to the grower providing the correct sequence of environmental conditions. Therefore, plant quality is indicated by synchronous flowering of all reproductive buds. Correct stage of judging is when one-half of the florets are open within an inflorescence with all inflorescences being uniform.

Foliage: The foliage covers the plant and hides the stems. Too few leaves are considered sparse foliage, while small leaves, although plentiful, result in poor plant coverage. The foliage consists of lustrous dark green leaves free from spray residue, insect and disease pests, or mechanical injury. Zonal markings in the leaves with reddish color and rings are a varietal characteristic and is not faulted unless irregular in design.

Merits

- Flower and flower bud potential provide a symmetrical floriferous display.
- Uniformity of individual flowers.
- Proper size of leaves.
- Proper proportion of plant to pot.
- Abundant dark green foliage.
- Flowers borne above the foliage.
- Symmetrical plant form, with properly placed lateral branches.
- Free of insects and disease.
- Clear, intense flower color.

Faults

- Lack of symmetry.
- Elongated flower pedicels.
- Faded flowers.
- Flowers hidden by foliage.
- Plant in poor proportion to pot, too short or too tall.
- Poor foliage (chlorotic, spray residue, presence of disease, especially botrytis).
- Individual flowers are not uniform in size.
- Single and double flowered plants in same class (If mixed in class, the one plant that does not match is faulted the greatest amount.)
- Irregular zonal markings on foliage.
- Flowers water spotted.

Relative Value of Faults

- | | | | |
|----|---|---|---|
| 10 | Injury from insect pests or disease
Poor plant shape | 6 | Stretched petioles
Sparse foliage
Water spotted flowers
Immature inflorescences and florets |
| 9 | Lack of symmetry
Poor ratio of flowers to foliage
Plant too small for pot | 5 | Faded or damaged inflorescences (<i>P. X domesticum</i>)
Poor foliage condition
Poor foliage coverage |
| 8 | Plant too large for pot
Insufficient number of flowers and flower bud potential (excluding <i>P. X domesticum</i>)
Elongated peduncles
Flowers failing to clear foliage (short peduncles)
Overmaturity of flowers (<i>P. X domesticum</i>) | 4 | Spray or water residue on plant
Improper height, elongated stems |
| 7 | Flowers poorly distributed around plant | 2 | Lack of uniformity in individual flower size
Irregular zonal markings
Faded or damaged florets |

Gerbera, Cut Flowers

Gerbera jamesonii

Special Note: Potted Gerbera are judged based on the African Violet Plant criteria. This chapter deals exclusively with fresh cut Gerbera flowers.

Judging Considerations

Flower Maturity: For maximum vase life single inflorescences are harvested when two rows of stamens are mature. Wilting of stems just below the inflorescence may occur if the stamens are too immature (less than 2 rows showing). Flowers harvested when showing more than 2 rows of stamens will not last as long as those picked at the proper stage. Anemone and decorative inflorescences do not follow this rule.

Inflorescence Form

Anemone: The one to five rows of outer ray florets are arranged in a flat plane and overlap at regular intervals. The tubular disk florets form a tightly arranged prominent cushion in the center. The inflorescence is circular when viewed from the top.

Single: The one to five rows of ray florets are in a flat plane, evenly arranged, and overlap at regular intervals. The simple, yet conspicuous, disk florets are arranged in a tight, flat cluster in the center. The inflorescence is circular when viewed from the top.

Decorative: The outer ray florets are evenly arranged in a flat plane and overlap at regular intervals. The center ray florets gradually become shorter than those in the outer rows as they approach the center of the inflorescence. Few, if any, disk florets show at full maturity. The inflorescence is circular when viewed from the top.

Flower Color: The color is clear, bright, intense, and typical of the cultivar. Off-colored ray florets, streaked, and/or faded florets are faults. The lack of pollen dehiscing is a sign of immaturity.

Stem: The stem is in proportion to the inflorescence it bears and long and strong. Gerbera stems typically have a minimal amount of twisting present. The inflorescence is perpendicular or at a right angle to the stem.

Merits

- Well-shaped inflorescence.
- Large flower size, consistent with variety.
- Flower head placed squarely on top of the stem.
- Clean, intense flower color.
- Strong, straight stem.



Faults

- Flowers either overmature or immature.
- Form lopsided, open-centered, or having promiscuous (irregular) ray arrangement.
- Centers of single flowers asymmetrical (poor form).
- Wilting of flower or stem.
- Mechanical injury to flower or stem.
- Falling ray florets.
- Stem too weak or too heavy.
- Cracked or crooked stem.
- Weak or crooked stem.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Wilting of ray florets
 - Stamens overmature (more than 2 rows)
 - Stamens immature (stamens green or dark colored)
- 8 Ray florets bruised, burned (tip) or have mechanical damage
 - Missing ray florets
 - Promiscuous ray arrangement
 - Asymmetrical flower centers
- 7 Crooked stems
 - Small flower size
- 6 Inflorescence not perpendicular to stem
 - Off color flowers
- 4 Blemishes on entire inflorescence (soil or dust)
 - Ray florets off color

Gladiolus, Cut Flowers

Gladiolus hybrids and cultivars

Definitions

Spike: A usually unbranched, elongated, simple, indeterminate (flowering from the base to the tip) inflorescence whose flowers are sessile (do not have individual pedicels). In the case of the gladiolus, the spike is elongated.

Judging Considerations

Florets: The petals are turgid, not showing signs of age or damage. The basal florets are at optimum opening, decreasing in degree of openness to a colored bud located approximately one-third the distance from the top of the flower spike (inflorescence). There is no streaking of petals due to thrips damage, or damaged bracts (sheath) around the buds.



Floret Spacing: The florets are evenly spaced in the spike without any apparent spaces between florets.

Floret Facing: All florets face in approximately the same direction giving the spike a one-sided appearance.

Foliage: The leaves are turgid, dark green, and do not extend above the basal floret. Evidence of insect, disease, or mechanical damage is a fault. No tip burn or sign of thrips injury is present.

Stem: The stem is straight and strong, and the tip of the flower spike does not bend nor is broken. No side shoots are present.

Flower Color: Floret color is typical of the variety and uniform across all florets on the spike.

Flower Spike: The flower spike is not less than 1/3 the total length of the stem.

Merits

- Two-thirds of the florets open and in good condition.
- Florets open progressively from full open florets at base to buds at top of spike.
- All florets face the same direction.
- Strong, straight stem.
- Leaves dark green with no damage.
- Florets evenly spaced on spike.

Faults

- Florets show signs of age, discolored, flaccid.
- Florets too tight.
- Stem bent at tip.
- Florets face different directions.
- Florets unevenly spaced.

- Florets not progressively smaller from base to top of flower spike.
- Presence of thrips injury on florets or foliage.
- Presence of leaf tip burn.
- Foliage extending above basal florets.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poor condition or overmaturity
Stem tip broken
- 8 Poor facing
- 7 Flower spikes less than one-third total stem length
Poor spacing
Poor stage or progression of opening
Missing florets
- 6 Off color florets
Crooked stem
- 5 Mechanical damage to flowers
Cut too tight
- 4 Foliage extending above basal florets
- 3 Stem tips bent
Presence of side shoots
- 2 Mechanical injury to foliage
- 1 Leaf tip damage

Gloxinia

Sinningia speciosa cultivars

Judging Considerations

Plant. A well-grown gloxinia plant consists of regular whorls of leaves radiating from a common stem. When seen from above, the plant is symmetrical with leaves regularly spaced. When seen from the side, the leaves appear as a flattened dome, with the lower leaves extending beyond and arching slightly downward over the edge of the pot. Single-crowned plants are preferred to multiple-crowned plants because they produce this effect. One-sided form or upright leaves typically is the results of crowding on the greenhouse bench.



The plant is properly proportioned to its container, usually an “azalea” pot. Under optimum conditions, gloxinias may reach 20 inches or more in diameter. From a commercial standpoint such sizes are too large for shipping to market. A diameter of 10 to 12 inches is more suitable. Larger size plants in a class maybe given extra credit if they are of good form and in proportion to their containers.

The flowers and flower buds are displayed on upright peduncles that extend in a regular pattern (not one-sided) well above the leaves.

Flowers. Flowers and flower buds are in reasonable abundance and loosely clustered about the center of the plant. A well-grown plant may carry 15 to 35 flowers. For judging, about one-fourth of the flowers are fully open and the remaining buds in various stages of development and coloring. Flowers are bright, clear, and intense and free of injury or dried edges.

The peduncle must be strong enough to support the tubular flowers clearly above the leaves and in a horizontal to slightly upright position for best showing.

Foliage. The gloxinia foliage is generally large and ungainly. A true indication of cultural perfection is the lack of “stretch” in the leaf petioles. Mechanical injury to the leaves is a minor fault because of their large size and tendency toward brittleness.

The hairy leaves have a lush, deep dark green, velvety appearance. Dried leaf edges and yellowish or light-colored leaves indicate improper moisture or fertility levels. The presence of spray or water residue on the foliage is a fault. Streaks or spots on leaves suggest that leaves were subject to cold water. These leaf blemishes indicate improper culture and be faulted accordingly.

Merits

- Proper proportion of plant to pot.
- Symmetrical plant form.
- Flowers and flower buds uniformly distributed in a loose cluster in the center of the plant.
- About one-fourth of flowers open with buds at all stages of development.
- Flowers carried on strong upright stems well above foliage.
- Fresh, clear, bright flower color with no injury or drying of petal edges.

- Large, abundant, lush green leaves regularly distributed on plant.
- Foliage free of blemishes and disease and insect injury.

Faults

- Plant too large or small for container.
- Plant form one-sided or otherwise poorly shaped.
- Flowers in poor condition, irregular, injured, faded, spotted.
- Too few or too many flowers open.
- Flowers on weak or short stems that fail to adequately clear leaves.
- Chlorotic, small, or “stretched” leaves present.
- Foliage blemished by spray, disease, insects, or mechanical injury.
- Large gaps in foliage or missing foliage.
- Multiple-crown plant in single-crown class.

Relative Value of Faults

- 10 Injury from insects, pests, or disease
Asymmetrical plant, too large or too small for pot
Multiple-crown plant in single-crown class
- 9 Stretched, elongated leaf petioles
Gaps in foliage
- 8 Sparse and off-colored foliage
Too few flowers and buds
Flowers poorly distributed around plant
Overmature plant
- 7 Immature plant
Poor flower condition
- 6 Small Flowers
Flowers failing to clear foliage
- 5 Weak flower stems
- 4 Water spotting on leaves
Spray or water residue
- 3 Mechanical injury to leaves

Hanging Flower Containers and/or Baskets

Definition of Terms

Hanging Flower Container: A container constructed from a variety of materials designed to be suspended from a bracket or similar device, and in which decorative flowering plants are grown.

Judging Considerations

Plant Form: Various plant forms from upright to spreading and trailing are grown in hanging baskets. The most common form are those species or varieties of plants with a trailing habit grown by itself or in conjunction with other kinds of plants or forms. Flowering plants or those grown for their foliage are utilized.



Cultural Perfection: The plant is in proper balance with the container. The shape of the plant(s) and the container complement each other. The plant is symmetrical and in keeping with the natural form of the species or variety without any gaps within the foliage or flower cover. Trailing plants uniformly fall over the edge of the container and cascade in proportion to the container.

Foliage: If the plant(s) are only produced for their foliage, foliage is clean, has good color and sheen (if smooth leaved), gives no evidence of nutritional deficiencies, spray or water residues, and insect, disease, or mechanical injury. The size, number of leaves and appearance of the foliage is healthy and consistent with the variety and kind of plant. Stems are also vigorous and support the foliage.

Flowers: If the plants are ones grown for both their foliage and flowers, then they are assessed proportionately. The flowers are abundantly and clearly displayed uniformly for the type of plant. The flowers are partially in full bloom with well-formed and visible buds. The flowers are in prime condition showing no age, blemishes, or mechanical injury and are the proper size and color for the species or variety.

Merits

- Correct form for species or variety of plant.
- Symmetry of form.
- Proper proportion of plant to container.
- Strong and Proportionate stems.
- Proper trailing or cascading of foliage and/or flowers.
- Dense and even distribution of foliage and/or flowers.
- Foliage turgid and proper color for that cultivar and free from insect or disease damage.
- No water or spray residue on foliage.
- Flowering plants should have flowers one-third to one-half open, but not overmature, and one-half to two-thirds in properly advanced bud stage.
- Proper relationship of aesthetic appeal of container and plant material.

Faults

- Not representative form for species or variety of plant.
- Poorly shaped or off-form plant for container.
- Too large or too small for container.
- Weak and/or flaccid stems and foliage.
- Irregular distribution of flowers and/or foliage.
- Foliage dull, marginal burning, or chlorotic in appearance.
- Presence of water spots, spray residue, or damage from insects or disease.
- Flowers overmature or insufficiently developed with poor potential.
- Poor aesthetic relationship of container and plant materials.
- Mechanical damage to foliage and/or flowers.

Relative Value of Faults

- 10 Injury from insect pests or disease
Lack of symmetry
- 9 Sparse or off-color foliage
Poor plant form
Overmaturity
Plant too small for container
- 8 Plant too large for container
Weak Stems
Irregular distribution of flowers and/or foliage
- 7 Flowers and flower potential or underdeveloped
Poor flower condition
- 6 Soiled or dirty foliage
- 4 Mechanical injury to foliage
- 2 Lack of aesthetic relationship between container and plant materials

Hybrid Lily, Cut Flowers

Lilium species and cultivars

Lilium species are classified into various divisions. For the sake of judging cut lily flowers, only the Asiatic Hybrids and the Oriental Hybrids will be discussed.

Judging Considerations

An acceptable cut lily will have from four to eight flowers and buds. At the time of judging, one-third to one-half of the flowers are fully open. The flowers are in prime condition without blemishes or showing any sign of age. Flowers are of sufficient size and color for the cultivar. Anthers are removed as soon as the bud opens to prevent pollen shed onto the petals. For Asiatic Hybrids, flowers and flower buds are uniformly spaced at the top of the stem to form a whorled pattern in all directions of the compass. Flowers and buds on the Oriental hybrids are evenly spaced along the stem as it extends above the foliage.



Foliage is glossy, deep green, and free from blemishes or spray residue. Stems are from 18 to 32 inches in length. Leaves uniformly encircle the stem from the base of the stem to the flower whorl. Oriental Hybrids often have smaller leaves at the base of the stem.

Merits

- Four to eight or more flower buds per stem.
- Flowers and buds evenly distributed in a radiating pattern at top of stem.
- Flowers well-formed and of sufficient size.
- Dark, glossy green foliage extending from the base of the plant to the flowers.
- Blemish-free flowers and foliage.
- One-third to one-half of flowers fully open, the remaining in various sizes of buds.
- Straight, sturdy stems.

Faults

- Less than four flowers and buds per stem.
- Malformed flowers.
- Flowers in poor condition.
- Flowers asymmetrically arranged on stem.
- Sparse, light green foliage.
- Crooked stems.
- Tip burn or leaf scorch on foliage.
- Pollen smears on flowers.
- Old flowers removed.
- Lack of foliage at pot rim.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Flowers overmature
- 8 Low flower and bud count
 - Poor flower distribution
 - Malformed flowers
 - Aborted flower bud
- 7 Mechanical damage to flowers
- 6 Sparse foliage
 - Pale foliage
 - Tip burn to foliage
- 5 Too few flowers open
 - Old flowers removed
 - Weak stems
- 4 Crooked stems
- 3 Pollen smeared flowers

Hydrangea, Potted

Hydrangea macrophylla

Definition

Panicle: A branched inflorescences with the older flowers are towards the base of each of the branches. The flowers have short, individual pedicels.

Judging Considerations

Plant: The plant consists of one stem branching just above soil level, forming a round or rounded triangular plant when viewed from above. Blind shoots and short scrubby growth at base of plant is a serious fault.



Flowers: The floral display consists of a panicle of florets terminating each primary stem of the plant. The florets within each panicle are uniform in size with 90 percent of the florets open and uniformity among the inflorescences. The color is pure and of intensity and brilliance typical of the variety. Muddiness, greenish coloration, faded coloring are faults. The stems should be strong enough to support the flowers without staking or tying. The panicle is not cleft or divided into two or more parts, another serious fault.

Foliage: Foliage is large, ample in quantity, dark green, and free from nutrient deficiency, insect or disease injury, and spray residue. Dead foliage is removed. The use of foliar waxes is a fault. Evidence of improper use of growth regulators or temperature that produces variable internode lengths (the space between leaves on the stems) is a serious fault.

Merits

- A well-shaped plant, as nearly round as possible.
- A minimum of three panicles of flowers on plant(s) in 5-inch or larger pots.
- Uniform stage of opening in each panicle and between panicles.
- At least half of the florets open in each panicle.
- Strong, well-branched stems arising just above soil line.
- Large, dark green foliage.
- Flower color of full intensity for the variety.
- Overall height of the plant about 15 to 20 inches.

Faults

- Lack of uniformity in floret size or maturity.
- Lack of maturity between panicles.
- A top-heavy plant with weak stems.
- Lack of uniformity in height of panicles in the pot.
- Spray residue and dead foliage.
- Evidence of nutrient deficiency.
- Blind shoots.
- Leaves in the floral panicle.
- Split or cleft in the floral panicle.

Relative Value of Faults

- 10 Injury from insect pests or disease
 - Multiple plants in container
 - Grotesque or misshapen form of plant
 - Maturity of bloom (over or under mature)
- 9 Panicles poorly distributed around plant
 - Non-uniformity in size or maturity of panicles
 - Non-uniformity in stem length
 - Blind shoots
 - Cleft or leaves in panicle
- 8 Improper height
 - Wilted plant
 - Stretched internodes
- 7 Bare stems Chlorotic foliage Small foliage
- 6 Off color panicles (neither blue nor pink)
 - Non-uniformity in size and maturity of individual florets
 - Weak stems
 - Too few panicles
- 5 Off color florets within panicle
 - Dead shoot stubs
 - Spray or water residue
 - Damaged or wilted individual florets
- 4 Plant not centered in pot
- 3 Mechanical injury to foliage
 - Presence of dead foliage

Hydrangea, Cut Flowers

Hydrangea macrophylla

Definition of Terms

Panicle: A branched inflorescences with the older flowers are towards the base of each of the branches. The flowers have short, individual pedicels.

Antique: Mature flowers from varieties that exhibit splotching, greening, reddening or other desirable color variations in late summer and fall.

Immature: White hydrangea flowers harvested and sold in the green stage.

Mature: Hydrangea flowers with fully developed florets and panicles.



Judging Considerations

Flower Size: The largest size consistent with good quality is desired.

Flower Placement: For mature panicles, the flower is borne so that the plane of the outer petals is at or exceeds right angles to the stem. For immature panicles, the angle should be no less than 45 degrees from the central axis.

Flower Form: There is no wilting or collapse of florets or flower trusses within the panicle. The flower is rounded (immature) or hemispherical (mature) with petals well-placed to form a full center. The florets within each panicle are uniform in size with 90 percent of the florets open and within the inflorescence. The color is pure and of intensity and brilliance typical of the variety. The stems are strong enough to support the flowers without bending. The panicle is not cleft or divided into two or more parts, another serious fault. nor is there any foliage within the panicle.

Flower Petal Arrangement: The petal size and shape is uniform. No large, irregular voids are present in the panicle.

Size: Flowers are a size appropriate to their cultivar and stage.

Stem: The stem has sufficient strength to support the flower in an upright position without excessive bending. Stems are mostly straight, without curves or angled bends. There are no side shoots nor recent or incomplete disbudding.

Color: The color of the flower is at the optimum stage of clarity and brilliance for the variety. Color can be even or variable throughout the flower and may exhibit seasonal effect as in those marketed as antique hydrangeas.

Foliage: The leaf arrangement is opposite/subopposite. Foliage is large, dark green, and free from nutrient deficiency, insect or disease injury, and spray residue. Torn or dead foliage is removed.

Merits

- A hemispherical, symmetrical flower head.
- Plane of florets equal to or greater than right angle to the stem.
- Uniform stage of opening.
- Strong, straight stems.
- Large, dark green foliage.
- Flower color of full intensity for the variety.
- Stem length equal to or greater than 12 inches.

Faults

- Lack of uniformity in floret size or maturity.
- Lack of maturity between panicles.
- Weak stems.
- Collapsing panicles.
- Spray residue and dead foliage.
- Evidence of nutrient deficiency.
- Leaves in the floral panicle.
- Split or cleft in the floral panicle.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Lack of symmetry
 - Non-uniformity in size or maturity of panicles
 - Cleft or leaves in panicle
- 8 Panicles broken or collapsed
- 7 Bare stems
 - Chlorotic foliage
 - Small foliage
- 6 Non-uniformity in size and maturity of individual florets
 - Weak stems
 - Too few panicles
- 5 Spray or water residue
 - Damaged individual florets
- 4 Mechanical injury to foliage
- 3 Presence of dead foliage

Iris, Cut Flowers

Iris species

Definitions of Terms

Perianth: The term for the floral envelope used generally when the sepals (calyx) and petals (corolla) cannot be distinguished from each other.

Standards (Bulbous Iris): The term applied to three erect petals forming the inner ring of perianth segments.

Falls (Bulbous Iris): The term applied to outer ring of perianth segments which are held in a horizontal plane or reflex outward and down.

Scape: The leafless flower stalk rising from the ground.

Sheath: The membranous bract (highly modified leaf) at the base of the perianth which can be confused as the calyx of other flowers.

Judging Considerations

Flowers: The standards are intact and stand erect, neither leaning to one side nor the other, and free from mechanical injury. Standards are separated and vertical. The falls flare outward at right angles to the standards and are free of tears or other mechanical injury. Flowers are firm and crisp, free from crepiness (lightly wrinkled), with intense uniform color. The presence of a second bud is a fault only when it has developed far enough to negatively impact the condition or form of the open flower, or results in a crooked stem or a cocked flower. The stem should be strong, upright, holding the flower perfectly erect, completely above the tallest leaves. The flower is placed squarely on the stem.

Foliage: In general, the foliage is dark green, free from blemishes and disease and insect pests. In bulbous iris, less than one-eighth of an inch of dry, brown leaf tip is permitted.

Merits

- Intense, uniform flower color.
- Flowers free from blemishes.
- Leaves dark green.
- Flowers held above leaves.
- Flowers firm and crisp.
- Proper placement of flower.
- Perfect standards and falls.
- Less than one-eighth of an inch of brown, dried leaf tip.

Faults

- Poor flower color.
- Poor foliage color.
- Weak stems.



- Malformed petals.
- Small flowers.
- Poor substance or condition.
- Poor placement.
- More than one-eighth of an inch of dead or brown leaf tip.
- Crooked stems.
- Presence of an interfering second bud.
- Leaves light colored.
- Flower tilted on stem.

Relative Value of Faults

- 10 Injury from insect pests or disease
 - Poor flower condition
 - Malformed flowers
- 9 Torn or damaged flower petals
- 8 Presence of an interfering second bud
- 7 Deformed foliage
 - Small flower size
 - Weak stems
 - Flowers borne down in foliage
- 6 Poor placement or crooked stem
 - Poor flower color
 - Immature flowers
- 4 Mechanical damage to foliage
- 1 Leaf tip browning

Kalanchoe

Kalanchoe blossfeldiana

Judging Considerations

Plant: The typical kalanchoe potted plant consists of a single branched plant or up to 3 cuttings planted together in one pot. Cultivars are grown in a variety of pot sizes depending upon the finished size of the cultivar. Regardless of the cultivar, plants display proper proportion to the container; are symmetrical and vigorous; appropriately displays the flowers; and are centered and in proportion to the pot. Therefore, all plants in the class need to be in the same sized pot. Multiple cuttings planted together must appear as a unified whole. A multi-cutting plant tends to be flat and not as domed as a single branched plant. Distribution of flowers is uniform across all the cuttings, giving it the appearance of a single branched plant.



Flowers: Flowers and flower buds, in sufficient number are held above the foliage on strong stems distributed uniformly over the crown of the plant with one-third to one-half of the flowers open, showing no signs of age or mechanical injury. The color is clear, intense, and uniform.

Foliage: The adequate foliage is on all branches without excessively large (for the cultivar) leaves that are lustrous, dark green, and free from blemishes, spray residues, insect pests or diseases, and mechanical damage. There is no evidence of nutrient deficiencies.

Merits

- Symmetrical plant form.
- Proper proportion of flowers and flower buds to plant.
- Foliage free from blemishes.
- Strong, erect flower stems.
- Flowers borne in clusters above the foliage.
- Clean flower color.
- One-third to one-half of flowers open.

Faults

- Lack of symmetry.
- Lack of adequate flowers.
- Flowers not uniformly placed, sparse.
- Blemished foliage.
- Weak flower stems.
- Uneven development of plants in pot (maturity and size).
- Light green or off-colored foliage.
- Over aged and/or dead flowers present.

Relative Value of Faults

- 10 Injury from insect pests or disease
Poor proportion of plant to pot
- 9 Lack of symmetry
Lack of uniform development in multi-plant pot.
Overmature flowers
- 8 Sparse or off-color foliage
- 7 Insufficient flowers and buds
Too few flowers open
- 6 Flowers not uniformly distributed around plant
Weak flower stems
Flowers failing to clear foliage
- 5 Blemished foliage
Poor flower color
- 4 Spray or water residue
Mechanically damaged foliage
Plant poorly centered in pot

Liatris, Cut Flowers

Liatris species

Definition of Terms

Plume: The term used to describe the determinate, unbranched inflorescence of liatris. The narrow fluffy flowers are each a small inflorescence of disc flowers (since the plant is in the daisy family, Asteraceae) at the end of the liatris tall, narrow stems. The flowers within the plume open in a descending order from the tip down. Flower density is dependent upon the species.



Stem: Single stems with one terminal plume. Each stem is densely set with narrow leaves that run up the stem to the base of the plume.

Judging Considerations

Stem: The stem is strong enough to support the plume in an upright position. The leaves are arranged opposite one another in a whorl up the stem. The leaves are narrow and slender. Stems are at least 24 to 36 inches in length with at least the top 10 inches bearing the flowers in the plume. The stem is not flattened in any way.

Flowers: From 1/3 to 1/2 of the flowers along the plume are fully open. The flowers open from the top to bottom of the plume so the bottom half to 2/3's may not be open or at all. The plume is made up of many individual flowers (see above definition). The stamens and calyces extend out of the flower producing an overall fluffy looking plume. The plume is at least 10 inches long. The flowers are generally a rosy purple color although a white variety is also available. As the flowers age, they fade or the petals curl in and darken as the plume ages. The flowers in the plume are evenly spaced and the plume is not flat sided.

Form: Each stem is a long single straight stem with one straight terminal plume. When judging the whole stem and plume are considered.

Merits

- Long strong straight stem.
- Flower plumes around 10 inches in length.
- Plumes 1/3 to 1/2 open in a descending order.
- Mature flowers open at top in good condition.
- Individual flowers evenly spaced.
- Vibrant flower color.
- Good foliage condition.

Faults

- Flattened stem.
- Spacing and facing of plume.
- Crooked stems.

- Short stems.
- Immature plumes.
- Poor foliage condition.
- Discolored or faded flowers or other signs of overmaturity.
- Short plume.
- Weak stems.
- Crooked plume.
- Missing or broken tip.
- Missing flowers.
- Poor progression of opening.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poor flower condition
 - Overmature plume
 - Missing tip
- 8 Overmature flowers
 - Small plumes under 10 inches
 - Broken off voids
 - Tip failing to open
 - Skips or growing voids along the plume
 - Faced plume
 - Poor stage of flower opening on plume
- 7 Immature plumes
 - Uneven spacing of florets within plume
 - Secondary stem or branching
 - Thin or weak stems
- 6 Short stems
 - Broken florets
 - Crooked stems
 - Missing flower
 - Mechanical damage
- 5 Poor foliage condition

Lisianthus, Cut Flowers

Eustoma grandiflorum

Definition of Terms

Rose bud stage: The stage of inflorescence development when fully developed secondary buds show distinct spiraling of the petals.

Candle flame stage: The stage of inflorescence development when sufficiently developed tertiary buds show color.

Judging Considerations

Plant: Stems of the Lisianthus are commercially produced in lengths of 22 to 32 inches. Leaves are typically 2 to 4 inches in length, medium green in color, with a glaucous (having a greyish-blue powder of wax on the leaf surface that easily rubs off but does not damage to the leaf) surface area. Leaves are opposite and two-ranked. Stems are sturdy enough to produce a tight spray effect. Side shoots are also sturdy and tightly held toward the center of the spray. Branching may occur several nodes below the top flower bud.



Flower: At least one flower is completely open, with three secondary flowers developed to the rose bud stage. Three to five tertiary buds are also present in the candle flame stage. Quaternary (fourth order) flowers are present but will not necessarily open, nor expected to. Primary flowers may be fully open but show no sign of discoloration or damage. The oldest primary flower may also be removed to create a better spray. Secondary, tertiary, and quaternary flowers are straight and show no signs of wilt. Flower buds are generally held above open flowers, with open flowers generally facing the same direction. Flowers range from single to double by variety, come solid and bicolored, are colored from pink to mauve, light and dark purple, and white. Throat colors range from green to burgundy.

Merits

- Sturdy stem with sufficient strength to hold side shoots upright.
- Minimum of one to two open flowers and three to five large buds.
- Large, medium green glaucous leaves.
- Straight flower peduncles.
- Flowers in good condition.
- Sufficiently branched for large spray.
- Uniform flower color with no fading.

Faults

- Insufficient flowers.
- Buds of improper maturity.
- Poor condition of flowers.

- Weak laterals creating open spray.
- Small leaves.
- Weak or crooked stems, thin stems.
- Insect and disease damage, mechanical injury to foliage, flowers, or stems.
- Flower too small.
- Flowers so open as to lose shape.
- Weak or wilted peduncles.
- Buds subtending primary flower.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Insufficient buds
 - Lack of appropriately sized buds
 - Weak laterals
 - Poor spray form
- 8 Wilted tertiary and quaternary buds
 - Buds subtending primary flower
- 7 Missing or broken tertiary and quaternary buds
 - Lack of uniformity among sprays
 - Poor facing
- 6 Poor condition of primary flower
 - Small leaves
 - Small flowers
- 5 Bent peduncles
 - Flowers so open as to lose shape
 - Thin stems
- 3 Mechanical damage to leaves
 - Faded primary flowers
 - Poor foliage and/or flower color

Phalaenopsis. Potted Plants

Phalaenopsis amabilis

Definition of Terms

Spike: The phalaenopsis inflorescence is indeterminate, simple panicle with pedicled flowers. Under excellent growing conditions, it may branch below where the first flowers open.

Judging Considerations

Plant: A single, vigorous orchid plant is centered within the pot. Phalaenopsis is grown in 4-, 5- or 6-inch pots. Both dwarf and standard plants are available and grown in pots proportionate to their size. The plant's height may be of 3 to 4 times the height of the pot. Being an epiphyte, coarse roots may protrude along the media and over the pot's rim. This is not considered a fault unless they are damaged. The roots typically are gray or greenish gray, and turgid. The spike is trained upright on a stake which may be straight or curved, depending on its pattern. If trained on a curved stake, the inflorescence must be long enough to follow the curve.



Florets: The flower consists of two half-circular petals, three egg-shaped sepals, a short column, throat, and lip with two curving tendrils at the base. Quality flowers are turgid, free from crepiness (lightly wrinkled) of senescence, tears, or bruising. The florets are open and no more than two terminal florets in bud. All florets are facing in the same direction or exhibit a gradual transition of facing.

Flower Spike: A stake and associated clips or other inconspicuous binding are typically used to support the spike. It is left in place after production and does not factor in quality. The floral spike is strong enough to support the florets if it is not staked. Some plants will throw multiple spikes directly from the plant's stem. The overall surface area of color determines quality rather than number of spikes; therefore, a vigorous single-spiked plant may be preferable to a scant multi-spiked plant.

Secondary Spikes: If secondary spikes on the inflorescence emerges from the primary spikes, they, too, have strong stems with a minimum of 2 to 3 florets. The absence of lateral spikes does not indicate poor quality of the primary inflorescence.

Flower Spacing: The florets are spaced to appear compact without crowding. They are evenly arranged without unusual spaces in between and no voids or skips due to lankiness of the overall spike.

Foliage: The leaves are opposite or nearly so, firm, deep green, and somewhat rigid, not flaccid or wrinkled. There is no evidence of injury from spray materials, nutrient problems, or from diseases, mites, or insects. The foliage crown is not lopsided, and leaves are similar in size.

Merits

- Appropriate proportion to the container.
- Foliage in good condition.
- Leaves similar in size, glossy, turgid.

- Florets in good condition.
- Florets open progressively from fully open florets at the base to tight buds at the top of the spike.
- Florets facing in the same direction or a gradual transition.
- Florets evenly spaced in spike.
- Strong inflorescence stem.

Faults

Note: Secondary spikes, if present, should be considered along with the primary flower spike; their presence is not considered a fault. However, all efforts should be made to have a class composed of plants all with single spikes or all plants with secondary spikes. Do not mix within a class.

- Broken tips of spikes.
- Poor flower condition.
- Poor facing of florets in spike.
- Irregular spacing between florets.
- Crooked or weak inflorescence.
- Missing florets in spike.
- Short, clubby spike.
- Foliage lopsided giving plant poor visual balance.
- Foliage in poor condition

Relative Value of Faults

- 10 Injury from insects or diseases
Stem tip broken out or missing
- 9 Poor flower condition
- 8 Asymmetrical facing of florets
- 7 Irregular spacing of florets
Weak stem
- 6 Florets missing
- 5 Foliage extending above basal floret
- 4 Crooked stems
- 3 Mechanical injury to foliage, lopsided foliage display

Poinsettia

Euphorbia pulcherrima

Judging Considerations

Plant: The poinsettia, *Euphorbia pulcherrima*, is confined to Christmas season sales in the United States, but with day-length manipulation it can be flowered at any time of the year. Quality is usually better when the plants are flowered for the Christmas season. Plants are either grown as single-stem or pinched plants. The number of cuttings per pot is dependent upon the size of the pot, whether the plants will be grown pinched or single stem (produces one exceptionally large inflorescence on each stem). The most popular cultivars are those with red bracts, but colors are also available.



Plant size, particularly height, should be in proportion to pot size. A height of approximately 15 inches is preferred if the plants are in a 6 to 6 1/2-inch pot, 15 to 18 inches overall for pinched, and 15 inches from pot rim for straight-up (single-stemmed, unpinched plants). Some cultivars will require staking to prevent damage in shipping and done as carefully and inconspicuously as possible.

Flowers: The true flowers of the poinsettia are cyathia in the center of the inflorescence. The cyathia contain the stamens, pistils and nectary glands. The conspicuous structures in the inflorescence are bracts, or modified leaves. All inflorescences on a plant are fully developed, with cyathia present, and uniform in size at the time of judging. Presence of pollen is not objectionable unless its abundance is indicative of overmaturity.

Foliage: Leaves are dark green with no evidence of nutrient deficiencies. Foliage is present from the base of the plant up to the lowermost bracts, adequate in size to indicate that moisture was not limiting during production, and characteristic of the cultivar.

Merits

- Optimum plant size, symmetrical, in proportion to pot.
- Intense bract color.
- Proper spatial arrangement of inflorescences when multiple blooms are present.
- Foliage dark green and turgid.
- Strong, straight stems on single-stem plants.
- Proper stage of maturity.
- Freedom from mechanical injury.
- Freedom from insect and disease damage.

Faults

- Excessive height.
- Poor bract color.
- Absence of cyathia.
- Overmaturity of cyathia.

- Leaf chlorosis.
- Immature primary bracts and cyathia.
- Necrosis on leaf or bract margins.
- Small bracts.
- Weak stems.
- Yellowing of foliage caused by Cycocel spray.
- Epinasty of bracts and/or leaves.
- Injury from pests.
- Mechanical damage.
- Severely puckered or crinkled bracts.

Relative Value of Faults

- 10 Injury from insects and disease
- 9 Uneven stem height of single stem plants in a multiple stem pot
 Uneven development of inflorescences of pinched plants
 Poor plant shape
 Excessive lateral development on single-stem plants such that it interferes with form
- 8 Excessive height
 Overmaturity of inflorescence
 Absence of cyathia
 Bract necrosis
 Lack of leaves from pot rim to base of bracts
- 7 Poor bract color
 Secondary shoots interfering with primary inflorescences on pinched plants
 Immature bracts or cyathia Leaf and bract epinasty Severe bract puckering
- 6 Weak stems
 Small bracts
 Sparse foliage, leggy, small leaves
- 5 Leaf necrosis or chlorosis
- 4 Mechanical damage or bruising
- 3 Chlorosis from Cycocel

Primula

Primula species and cultivars

Judging Considerations

Plant: Primulas are grown as a single plant centered in a 4- or 5-inch pot. The inflorescences are various, depending upon the species. Those most common in potted plant production have a basal rosette of leaves from which the flowers arise from the centers. Each flowering stem may contain 1 to 10 flowers, and the flowers may be attached closely or loosely to the main stem, depending on cultivar. The ideal plant will have the flowers held above the foliage with little or no break between flowers and foliage. Flowers and buds may equal two-thirds to three-fourths the leaf area of a well-grown plant and are uniformly distributed.

The leaves of a well-grown plant do not overlap excessively, are uniform in size, and radiate evenly from the crown. When viewed from the side, the plant is hemispherical with leaves extending beyond the edge of the pot and arching downward slightly. In general appearance, the leaf pattern of primula is much like that of African violet or gloxinia. The plant should be properly proportioned to its pot, and symmetrical. A plant 1 1/2 to 2 times the height of the pot is suitable.

Flowers: The flowers are round and borne on an elongated flowering stalk. The flowers can vary greatly in size and color. In all cases, high quality flowers are clear and bright in color, and show no fading, dry petal edges, disease, insect, or mechanical injury. Approximately one-third to one-half of uniform flowers are blooming with buds at various stages of development.

Foliage: The leaves will vary from round to strap-shaped and may have entire to lobed margins, depending on the variety. The leaves are clear lush green with no dried margins, chlorotic color, other symptom of moisture or fertilizer stress, damage from handling, nor any injury from insects and diseases. Proper spacing and culture will produce a plant with several layers of closely spaced leaves on short petioles.

Merits

- Symmetrical plant in proper proportion to its pot.
- Foliage evenly radiating and uniform in size and spacing.
- Leaves in lush green condition with no blemishes.
- Flowers abundant and in good condition.
- Flowers displayed on strong stems above the foliage.
- Flowers uniform and of clear, bright color.



Faults

- Asymmetrical or one-sided plant.
- Large voids in the foliage pattern.
- Chlorotic, burned, or mechanically damaged foliage.
- Sparse flowering.
- Flowers in poor condition or on weak stems.
- Insect or disease injury.
- Flowering down in the foliage.

Relative Value of Faults

- 10 Injury from insect or disease
- 9 Poorly proportioned plant
Small and too few flowers and buds
- 8 Poor plant shape, asymmetrical
“Stretched” leaf petioles, voids in foliage pattern
Sparse and off-color foliage (senescence)
- 7 Flowers failing to clear foliage (short peduncles)
Uneven distribution of flowers
- 6 Weak flower stems
Too few open, immature
Blemished foliage
- 5 Poor flower condition
Immature plant
- 4 Mechanical injury to foliage
- 3 Spray-residue on foliage

Rieger/Heimalis Begonia

Begonia x hiemalis

Judging Considerations

Plant: The commercially produced Rieger begonia generally consists of one plant, well-branched at the base, per 4 to 6-inch pot. Plants are compact, symmetrical rounded appearance, vigorous, and with foliage to the base, resulting in maximum distribution of flowers. Typically, plants are slightly wider than tall (height equals 80 percent of width), in proportion to the container, and without an appearance of being lopsided or leggy regardless the viewing angle.



Foliage and Stems: The foliage is good color, consistent with the variety, giving no evidence of nutritional disorder, disease, and/or insect damage, spray residue, and mechanical injury. Typically, aged foliage at the base of the stem is at a minimum, and dead or malformed leaf were removed at an early stage during production. Leaf form will vary by variety; however, it is consistent over the entire plant. Stems are strong enough to support the floral spray above the foliage. The plant has at least five primary shoots. Willowy or weak stems that require staking indicate poor cultural methods.

Flowers: Flowers and flower bud potential is equal to the leaf area and distributed uniformly over the plant with one-third to one-half of the flowers open, the rest in bud. The flowers are in prime condition, showing no signs of age or mechanical injury. Double and single flower forms exist.

Merits

- Flowers and flower buds distributed equally over the plant.
- Proper proportion of plant to container.
- Abundant foliage, in good condition.
- Compact, symmetrical plant.
- Strong stems.

Faults

- Poor floral display.
- Weak, willowy stems.
- Legginess of plant.
- Damage to flowers, stems, or leaves by insects and/or disease.
- Asymmetrical plant shape.
- Sparse, off-color leaf cover.

Relative Value of Faults

- 10 Injury from insect pests or disease
- Asymmetrical plant shape
- Voids in foliage display

- 9 Poor proportion of plant to pot
Poor flower condition, bruised or faded
- 8 Sparse flower and flower bud development
- 7 Sparse or chlorotic foliage
Flowers not uniformly distributed around plant
- 6 Leggy plant
More than one-half flowers open
- 5 Flowers covered or hidden by foliage
- 4 Blemished foliage
Spray or water residue
- 3 Mechanical injury to foliage

Rose, Cut Spray Flowers

Rosa species, Floribunda Type

Definition of Terms

Peeling: The removal of one or more outer petals that are guard petals, overmature, off color, damaged, or dirty to reveal the inner petals which are less mature, of true color, undamaged, or clean. Typically, peeling is avoided for spray roses.

Bullhead: A malformed bud that either is unable to open or upon opening becomes a malformed flower. The outer, and sometimes the inner petals, are shortened, stiff, fail to reflex, and crinkled. The bud is often flat rather than pointed.

Peanut Flower: A flower of near normal form but which is distinctly smaller and with many fewer petals than normal for the cultivar.

Bent or Weak Neck: The collapse of the stem directly below the flower. The flower droops and wilts rapidly because of its inability to take up adequate water.



Judging Considerations

Spray Formation: The flowers are in a flat or slightly domed making all flowers visible to fullest advantage. Flowers open from the center to the outer edge of the spray with size and maturity being reduced the further away from the center. Some producers will remove the central bud. Removal early in development results in an inconspicuous stub; no penalty is assessed against center bud removal, if done properly. Early disbudding (removal of lateral buds) may be done to improve spray quality. Broken pedicels are not present.

Flower Condition: The petals are fresh, firm, turgid, and free from mechanical damage, blemishes, dirt, spray, or water residue, disease, and injury from diseases and insects.

Flower Form and Size: The inflorescence displays numerous robust florets. Each floret is the form, opening stage, size and petal count generally typical for the cultivar.

Flower Color: The color(s) are fresh, intense, clear, and true to the cultivar. The greenish or off-color blotching on the outer petal or petals of some cultivars is inherent and, while undesirable, is not considered more than a minor fault.

Inflorescence: The stem of the inflorescence (peduncle) is proportionate to the flower spray size and strong enough to hold all florets without bending. Thin, weak pedicels of the individual florets or the peduncle are a more serious fault than slightly crooked ones. Bent or weak pedicels, clubby, asymmetry, and conspicuous pinching are faults.

Foliage: The foliage is fresh, turgid, typical in size and color for the cultivar, and free from spray or water residue, disease, insect and disease injury, evidence of nutritional deficiencies or excesses, and chlorosis.

Merits

- Fresh flowers of cultivar; appropriate size and in prime condition.
- Neither fully blown or in tight bud opening.
- Color(s) fresh, intense, clear, and typical for cultivar.
- Form typical for cultivar.
- Flowers properly arranged about the stem.
- Stems long, stiff, and straight.
- Turgid foliage.

Faults

- Bent or weak necks with wilted flowers.
- Bent pedicels.
- Overmature, peeled flowers.
- Bare stems lacking foliage.
- Color faded or off color for cultivar.
- Florets bruised, blemished, or otherwise damaged.
- Thin, weak, or crooked stems.
- Late or careless disbudding.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Poor spray formation/asymmetry
 - Bent or weak necks
 - Overmaturity of flowers
- 8 Broken pedicels
 - Off-color flowers
- 7 Lack of floriferousness
 - Small flower size
 - Thin, weak stems
- 6 Bare stems lacking foliage
- 5 Sparse foliage
 - Chlorotic foliage
- 4 Crooked stems
 - Spray or water residue
- 3 Outer petals poorly formed, bruised, damaged, or dirty
- 2 Recent or faulty disbudding
- 1 Greenish or off-color blotching on outer petals
 - Noticeable mechanical or thorn damaged foliage

Rose, Cut Standard Flowers

Rosa species, Hybrid Tea Type

Definition of Terms

Peeling: The removal of one or more outer petals which are overmature, off color, damaged, or dirty to reveal the inner petals which are less mature, of true color, undamaged, or clean.

Bullhead: A malformed bud that either is unable to open or up on opening becomes a malformed flower. The outer, and sometimes the inner petals, are shortened, stiff, fail to reflex, and crinkled. The bud is often flat rather than pointed.

Peanut Flower: A flower of near normal form but which is distinctly smaller and with many fewer petals than normal for the cultivar.

Bent or Weak Neck: The collapse of the stem directly below the flower. The flower droops and wilts rapidly because of its inability to take up adequate water.

Judging Considerations

Flower Placement: The flower is on the terminus of the stem and the longitudinal axis of the flower coincides with the vertical axis of the stem.

Flower Maturity: Commercial roses are acceptable at two stages of development. Before judging starts, the judges are informed of the desired stage.

Wholesale or Fairly Tight Stage. This stage is when one to several outer petals are no more than slightly separated from the remainder of the bud, which remains tight, yet the flower can still open naturally. The degree of openness desired at this stage varies with the cultivar, but basically depends on the number of petals characteristic of a normal flower of that cultivar. Those which normally have many petals may be looser than those which normally have fewer petals.

Retail or Bud Stage. In this stage, the flowers are further developed than in the wholesale stage but, in no case are they more than one-fourth to one-third open. Again, the normal number of petals per cultivar determines the acceptable degree of openness. The peeling of a few outer petals from flowers to make them appear to conform to either the wholesale or retail stage is a major fault. The peeling of less than two outer petals which are bruised, off color, dirty, or otherwise damaged from a fresh flower is considered only a minor fault.

Amateur Stage. A third stage of development, usually at least one-half open, is used in showing and judging flowers according to the American Rose Society standards. This stage is not used in judging commercial roses.



Flower-Condition: The petals are fresh, firm, turgid, and free from mechanical damage, blemishes, dirt, spray, or water residue, disease, and injury from diseases and insects.

Flower Form and Size: Flowers exhibit the form, size, and petal count generally accepted as typical for the cultivar. Petals are arranged in a tight spiral; bullheads or other deformities, are not acceptable.

Flower Color: The color is fresh, intense, and clear. Bi-color and multicolor cultivars exhibit distinct color markings. Red and pink cultivars are free from bluing and purpling; yellow cultivars are free from greening. No soiled or dirty effect in white or light-colored cultivars is not acceptable. The greenish or off-color blotching on the outer petal or petals of some cultivars is inherent and, while undesirable, is not considered more than a minor fault.

Stem: The stem is straight, long, thick, and in reasonable proportion to the flower size, and strong enough to hold the flower in an erect position. Thin, weak stems are a more serious fault than slightly crooked ones. The presence of side shoots or buds is a fault, as is the indication of late or careless disbudding. A bent or weak neck is a serious fault.

Foliage: The foliage is fresh, firm, turgid, typical in size and color for the cultivar, and free from spray or water residue, disease, insect and disease injury, evidence of nutritional deficiencies or excesses, and chlorosis. Few roses passing through commercial markets have foliage entirely free from mechanical and thorn damage. Such damaged foliage, unless severe, constitutes only a minor fault.

Merits

- Fresh flowers of normal size and in prime condition.
- Proper stage of opening.
- Color fresh, intense, clear, and typical for cultivar.
- Form typical for cultivar.
- Flower properly placed on stem.
- Stems long, stiff, and straight.
- Foliage turgid and of normal color for cultivar.

Faults

- Bent or weak necks with wilted flowers.
- Overmature, “peeled” flowers.
- Bullhead or otherwise misshapen flowers.
- Color faded or off color for cultivar.
- Inner petals bruised, blemished, or otherwise damaged.
- Thin, weak, or crooked stems.
- Late or careless disbudding.

Relative Value of Faults

- 10 Injury from insect pests or disease
- 9 Bent or weak necks
Overmaturity of flowers
“Peanut” flower size
- 8 Bullheads

- Off-color flowers
- Small flower size
- 7 Petal arrangement non-spiral in center
 - Thin, weak stems
 - Immature flowers
- 6 Poor placements on stem
- 5 Inner petals bruised or damaged
 - Sparse foliage
 - Chlorotic foliage
- 4 Presence of side buds or shoots
 - Crooked stem
 - Spray or water residue
- 3 Outer petals poorly formed, bruised, damaged, or dirty
- 2 Recent or faulty disbudding
- 1 Greenish or off-color blotching on outer petals
 - Noticeable mechanical or thorn damaged foliage

Snapdragon and Stock, Cut Flowers

Antirrhinum majus and *Matthiola incana*, respectively

Judging Considerations

Flower Spike: The petals are firm and free from crepiness (lightly wrinkled) which is a sign of old age and mechanical injury. The florets at the base of the inflorescence or spike are further advanced with development decreasing toward the tip of the spike. There is a good balance between buds and open florets. A spike showing two-thirds of the florets open and one-third buds in various stages of development produces a well-proportioned spike. In stocks, a good spike will frequently exhibit three-fourths of the florets open, the rest in bud. The presence or removal of seed pods or old florets is a fault.

Floret Spacing: The florets are spaced to appear compact but not crowded and arranged in an ascending spiral from the base to the tip of the inflorescence without voids or skips.

Flower Color: The florets have the color typical of the variety. The color is clear and fresh, free from fading or blemish. All florets in the spike, as well as all spikes within the entry, are uniform in color.

Foliage: The leaves are firm, dark green, and do not extend above the basal floret. There is no evidence of injury from spray materials, nutrient problems, or from diseases, mites, or insects.

Stem: The stem is straight and strong. Curvatures of the tip of the flower head, as is the presence of side branches or secondary flowering within the spike, are all serious faults. Laterals below the basal floret were removed when young and not detract from the appearance of the spike. Removal of tips or their absence, resulting in a clubby, unbalanced inflorescence is a major fault. The stem length is proportion to inflorescence.

Merits

- Florets in good condition.
- Florets open progressively from fully open florets at the base to tight buds at the top of the spike.
- Florets facing to produce a symmetrical, compact spike.
- Florets evenly spaced in spike.
- Strong, straight stem and flower spike.

Faults

- Broken tips of spikes.



- Poor flower condition.
- Presence of lateral shoots below inflorescence.
- Poor facing of florets in spike.
- Irregular spacing between florets.
- Lateral shoots in flower spike.
- Secondary flowering within spike.
- Crooked or weak stems.
- Missing florets in spike.
- Short, “clubby” spike.
- Crowded florets producing misshapen spike of bloom.

Relative Value of Faults

- 10 Injury from insects or diseases
Stem tip broken out or missing
- 9 Poor flower condition
Seed pods or old flowers present
- 8 Asymmetrical facing of florets
- 7 Irregular spacing of florets
Presence of side branches or secondary flowers in spike
Weak stem
- 6 Florets missing
Cut too tight
Immaturity
Poor stage or progression of opening
- 5 Foliage extending above basal floret
- 4 Presence of laterals below the inflorescence
Crooked stem
- 3 Bent stem tips
- 2 Mechanical injury to foliage

Selecting and Judging Nursery/Landscape Plants

Establishing Classes

Classes are created from landscape plant that can be judged from students across the country and yet are common to the area of the contest to ensure having readily available plant material.

Obtain five to seven specimens of each class.

Make sure the plants are produced in the same size nursery container and the plants are characteristic of the species and variety.

- For ease of handling, plants grown in nursery containers are best.
- Try to avoid ball-and-burlap specimens.
- If necessary, the nursery containers can be wrapped in burlap or other fabric to obscure any problems with the containers.
- Do not select specimens whose roots are growing out of the container. All specimens need to sit flat on the floor or table, and not tilt.
- Check for plants centered in the pots. If more than one cutting is planted in the pot, make sure each pot has the same number of cuttings.

If the contest is held during the flowering season for a species, make sure all specimens are approximately at the same stage of development.

Detailed Specifications

To learn more about judging the quality of nursery material, consult the American Standard for Nursery Stock published by American Hort. The current edition is available as a pdf file free to nonmembers at <https://www.americanhort.org/page/standards>. The standards far exceed what is expected for a judging contest.



Scale of Points for Nursery/Landscape Plants

	Relative Point Value	Running Point Total
True to type: Specimens in subclasses display true characteristics for the species (leaf size, shape, and color; bark color and texture; overall shape of the plant).	10	10
Excellence of physical condition		
A. Clean, healthy, turgid foliage, no visible damage to the trunk, and bark of good color for the species and/or horticulture variety	15-20*	25-30*
B. Form appropriate to the species and/or horticulture variety and of good appearance for all sides	15	40-45
C. Well branched with strong stems typical of the species and/or horticulture variety	15	55-60
D. Freedom from damage of the following types – insects, disease, mechanical, or chemical injury	10	65-70
E. Plant size in good scale relation to the container size	10	75-80
F. Condition of the root system related to the soil and the container (not pot-bound); root flare is visible and not planted deep in the container	10	85-90
Container An appropriately sized and clean nursery container in good condition	10	95-100
Flowers/Fruits If in season, the flowers and/or fruit exhibit good color and condition.	0-5*	100-100
		100

*Note: If the class is not shown with flowers or fruit, the five points is added to line A (rather than 15 points, it is worth 20 points) and is not judged for Flowers/Fruits (zero points).

Selecting and Judging Produce

This information was originally published by Karen L. Panter, Extension Horticulture Specialist, Department of Plant Sciences, University of Wyoming, as Bulletin B-684, Revised 2008, original bulletin by Jim Cook. Dr. Panter gave Pi Alpha Xi permission to include this in the Judging Manual. The bulletin provided guidance for showing produce for competition at a state or county fair. It has been edited to reflect a judging competition with classes as opposed to a show where a person would be displaying their best sample.

Produce is an important part of horticulture. Knowing what characteristics contribute to high quality produce is important to practicing good horticulture. This section is designed to help 1) coaches establish judging categories, and 2) judges learn what are desirable characteristics.



General Guidelines

- If possible, when establishing a judging contest, try to adhere to the recommended number of specimens for each class of produce. Availability of quality produce may influence your ability to display the recommended minimum per class. If you need to reduce the number per class, reduce it for each class.
- This manual provides standards for 58 fruits and vegetables. When setting up a contest, consider the amount of time it will take for judging and limit the contest to 10 to 30 groupings. Seasonal availability will help determine what you will be able to judge.
- Keep the produce stored under the proper conditions. You may want to establish classes ahead of time, store the produce until shortly before the contest is scheduled to start, and set up the contest just before start time.

Staging Classes for Produce

It is important to select fruits and vegetables that are uniform in size, shape, and color, and free from insect, disease, or mechanical injury.

Preparation. For best appearance, specimens should be clean. Remove excess soil by brushing or washing. Avoid marking the skin of fruits and vegetables. Generally, root crops need to be washed. Leafy vegetables may be dipped or sprayed to remove soil, dust, or any foreign materials. Peppers and eggplants may be wiped with a damp cloth or a cloth to which a drop of salad oil has been applied. In all cases, do the job carefully and do not injure or bruise specimens.

Specimen Uniformity. One of the most important factors for competitive classes is uniformity. All specimens should be as nearly identical as possible in size, shape, color, freshness, and degree of maturity. Pick a specimen that is most nearly perfect, and then select others like it. Coaches then work their way through the produce selecting uniformity for each of the subclasses (those groupings or single specimens to be judged against each other and labeled A, B, C, and D) that are then displayed on plates (paper plates are commonly used).

Quality and Condition. Cultural perfection and degree of maturity are other factors to consider in selecting fruits and vegetables for judging. The condition or degree of maturity should be at its best for good eating, typical of farmers' market or grocery store-quality produce. Specimens should not be overripe, wilted, or immature. For cultural perfection, the entry should be free from insect or mechanical injuries, cracks or blemishes, disease spots, wilt, and mold.

Size. The size should be the same as, or slightly larger than, the size sold to the consumer. Excessively large specimens may indicate overmaturity, coarseness, or poor quality. Small size indicates immaturity, and specimens, especially for leafy vegetables, may soon wilt and collapse. High-quality vegetables will also have high food value and are in the best condition for table use and for judging.

Quantity. Below the name of each fruit or vegetable class, the number of specimens required in each plate is given. If coaches cannot fill a plate with the recommended number of specimens, make sure each plate has the same number of specimens. When procuring produce, have on hand 25 percent more than what is needed to have an adequate pool from which to select the specimens for each plate.

Scale of Points for Produce

Quality	40	Marketable size 10; characteristic color 10; typical shape 10; stage of development or maturity 10
Condition	20	Cleanliness 7; proper trimming 7; freshness 6
Freedom from Injury	20	Mechanical 10; pests 10
Uniformity	20	Shape 4; size 4; color 4; type or variety 4; stage or maturity 4

NOTE: From Harrison, H.C., 1985. Exhibiting and Judging Vegetables, Publication A3306, University of Wisconsin-Extension, Madison

General Requirements for Judging Produce

Apples

Three fruits per plate (total of 12 specimens needed).

Judging Considerations

- Fruit are round to slightly elongated and best represent the characteristics of the specific variety being judged.
- Apples are commonly red, yellow, or green, but many of newer varieties may be a mixture of these colors. Colors should be true to variety.
- Flesh is white, or, on some varieties, soft pink.
- Flesh is crisp, white, and juicy.
- Skin is smooth and devoid of blemishes with firm tissue all the way to the core.
- Each fruit has good symmetry.
- Fruit does not have brown or bruised flesh, discolorations of the skin, corky tissue on the skin, soft flesh, or a watery core.



Asparagus

Nine, untied stalks per plate (cut ends may be kept in water until judged; total of 36 specimens needed).

Judging Considerations

- Stalks are uniform in color, whether green, white, or purple.
- White butt (cut end of stalk) does not exceed 1 1/2 inches in length.
- Diameter of stalk at midpoint about 1/4 to 1/3 inch.
- Uniform taper and length.
- Tip compact; not starting to open.
- Entire stalk firm and tender.



Basil, Fresh

Five stems per plate (total of 20 specimens needed).

Judging Considerations

- Stems are fresh and not wilted.
- Free of insect damage, yellowing, or blackening, with a strong, pleasing aroma.
- Stems does not show yellow leaves, wilting, signs of insect damage, or blackening of the stems.



Beans, Green or Wax

Twelve pods per plate (total of 24 specimens needed).

Judging Considerations

- Wax and green beans are clean, firm, crisp, and free of blemishes.
- Pods should be long and straight, with uniform length, color, and maturity.
- Ends are not broken off in picking.
- Seeds are not more than half-grown.
- Avoid dull and wilted beans as this indicates stringiness.

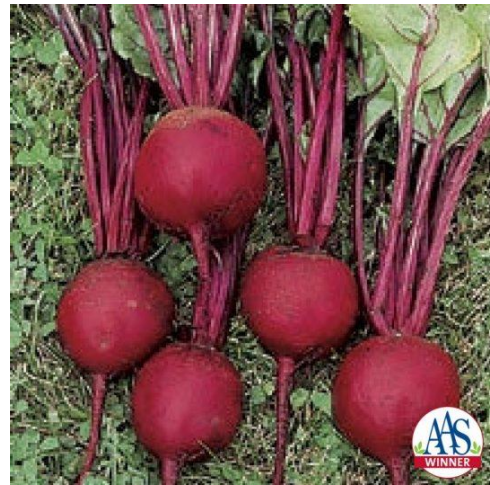


Beets, Table or Pickling

Five table beets or 11 pickling beets per plate (total of 20 to 44 table or pickling beets needed).

Judging Considerations

- Beets are uniform in size, shape, and color.
- Smooth and free from side roots, cracks, or blemishes.
- Tap root small and not too fleshy.
- Flesh firm, crisp, and fine-grained. Avoid stringiness, which indicates overmaturity.
- Medium-size beets, 1 1/2 to 2 1/2 inches in diameter, are preferred for table beets. Pickling beets should be 3/4 to 1 inch in diameter.
- Tops are cut off, leaving 1 inch of stem.



Broccoli

One head per plate (four heads needed).

Judging Considerations

- Each head is at least 3 inches in diameter.
- Stems 5 to 6 inches long.
- Heads compact and dark or purplish-green in color, depending on variety.
- Avoid any yellowing of flowers in head. This indicates overmaturity and lack of quality.
- Heads are free from insects, worms, wilting, or other injury.



Brussels Sprouts

Seven heads per plate (total of 28 heads needed).

Judging Considerations

- Heads are compact.
- Heads are uniform in diameter; 1 inch is best.
- Color is uniformly green.
- Heads are not yellowing, overmature, puffy, or opening.
- Stem does not exceed 1/2 inch.

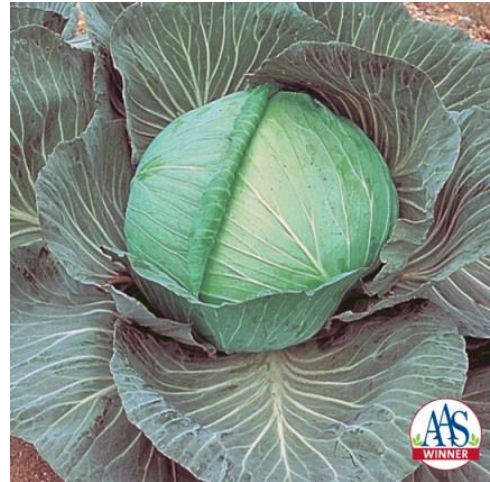


Cabbage

One head per plate (total of four heads needed).

Judging Considerations

- Head are firm, heavy for its size, free from insect or disease damage, and not withered or soft.
- Midribs are not too large. Leaves are not trimmed too closely. Three wrapper leaves should be left after trimming. Core is 1/4-inch long to hold leaves firmly.
- Head is of best commercial size and weight for its variety.



Carrots

Five roots per plate (total of 20 roots needed).

Judging Considerations

- Specimens are typical of variety.
- Select carrots that are smooth, clean, straight, fresh, firm, crisp, and of color characteristic of the variety.
- Carrots are free from sunburn (greening at the top).
- There are no side roots, cracks, deformities, or mechanical injuries.
- When cut, the core should have the size, color, and firmness characteristic of the variety.
- Avoid oversized or coarse specimens, except in “largest specimen” classes.
- Tap roots are not trimmed.
- Tops are cut to 1 inch.



Cauliflower

One head per plate (total of four heads needed).

Judging Considerations

- Outer green leaves are present to protect the head.
- Head is white, yellow, or purple, solid, uniform, and smooth.
- Stem is not trimmed too closely; four to six leaves remain.
- Outer green leaves are trimmed to 1 inch above the head, just before judging.
- Heads are clean and no soil remains.
- Heads do not have discolored buds.
- Heads are not be overmature or show any development of the flower bud (ricing), which causes a rough surface.



Celeriac

Three roots per plate (total of 12 roots needed).

Judging Considerations

- Roots are rough-surfaced and round, measuring 2 to 6 inches in diameter.
- The root has crisp, white flesh, and smell like celery.
- Roots show uniform color and are solid.
- Celeriac is not too large or small, wilted, or damaged from worms or insects.



Celery

One plant per plate (total of four plants needed).

Judging Considerations

- No roots present.
- Butt is trimmed straight across below the crown.
- No split, pithy, woody, or stringy stalks are visible.
- Stalks are clean and free from rust defects or mechanical injury.
- Color is uniform (outside stalks may be removed).
- Seed stalk is not visible in the center of the plant.



Chinese Cabbage

One plant per plate (total of four plants needed).

Judging Considerations

- Chinese cabbage heads are compact and elongated with thin, many-veined leaves.
- Color can be light green to white.
 - Bok choy has dark green leaves and white stalks.
 - Bok choy does not have a solid head.
- Heads are solid and firm with tender, crisp leaves, and uniform color.
- Chinese cabbage heads do not show very prominent midribs, wilted leaves, or uneven color.



Chives

Three plants per plate (total of 12 plants needed).

Judging Considerations

- Chives are dark green with hollow, thin leaves, preferably without flowers.
- Leaves are evenly green showing no sign of blemish or drying.
- Wilted or dried leaves, insect damage, or unevenly colored leaves are not present.



Collards

Three plants per plate (total of 12 plants needed).

Judging Considerations

- Rosettes consist of tender, dark green leaves attached to the main stem.
- Roots are removed.
- Leaves are firm, and crisp with uniform color and size.
- Leaves are not wilted, dirty, or damaged.



Corn, Sweet

Three ears per plate (total of 12 ears needed).

Judging Considerations

- Ears filled out to the tip. Kernels are tender and juicy.
- Ears are free from insect or disease injury.
- Husks are fresh and green. Dry or yellow husks indicate overmaturity.
- Husks are pulled back slightly to display and examine the quality of the kernels.
- Silks are trimmed to 1 inch and shanks to 1 to 2 inches.



Cucumbers

Three slicing or 11 pickling per plate (total of 12 slicing or 44 pickling cucumbers needed).

Judging Considerations

- Each specimen is crisp, straight, and fine-grained, with shape typical of variety.
- Pickling cucumbers are 2 to 5 inches long. Slicing cucumbers are 6 to 8 inches long but may vary with variety.
- Cucumbers are uniform in size, shape, color, and spines characteristic of the variety.
- Specimens are not overripe with large, mature seeds. These are generally puffy or dull in color.

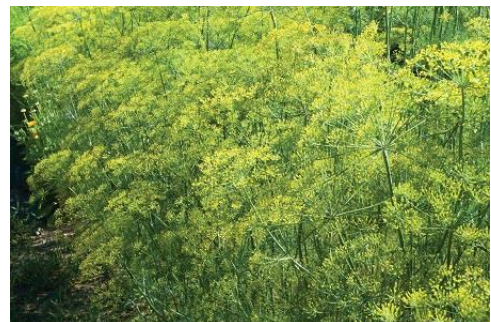


Dill

One plant per plate (total of four plants needed).

Judging Considerations

- Dill has green, fragrant flower heads with stems and green leaves.
- Seeds are brown and immature and are not shedding.
- Leaves and stems are fresh and clean.
- Dirty foliage or flower heads, disease or insect damage, discoloration, or wilted foliage are not present.



Eggplant

One fruit per plate (total of four fruit needed).

Judging Considerations

- Smooth and firm with small blossom scar and no blemishes.
- Color is uniformly purple, white, or black and shiny.
- No greening or bronzing.
- The stem is short, about 1 inch. The calyx should be fresh and green.
- Size is about 4 inches or consistent with variety.
- No evidence of soil or pest damage.



Endive

Three plants per plate (total of 12 plants needed).

Judging Considerations

- Leaves attached to the crown.
- Plants are uniform in color, shape, and size.
- Heads are compact.
- Plant centers show creamy white.
- All leaves are tender, crisp, and fresh.



Garlic

Five bulbs (this is the entire bulb, not five cloves of garlic) per plate (total of 20 bulbs needed).

Judging Considerations

- Garlic bulbs are 1 1/2 to 3 inches in diameter.
- Color is white to pink; skin is dry and papery.
- Individual cloves are uniform in size and shape. Clear skin also is a merit.
- Soft or damaged bulbs are poor quality.
- Cloves are not sprouting.



Grapes

One cluster per plate (total of four clusters needed).

Judging Considerations

- Grape skins may be green, red, purple, or yellow when ripe.
- The skin is usually thin and the flesh juicy. Seeds may or may not be present, depending on the variety.
- Plump fruits with stem securely attached, rich coloring, and absence of shriveling or skin blemishes.
- Blackening of skin near stem, soft or shriveled fruits, and mold present on fruits indicate underripe or overripe fruit.



Jicama

Three tubers per plate (total of 12 tubers needed).

Also called Mexican potato, Mexican turnip, Mexican yam bean, Chinese turnip, and Chinese potato

Judging Considerations

- Free of bruises or cracks. Appearance is fresh and firm.
- Cracked, bruised, or soft tubers are poor quality.



Kale

One plant per plate (total of four plants needed).

Judging Considerations

- Foliage color is grayish or blue-green and curly. Kale looks like a non-heading cabbage.
- Firm leaves and color uniformity are important.
- Wilted, dirty, or damaged leaves or uneven color are poor quality.



Kohlrabi

Three balls (stems) per plate (total of 12 balls/stems needed).

Judging Considerations

- Roots are removed just below the ball.
- Four to six upper leaves trimmed to 3 inches in length.
- Specimens should be 2 to 3 inches in diameter.
- Hard, woody, or pithy kohlrabi is poor quality.
- The skin is easily punctured with a fingernail.



Leeks

Five bulbs per plate (total of 20 bulbs needed).

Judging Considerations

- Leeks are large and green with thick, straight 1- to 2-inch thick stems.
- Leeks have flattened, V-shaped green leaves.
- Uniform size, shape, and color, dark green leaves, and clear white bulbs.
- Underripe and overripe leeks will show uneven color and faded or pale tops. Avoid wilted or damaged leeks.



Lettuce, Head

One head per plate (total of four heads needed).

Note: Iceberg and Romaine lettuce and similar large headed lettuce are in this class.

Judging Considerations

- Heads are fresh, crisp, firm, and fine-textured.
- No yellowed outer leaves.
- A core about 1/4-inch long remains.
- One to three wrapper leaves to protect the head remain.
- Do not exhibit broken ribs, tip burn, and sliminess.
- Heads are heavy for their size.
- Note: Always keep lettuce cool.



Lettuce, Leaf

Three plants per plate (total of 12 plants needed).

Judging Considerations

- Plants are fresh, crisp, firm, and fine-textured.
- Do not have yellowed outer leaves.
- A core about 1/4-inch long remains.
- One to three wrapper leaves to protect the head remain.
- Avoid broken ribs, tip burn, and sliminess.
- Note: Always keep lettuce cool.



Mint

Five stems per plate (total of 20 stems needed).

Judging Considerations

- Stems are green, fresh, and crisp. Free of insect damage or yellowing, with a strong, pleasing aroma.
- No signs of insect damage and blackened stems.



Muskmelons

One melon per plate (total of four melons needed).

Judging Considerations

- Free from cracks, decay, and injury.
- The stem is removed smoothly.
- The melon is neither overripe nor underripe.
- No soil remains in the netting.



Mustard

Five stems per plate (total of 20 stems needed).

Judging Considerations

- Fresh, clean, uniform, leaves and stems.
- Dirty, diseased, discolored, or wilted leaves or stems are not present.



Okra

Five pods per plate (total of 20 pods needed).

Judging Considerations

- Pods are uniform and not more than 3 inches long.
- Pods are light green and tender; okra becomes tough rapidly.
-
- Length and taper at the points should be uniform.
- Note: Dried pods are not acceptable.



Onions, Dry

Five bulbs per plate (total of 20 bulbs needed).

Judging Considerations

- Each onion has bright, hard, dry skin and is well-shaped for the variety. There are no splits or doubles.
- Small basal roots are trimmed to ¼-inch long.
- Bulbs are not peeled.
- Necks are small, dry, and not green.
- Color and size are typical of the variety.



Onions, Green

One bunch of five bulbs per plate (total of 20 bulbs needed).

Judging Considerations

- Onions are tender, medium-sized stems with long white shanks.
- Shanks are straight, smooth, and uniform in size; fresh, green tops trimmed to 3 inches above the white shank.
- Roots cut to 1/2-inch long.
- Wrapper leaves removed to expose the long, white shanks.



Parsley

One bunch, 1/2 inch in diameter, per plate (total of four bunches needed).

Judging Considerations

- Fresh, bright green, and free of soil.
- No yellow or discolored leaves.
- Stems are at least 4 inches with overall length 8 to 10 inches.



Parsnips

Three roots per plate (total of 12 roots needed).

Judging Considerations

- Roots firm, smooth, and well-shaped for the variety.
- Light, creamy-color skins.
- Medium size (5 to 7 inches) indicates best quality.
- Tops trimmed to 1 inch.
- Soft, shriveled roots are not present as they are undesirable and unpalatable.



Peas, in Pod

Twelve pods per plate (total of 24 pods needed).

Judging Considerations

- Pods are fresh, bright green, crisp, straight, and unblemished; evenly filled with well-sized but tender peas.
- Flat, wilted, or discolored pods are poor quality.
- Hard peas indicate overmaturity.

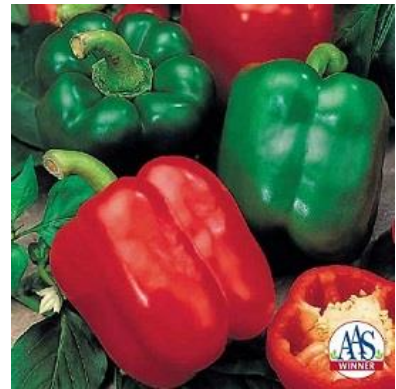


Peppers

Three fruits per plate (total of 12 fruits needed).

Judging Considerations

- Fresh, firm, evenly colored, heavy for their size, and true to shape for the variety.
- Green peppers do not show any red color.
- Free of sun scald and insect, disease, or mechanical injury.
- Stems 1/2-inch long.



Potatoes

Five tubers plate (total of 20 tubers needed. Note: Tubers are cleaned with a soft brush.).

Judging Considerations

- Uniformity, shallowness of eyes, smoothness, condition, size, and trueness of type are considered.
- Tubers are free from soil, insect, disease, and mechanical injuries.
- No soil is present.
- Tubers don't have cracks, sunburn, nor are oversized.



Pumpkins, Pie

One pumpkin per plate (total of four pumpkins needed. Note: Pumpkins are cleaned using a soft brush.).

Judging Considerations

- Color and shape are uniform.
- Pumpkin has good weight for its size.
- Pumpkin is free of injuries and blemishes.
- The stem is attached and not less than 1-inch long.
- The pumpkin is mature with a hard rind, resistant to puncture with thumbnail.

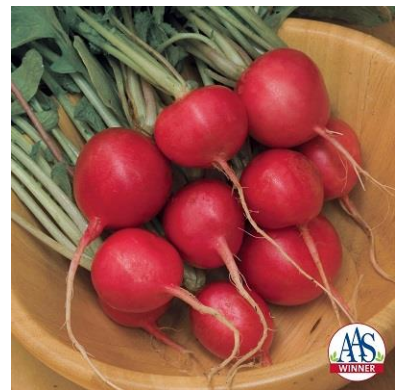


Radishes

Five roots per plate (total of 20 roots needed).

Judging Considerations

- Specimens are medium-sized, smooth, firm, and crisp.
- Entries are uniform in size and color, and true to the variety.
- Mild pressure indicates undesirable softness or a spongy texture.
- Tops are cut to 1 inch.



Raspberries

Fifteen berries per plate (total of 60 berries needed).

Judging Considerations

- Fruit does not contain the central core.
- Raspberries may be red, black, purple, or golden when ripe.
- Fruit are juicy, fragrant, and rich in color.
- Fruit are firm and not overripe or underripe.
- Berries are not soft and falling apart, leaking, bruised or moldy.



Rhubarb

Five stalks per plate (total of 20 stalks needed. Note: Wilted rhubarb can be soaked in ice water to restore firmness and color.).

Judging Considerations

- Stalks are fresh, firm, and thick yet not coarse.
- Small portions of leaves (1/2 to 1 inch) remain to prevent bleeding.
- Stalks are pulled, not cut, from the crown. The sheath may be removed.



Rosemary

Five stems per plate (total of 20 stems needed).

Judging Considerations

- Leaves are green and pliable, not brittle, or dry.
- Free of insect damage or yellowing with a strong, pleasant aroma.



Rutabaga

One root per plate (total of four roots needed).

Judging Considerations

- Medium-sized (4 to 6 inches in diameter), uniform, fresh, and bright light-purple and cream color.
- Free of insect, disease, or mechanical injury.
- Leaves are removed and stems are 1-inch long.



Salsify (Oyster Plant)

Five roots per plate (total of 20 roots needed).

Judging Considerations

- Roots are 1 to 1 1/2 inches at greatest diameter.
- Length not less than 6 inches.
- Roots straight with an even taper.
- All side roots removed.
- Tops trimmed to 1 inch.
- No soil on roots.



Shallots

Five roots per plate (total of 20 roots needed).

Judging Considerations

- Round or oblong bulbs.
- Shallots have dry yellow or red skin, are about 1 inch in diameter and up to 2½ inches long.
- Bulbs are crisp with uniform color.
- Shallots are relatively heavy, with clear skin, and uniform in size and shape.
- Bulbs do not have thick, soft necks, nor are damaged, nor overmature/under mature.



Spinach

Three plants per plate (total of 12 plants needed).

Judging Considerations

- Leaves are fresh, thick, and dark green, smooth or crumpled.
- Indications of poor handling or overmaturity include wilted foliage, poor foliage color, and gritty texture.

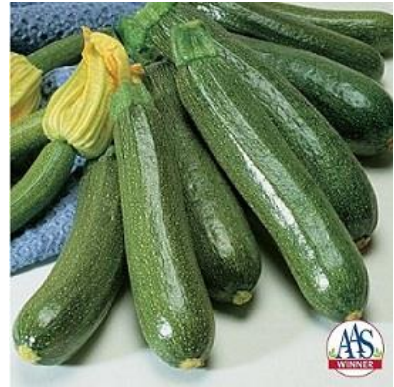


Squash, Summer

Three squash per plate (total 12 squash needed. Note: Brush to clean off soil, but do not wash.).

Judging Considerations

- Small- to medium-sized with a soft and tender rind.
- Uniform size, shape, and color.
- About 1/2-inch long stem remains.
- No soil is present.



Squash, Winter

One squash per plate (total 4 squash needed).

Judging Considerations

- Maturity is indicated by the hardness of the outer rind, resistant to puncture with thumbnail.
- Specimens are true to variety in type, shape, and color.
- Free from insect, disease, or mechanical injury.
- The stem is attached and about 1-inch long.



Strawberries

Fifteen berries per plate (total of 60 berries needed).

Judging Considerations

- Fruit are cone-shaped with even, red color.
- Stems cut to 1 inch, with calyxes attached.
- Rich red skin with a juicy red flesh.
- The skin is free of bruises and blemishes.
- No soil is present.
- No mold on the skin, pulpy core, bruised flesh, and brown calyx or soft tissue near the calyx.

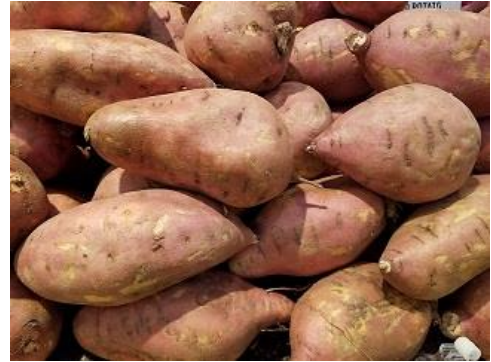


Sweet Potatoes

Three roots per plate (total 12 roots needed).

Judging Considerations

- Sweet potato roots are round, spindle-shaped, or cylindrical.
- Sweet potatoes may have red, orange, or yellow skin. Skin can be smooth or russeted.
- Roots are fresh and free from blemishes.
- Branched, blemished, or cracked roots, and uneven color are not acceptable.



Swiss Chard

Five stalks (leaf and petiole are one stalk) per plate (total 20 stalks needed).

Judging Considerations

- Entries are fresh, crisp, and have bright-green leaves with clear stalks.
- Stalks are free from injury.
- Entries are uniform in size and color and all of one variety.
- Stalks are medium to large size.



Thyme

Five stems per plate (total 20 stems needed).

Judging Considerations

- Green stems must be fresh.
- Stems are free of insect damage or yellowing and have a strong, pleasing aroma.
- Stems are not wilted, have signs of insect damage, nor blackened stems.



Tomatoes, Green (Pickling or Preserving)

Seven fruits per plate (total of 28 fruits needed).

Judging Considerations

- Entries are uniform in shape and color and are true to type and variety.
- Tomatoes are free from cracks, insect or mechanical injury, sun scald, or blemishes.
- Stems are retained for green tomatoes.



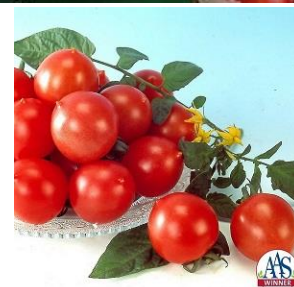
Tomatoes, Ripe

Large, slicing tomatoes: Five fruits per plate (total 20 fruits needed).

Small salad tomatoes (cherry, grape): Eight to ten fruits per plate (total of 32 to 40 fruits needed)

Judging Considerations

- Entries are uniform in shape and color and are true to type and variety.
- Tomatoes are free from cracks, insect or mechanical injury, sun scald, or blemishes.
- Entries are well-colored, ripe, and in prime condition for slicing.
- No green streaks evident, unless it is a characteristic of the variety.
- Stems removed.

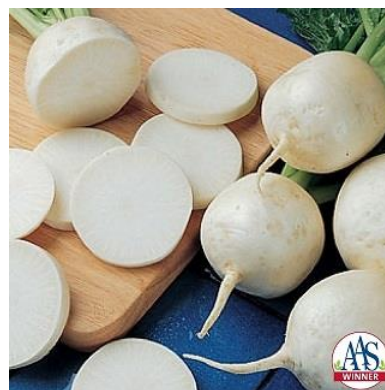


Turnips

Three roots per plate (total 12 roots needed).

Judging Considerations

- Entries may be white, purple-topped, or yellow.
- Entries are uniform in size and true to type in shape and color.
- They are medium size, young, and tender.
- Tops are trimmed to 1 inch.
- Each turnip is smooth, firm, bright-colored, and with few leaf scars.

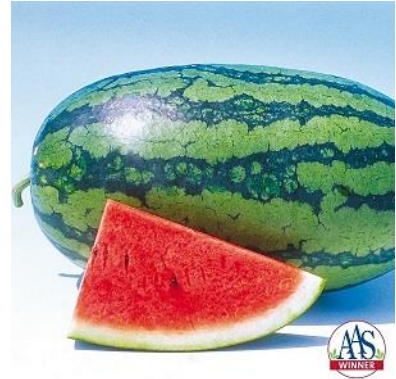


Watermelon

One melon per plate (total of 4 melons needed. Note: Wipe off soil but do not wash.).

Judging Considerations

- Watermelon is uniform in color; ground spot may be yellowish in color but not white or pale green.
- The entire watermelon has a smooth surface.
- Watermelon is mature but not overripe.
- Watermelon is free of sun scald, decay, and hail or other damage.
- The stem is not less than 1-inch long.



Winter Radishes (Daikon)

Three roots per plate (total of 12 roots needed).

Judging Considerations

- Winter radish roots are large and round or elongated.
- Their skins may be black, white, or pink. Their flesh should be firm, crisp, and white.
- Roots are firm, crisp, and brightly colored.
- Good, uniform shape for the variety with smooth, clean skin.
- Poor characteristics include overmature roots, poor shape, color, or rough texture.

