

AMERICAN PEONY SOCIETY

Bulletin

MARCH - 1947
Number 104

Table of Contents

W. F. CHRISTMAN, Editor
Northbrook, Ill.

	Page
President's Message—George W. Peyton	3
Peonies in the Pacific Northwest—Reno Rosefield	5
Frost Damage to Peonies—Fred Winslow	8
Peony Mlokosewitschi	9
Nematode Control—Gardener's Chronicle	10
What Is D.D.T., 2-4-D and Many Other Spray Materials—Dr. E. D. Witman	13
Color in Evergreens—L. L. Kumlain	17
Comments from Indiana—Fred Winslow	18
Comments from Alabama—Pope M. Long	19
Single Peonies—Mrs. Walter Brewster	19
2-4-D Sprayer Contamination—R. H. Landon	20
I Would Not Want to Be a Peony Judge—Harry L. Smith	21
A Communication from Minnesota—E. H. Lins	22
Peony Vines—Wm. H. Krekler	22
Where the Bulletins Go—W. F. Christman	23
Peonies or Gladiolus, That is the Question?—L. E. May	24
Give Me Land, Lots of Land—F. O. Hubert	26
Notes from Kansas—Mrs. L. E. Brown	28
Secretary's Notes—W. F. Christman	29
Department of Registration	33
New Members Since Last Bulletin	34
One October Day—Fred Stoll	35
A Social Event—W. T. Coe	36
Combined Schedule, Boston Peony Show	37

Entered as second-class matter at the post office at Northbrook, Ill.,
July 3, 1928, under Act of March 3, 1879.

Annual Subscription, \$1.00 Per Year, Included with Yearly Dues
Published quarterly by the

AMERICAN PEONY SOCIETY
NORTHBROOK, ILLINOIS

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Membership in the Society is open to both professional and amateur growers. Nomination is not necessary for those desiring admission, but a list of applicants for membership is presented to the Society at its annual meeting and the names are there voted upon.

Those who make application for membership at any time receive the current publications of the Society as they are issued.

The dues are \$3.00 a year, of which \$1.00 is toward a year's subscription to the American Peony Society BULLETIN. *All checks covering membership dues should be made to The American Peony Society and sent to the Secretary with application for membership.* Dues in future are to run from January 1st to January 1st of the following year.

Back BULLETINS of the Society will be charged for at the rate of 25 cents per copy and 50 cents for the Symposium Number (No. 14). To non-members these prices are doubled. No BULLETINS available prior to No. 13.



AMERICAN Peony Society Bulletin



MARCH, 1947

The President's Message

At the coming annual meeting of the Society and its directors a great many matters of vital importance should be discussed and decisions of interest to all be made. In order to be able to present these matters intelligently to those meetings, the help and co-operation of the members is greatly needed. So an appeal is hereby made to every member of The American Peony Society to send in to us at once his views on the following matters and on any others not mentioned which he thinks should be brought up.

A New Manual?

The entire edition of our old Manual has been sold. Shall we prepare and publish a new one? So far as I am aware there is now no book available to the public on the Peony. There should be one. Shall the Society undertake the task of publishing one? If so many difficulties will have to be solved. Some of the questions that must be answered are: How large a book should we issue? What should be the price at which it is sold to get maximum distribution? What should the book include in its contents? And perhaps most important of all, how should it be financed? In order to place the book in the hands of the greatest number of persons, its price to them should not be prohibitive as was that of the old Manual. A low price will necessarily limit the size of the book. So only essential matters should be included. What is your idea of what is essential? Certainly a list of all new peonies that have been put out since the publication of the old Manual in 1928 with good but brief descriptions should be included. Possibly a check list of varieties now in commerce in this country would be desirable. An informative article on the commercial cut flower peony business including cultivation, cutting, storage and marketing with a list of the better varieties suitable for this very large business would be very desirable. A complete list of the hybrid peonies now available with descriptions and pedigrees and an article by an acknowledged authority on their production, propagation cultivation and uses is a must. Likewise a similar one on tree peonies with a list of all known varieties now offered commercially with adequate descriptions should be included. Certainly a good article on cultivation, planting, propagation and other phases of peony culture should be given. How to prepare for and put on a show should also be touched upon.

A New Rating List?

In order to make the Manual complete as many new varieties should be rated as possible. To do this shall we get out at once a new rating list?

If so what varieties should be included? Should it have only the new ones since say 1925 with the possible addition of some older ones that are now considered unfairly rated or should all varieties now in commerce be rated? Should the entire membership participate in this rating or should a select committee of the members be chosen to do the job? If the latter how large should this committee be? I think I may very safely say for the Board of Directors and Officers of the Society that we will very definitely be unwilling to go to the trouble of compiling a new rating list which involves a very large expenditure of time and money and after going to all this expense and trouble have the membership fall down on the job and only a handful of these lists be returned and after the ratings given in these lists have been compiled and published, have the ones who have borne the brunt of the job be jumped on as publishing unfair, padded and distorted ratings and this mostly by those who took no part in the rating. This has been done in the past. We do not care to have a repetition of this. So it is definitely up to the membership of the Society. What is your pleasure in the matter?

Election of Directors

The charge has been frequently made in the past few years that the American Peony Society is a closed corporation and that the general membership is given no choice in the selection of its directors, but that invariably the old directors are re-elected and no change is ever made unless death steps in. The fact is always overlooked that the membership may always nominate their selection for directors at any time before the annual meeting in writing to the Secretary of the Society. So in order to give them as much opportunity as possible will every member please send in at once his nominations for the three directors to be chosen at the coming meeting? The directors whose terms expire are Messrs. Little, Thurlow and White. If any person receives as many as ten nominations his name will be presented to the Annual Meeting for election. Please do not fail to send in your selections naming three of course. It may here be called to your attention that Mr. Gayle's plan for the reorganization of the Society will come up for consideration also.

The Coming Show

For the first time since 1939 the Annual Show and Meeting of the Society returns to the East. Boston is the place. Horticultural Hall, 300 Massachusetts Avenue, the building, Tuesday and Wednesday, June 17 and 18 the time. The Massachusetts Horticultural Society the hosts. Our visits to Boston in the past have always been most enjoyable and our shows excellent. So let us do everything in our power to make the coming meeting a success. We hope every one who can possibly do so will plan to be present and if possible to take part in the show by exhibiting as many flowers as he can. A comprehensive schedule has been prepared which embraces classes of the Massachusetts Horticultural Society and a selected number of American Peony Society classes. Duplications have been eliminated as far as possible and so by referring to both schedules you will find every need attended to and ample classes for all provided. Some of them carry substantial money prizes. Others coveted medals and other honors. So plan to come and show your flowers and write and tell us what your intentions are.

Boston has ample hotel accommodations to please every purse and the city is one that all good Americans should visit. Almost every foot of it and the surrounding country is steeped in historical lore. No one will ever regret a visit there.

Some of our old friends, who always did their part in exhibiting, are now dead and their gardens maybe not kept up. All of us who had the privilege of knowing them will miss Wilbur C. Otis and William J. Doherty, both of whom were friends staunch and true and exhibitors of the first class. Some of our new members we hope will step in and fill their places at least on the exhibition tables. We shall certainly hope to see once more the grand exhibits of Cherry Hill, Prof. Saunders and Thos. Higgins and we also hope that Frank Allison and others of our good friends will not be missing. We also hope that both Mrs. Otis and Mrs. Doherty and their families will come to the show and give us a chance to renew old acquaintance and if possible bring some flowers to show from the old gardens.

GEORGE W. PEYTON, *President*.

Rapidan, Virginia, March 1, 1947.

A questionnaire is enclosed for your use in answering the many questions.

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Peonies in the Pacific Northwest

RENO ROSEFIELD, Tigard, Oregon

On page 37 of Bulletin 100 appears an article by Mr. Floyd Bass of New Augusta, Indiana, a portion of which is devoted to the subject of the effects of acid soil on peonies. The conclusion reached appears to be that "peonies will not thrive in soil on the acid side of neutral."

This really is an important subject that I think deserves a little more investigation since the success of any growing plant depends on soil that is congenial and a tolerable climate. I will touch lightly on climate later on.

The greater portion of the lands in the states of Oregon and Washington was originally in great forests of fir and cedar. Much of it still is. In fact the greater portion still is in forest. The soil in these forests is covered with a more or less heavy carpet of humus which is the decomposed leaves or needles that has been accumulating for centuries. Much of the undergrowth is composed of what is known as "ericaceous" plants, that is, plants that are absolutely dependent on acid soil for their well being. In this class among others are azaleas and rhododendrons which grow native in Oregon and Washington to a great extent. The ericaceous plants may tolerate a neutral soil but will not tolerate an alkaline soil or lime in any form. Most of the soils in this section are well drained, especially those on rolling lands. These soils in their original form, are a wholesome, smelling substance, and in this connection a wholesome acid soil should not be confused with a sour soil, which is usually a condition that is not congenial to plant growth of any kind.

About eight years ago I purchased a tract of land here in Oregon 12 miles from down town Portland and located on the West Side Pacific Highway. This land happened to be in forest and with masses of undergrowth. It had been what is known here as "logged off" in the past but new growth of fir covered it at the time I acquired it. A considerable portion of this land was cleared during the three years following its purchase. The clearing was done carefully so as to preserve as much as possible the humus which was very heavy. This clearing was completed in 1940 and several acres planted to peonies, much of it for cutflower production. Other portions of the same land were planted to azaleas and rhododendrons of which I now have quite a large stock. Naturally the azaleas and rhododendrons are growing and thriving profusely because the soil is a natural acid soil which is abso-

lutely, essential to them. But what is really interesting is that the peonies are also thriving and growing profusely. *Martha Bulloch* stands almost up to my chin when full grown and blooming. And this is also true of several others, particularly *W. F. Christman* and *Venus*. When I was located in Nebraska and Iowa I found it necessary to bend over pretty much when cutting the peony bloom for market. Here several varieties may be cut in a standing position. Of course this is true of only a few of the naturally taller growing varieties, and these usually attain a height of four feet and sometime more. Most of the varieties will attain from 36 to 45 inches. The bloom is generally larger here than they were for me in the central states and the color is usually deeper. By this I mean that there is not so much fading from sunlight here as in the central states. In the case of some varieties that are inclined to tones of purple, the purple will predominate, and in such cases the color effect may not be as attractive as in a climate where there is more fading out. However, there are few varieties that have this objection and many varieties have their good qualities intensified here. I have frequently seen *Walter Faxon* blooms here that would compare well with *Mrs. Livingston Farrand*. And when the weather is cool and somewhat misty, which is often the case at the time the peonies are blooming, such varieties as *Moonglow* and *Yosemite* are really a near yellow double peony. One year I saw them with the yellow extending almost the entire length of the petals. The effect was beautiful beyond description.

I am submitting a photograph showing peonies as grown in acid soil on my place. The blooms in the arms of the young lady are *Sarah Bernhardt* and the plants besides her that are blooming are *Myrtle Gentry*. If Mr. Brand could see some of the specimens of bloom on his variety *Myrtle Gentry* it would warm his heart. This variety is a lavender pink and the climate here brings out the color beautifully. It is very exquisite. Practically all the varieties of peonies I grow here do well with one exception and that one is my old love of bygone years,—*Karl Rosenfield*. This variety was originated at West Point, Nebraska and was very fine there but I have never seen larger and finer red peonies than *Karl Rosenfield* as grown near Des Moines, Iowa. The soil I had there was known as Carrington Loam and was a glacial drift soil in what is known geologically as "The Wisconsin Drift." My soil here in Oregon is what is classified as Willamette Loam and is a rich, well drained, friable soil. *Karl Rosenfield* grows and blooms here but instead of it being large and well developed, and early as in the Central States, it is one of the latest to bloom here and the petals are inclined to be short. I have no idea why it performs thus. On the other hand *Fontenelle* is away and by far a better peony here than it was in the Midwest. *Richard Carvel* is also good here but inclined to be a little floppy. Most of the other reds also do well except that I do not think there is any difference in *Philippe Rivoire*.

A few words on Oregon climate may be interesting from the standpoint of peony growing. Generally speaking I would say the climate here has many features that would be considered unfavorable for peonies, and yet for some reason or other the peonies out do themselves in spite of these handicaps. The principal fault, as far as I see it for peonies, is that there is considerable rain through all of the fall and winter months, and very little, or no freezing. This last winter's lowest temperature was 27 degrees on my place, which is only a few degrees below freezing. This lasted only a few days, and during much of the time the temperature was from 33 to 35 and up to 48 during the day. Anywhere from three to five inches of rain will fall a month during these days, and sometimes much more. With the

approach of March the rains let up a little and the temperature rises, especially during the day time. There are flowers blooming here every month of the year and I have seen *King Alfred* daffodills in bloom on February 22nd. However, in spite of the early spring in this part of the country the peonies bide their time and usually do not appear above ground much before the time real spring should arrive. They have grown up at times early in March but they grow slowly through those early spring days. The nights here are usually pretty cool and this condition prevails almost all through the year but more so during the spring months. This is due to the great masses of snow in the Cascade and Coast ranges of mountains which are but 50 miles from my gardens. Frost appears at times through March and April on clear nights when there is a breeze blowing in from the Cascades, which is an East wind. These frosts are infrequent some years, as in 1945 when I had no frost damage to the peonies at all. This year there have been two frosts, one on April 6th and one on April 27th that may have done some damage to the peony buds but the peonies do not show any injury at present and on this date,—April 29th, *W. F. Christman*, the peony, (not the Secretary) is standing forty-two inches high in his stocking feet.

Since coming out here to Oregon I have met up with many new and lovely flowers that I never knew in the central states, such as Azaleas, Camellias and Rhododendrons, to mention just a few. To these we may add the Portland Roses. You may easily imagine to what perfection the tea roses that are tender in central states will attain. However, in spite of all these gorgeous flowers that offer strong competition to the peony and to each other my love and admiration for the peony still remains strong as in days long ago when and in a location there was nothing that could approach them in their gorgeous floral display.

Peonies are being grown on the Pacific coast all the way from British Columbia to the vicinity of San Francisco and are doing especially well in many California communities. I sent a few plants to a lady in San Diego, California two years ago. She wrote me she had seen peonies growing elsewhere and thought them so beautiful she wished to at least try them in southern California. A year later she wrote to me she was awarded with some lovely bloom on the plants she received. Of course I do not know what these plants have done since, and it is possible they will become weak in time and not bloom, but peonies really will thrive and bloom in a mild climate if they are afforded a dormant period, and this period with us here is not the winter months, as elsewhere in the country, but during the months of July and August when we have our dry season. At this time the peonies should not be watered artificially but permitted to dry up somewhat. If the dry condition persists well into the fall months as it does in California, watering should be commenced in October and continued until the winter rains start.

In closing I would like to tell my friends in the central states that if you cannot grow the beautiful tender roses and the gorgeous Rhododendrons and Camellias, think nothing of it. Just secure a few plants of choice peonies and proceed to enjoy one of the most beautiful flowers in this world.

Notes on Frost Damage to Peonies

FRED E. WINSLOW, Salem, Indiana

It has been interesting to read in the BULLETIN of weather damage and especially to peonies. These notes in the Bulletin have been more or less of a general nature. It may be of interest to some to have something more specific, especially in regard to frost and freezing damage.

In 1945 I had three plantings of peonies, one in northern Illinois and two in southern Indiana. The most serious damage I ever experienced, occurred in the spring of 1945. The damage to the Illinois planting was negligible. The damage to a 4 year old planting of 500 clumps was no, very severe due to natural protection, but the most serious damage was experienced in connection with a three year old planting of about 350 clumps in southern Indiana. It was on this planting that the following notes were made. After the freezes, (for there were two or three of them), I made a general inspection, without making notes. The worst freeze caught them when about 20 to 30 inches high. The stalks doubled over and the buds usually touched or lay on the ground. But all of them straightened up except *Mons. Martin Cahuzac*, and *Georgiana Shaylor* which made a heroic effort but whose crooked stems seemed not to be able to straighten up. In general I made mental notes and it seemed to me that the darker colors, in general, seemed to be more hardy than the lighter ones. The patch had not been disbudded, and after the stems had righted themselves, where the central buds were killed, by disbudding them and leaving a branch bud most of the stalks produced fairly good commercial bloom. This and the fact that the price at the patch was doubled, saved the year from financial loss.

The notes below were made at about the time of the disbudding, and are based on the main central buds, which cut through the center, were black and dead.

Souv. de Louis		Richard Carvel,		Claire Dubois	80%
Bigot	80%	No damage		Hazel Kinney	70%
Laverne		Mary Brand	15%	Georgiana	
Christman	80%	Mons. Martin		Shaylor	80%
Grandiflora	75%	Cahuzac	80%	Denise	50%
Walter Faxon	67%	Jean Cooperman	70%	Mrs. Deane Funk	50%
Blanche King	50%	Mme. Emile		Hansina Brand	40%
Mrs. A. M. Brand		Lemoine	25%	Festiva Maxima	90%
	100%	James Kelway	15%	Phyllis Kelway	70%
John M. Good	80%	Martha Bulloch	75%	Some-ganoko	
Sarah Bernhardt	85%	Mrs. Edward		Jap)	20%
Kelway's Glorious	25%	Harding	80%	Solange	80%
Mrs. F. A.		Auguste Dessert	100%	President Wilson	50%
Goodrich	80%	Felix Crousse	25%	Grace Loomis	90%
Mrs. Romaine		Le Cygne	20%	Mabel Franklin	50%
B. Ware	75%	Phoebe Cary	50%	Eugenie Verdier	75%
La Perle	75%	Minnie Shaylor	10%	Mrs. Bryce	
Lora Dexheimer	100%	Elwood Pleas	80%	Fontaine	75%
Mrs. John M.		Marie Crousse	5%	Sarah K.	
Kleitsch	75%	Mme. Jules		Thurlow	50%
Thomas C.		Dessert	25%	Laura Dessert	75%
Thurlow	50%	Albert Crousse	50%	Philippe Rivoire	10%
				Myrtle Gentry	75%

Quite a number of questions rise from the above percentages of freezing losses, few of which I have the answers for. In 1946 we had a few losses from frosts, on which I did not make a detailed inspection. The percentages of loss for 1946 was not the same for the same varieties, many varieties hard hit in 1945, came through with little or no loss.



Peony Mlokosewitschi

This is really a fine outstanding flower of clear sulphur yellow color measuring some four or five inches in diameter. The following detailed account of this variety was written by T. H. Everett, that eminent Horticulturist of the New York Botanical Gardens and appeared in the Oct. 1946 issue of the Gardeners' Chronicle. We are unable to produce the picture accompanying the article, and made no effort to do so, as it was not a true representative of the variety, the photo being taken from a wilted flower. This is a most interesting species and I am sure our readers will enjoy knowing more about it. The article, in part, follows: Editor.

Professor A. P. Saunders, the outstanding American peony breeder, notes in "Peonies, the Manual of the American Peony Society" that it has "flower of a clear light yellow which is retained unaltered until the petals fall. The color is a shade deeper than *P. Wittmanniana*. Seedlings show not much variation in color. The foliage is also handsome and very individual. Altogether a most desirable garden plant." *Paeonia Mlokosewitschi* is a hardy herbaceous perennial having stout glabrous stems and biternate leaves that are dark bluish-green above, shortly pubescent and pale glaucous below; the margins and veins are red. The petals of the flowers number about eight, are more or less orbicular and are distinctly cupped. The stamens are very numerous and have filaments twice as long as the anthers. *Paeonia Mlokosewitschi* is so far as color goes, by far the best of the yellow-flowered herbaceous peonies and when accommodated comfortably it blooms freely. Its flowers are produced early in the season and it is sure to attract attention in any garden where it thrives, and here we may again quote Professor Saunders who says of it, "Although not always certain to succeed, it should at least be tried in every garden."

While it may not succeed everywhere, nevertheless its cultural requirements are in the main, the same as those of other herbaceous peonies; that is to say it appreciates a somewhat moist (but at the same time well drained) soil that is rich and deep, and a position in full sun. Rotted manure, bone-meal and wood ashes are excellent material to use to maintain and increase the fertility of the soil and one must bear in mind that peonies are gross feeders. During the season frequent shallow cultivation of the surface soil is of importance and periodic soakings with water are necessary during times of drought. A point to remember is that sanitation, including the prompt removal and burning of all decayed leaves, the cutting off (just below ground level) and the burning of all stems and foliage immediately after they have been killed by fall frosts, is most important in the control of disease. It is a good plan to spray the plants with Bordeaux mixture when the new foliage is a foot high in spring and again ten days or two weeks later. Propagation of the species we are considering here may be accomplished by division (August is the best time to attend to this) or by means of seeds, which should be sown as soon as they are ripe. Seeding

is usually done in cold-frames in late summer; ordinarily it is the following spring before germination takes place but not all appear then and some of the seedlings may take as long as eighteen months to appear, thus it is wise to leave the seed-bed undisturbed for this period of time. The first July after the seedlings are a year old (counting from the time they show their first leaves above the ground) they should be transplanted to nursery rows where the plants are grown on; the rows may be two feet apart and the plants a foot apart in rows. The nursery beds should be shaded lightly as baby peonies appreciate some protection from strong sunshine. In winter-time a mulch of litter or salt-hay is decidedly worthwhile.

To those unaccustomed to botanical nomenclature the name *Paeonia Mlokosewitschi* is somewhat forbidding, perhaps even a trifle terrifying; it prompts the neophyte to ask for its "common English name"—alas the plant is neither common nor English (nor yet American) and it has no common name. It is a native of the Caucasus and was first discovered there by Mlokosewitsch towards the end of the last century. Certainly if all our plant collectors were Smiths and Jones and Browns the way of the gardener called upon to struggle with commemorative specific names would be the easier, at least this would be true for the English-speaking peoples but then, for ought I know, Smithii, Jonesii and Brownii look as peculiar to a Russian and are as difficult for him to pronounce as is Mlokosewitschi for us—at least I hope so.

Paeonia Mlokosewitschi is closely related to *P. Wittmanniana* and to *P. macrophylla*, which together form a group of yellow-flowered species all originating in the same general geographical region. Professor Saunders has employed the subject of our present discussion in his breeding work and his latest listings include hybrids between it and *P. tenuifolia* and between it and *P. Veitchii*, both groups being among the earliest flowering of peonies.

Gardeners Chronicle, October 1946



Nematode Control

In the last bulletin I promised to have something for you in regard to the control or elimination of nematodes that are a troublesome pest to many growers of peonies and other crops.

The preparation I had in mind is known as D-D. This is a soil fumigant introduced and manufactured by the Shell Chemical Corporation, San Francisco, California. Now in case any of our members wants the chemical name of this fumigant, here it is. "Dichloropropane-Dichloropropylene." I am sure you will all agree that "D-D" is easier on the tonsils to say.

D-D is a dark colored, liquid mixture of unsaturated chlorinated compounds which has been shown to possess extremely valuable properties as a soil fumigant for the control of nematodes and other soil-borne pests. I am of the opinion that this would include the angle worm, or earth worm that all of us gardeners are so familiar with, and even the fishermen have learned to greatly appreciate.

Unlike the nematodes parasitizing man and animals, nematodes attacking plants are very small, usually between 1-25 and 1-64 of an inch in length. In spite of their miniature size, they can do untold damage to many plants like the thrip does to the bloom of the flower. Due to their small size and because they work underground, nematodes have been, and still are often overlooked as limiting factors in plant growth and plant production.

Certain forms, like the rot-knot nematode and some species of meadow nematodes, have a world wide distribution, and attack a wide variety of hosts while others are restricted to certain regions and attack only a few hosts, such as the sugar beet nematode, citrus nematode and a nematode which causes the red-ring disease of coconut palm.

In the United States the root knot nematode is one of the worst and most perplexing of agricultural pests. It is widely distributed in sandy soils through the Southern and South-western States and California, and can also be found in limited amounts on certain crops as far north as New York, Michigan, Oregon and Washington. It is also to be found quite generally in greenhouses.

It is difficult to make accurate surveys but it is conservatively estimated that in certain areas annual losses due to the nematode worm amount regularly to between 5 per cent and 25 per cent, and infrequently run much higher, and in some instances a complete failure is registered.

The D-D preparation is a comparatively new discovery and there is still research to be done before a full evaluation of all the factors which affect the influence of its use can be definitely determined, but this experimental work is now in progress and such variables as climatic conditions, soil composition, nature of crops and other factors is being fully investigated and recommendations deducted therefrom will be made available as soon as possible. These investigations by the U.S. Department of Agriculture, The Shell Development Co., The Shell Chemical Division and the Shell Agricultural Laboratory have cleared up certain points previously in doubt and the following is a brief summary of some of their findings.

Pests Controlled

Experiments, demonstrations and commercial applications already carried out have definitely demonstrated and proved beyond a question of doubt that if D-D is applied under proper conditions, it can be used to control nematodes, wire-worms and the garden centipede which separately or collectively infest many garden and field crops, among which include beans, carrots, celery, cucumbers, lettuce, melons, peppers, tomatoes, flower crops, woody plants and many others.

Requirements for Successful Control

It has been demonstrated that applications of D-D at a rate of approximately 200 pounds per acre should give control of the ordinary root-knot nematodes. It will take further experimenting to determine definitely how long this control will be effective after a local application. Work already done along this line indicates that the control is effective for a period of three or four years, but there is not as yet sufficient evidence to make a definite statement that these results will be obtained in all areas and under all conditions. Local conditions, including climate, type of soil, possibility of reinfestation through irrigation and other factors influence the period of control.

Method of Application

Most of the injections of D-D in the experimental work that has already been undertaken in the United States have been made by means of spot injections, employing a portable weed exterminator gun of which there are a number of types on the market. For comparatively small plots, and sections where labor is cheap, this method would probably be the most economical method of application. In this connection I might add that the Shell Chemical Co., has developed a mechanical trailer applicator which

applies the material under pressure in a continuous stream to the desired depth in covered furrows. This method, of course, would be preferable where large areas are to be treated. For the peony fan, with a small planting, the hand applicator would doubtless be all that would be required for desired results.

Depth and Distribution of Applications

Very good results have been obtained in many soils when D-D is applied to a depth of between 6 and 8 inches. In such application the fumigant will diffuse downwards some 16 or 18 inches and upwards to the surface of the soil. Applications made at a greater depth might leave the first inch or two of the soil insufficiently fumigated for satisfactory control and shallower applications might not diffuse far enough into the soil to control the pests in the lower area.

In respect to horizontal diffusion, it has been found that the limit of penetration for effective control is in the neighborhood of 8 to 10 inches from the point of injection. It is therefore apparent that applications, no matter how applied, should not be more than 18 inches apart. Some operators consider a closer spacing of 12 to 15 inches more desirable.

When application is made at the rate of 200 lbs. per acre by the spot-injection method at points 18 inches apart, the amount of D-D at each individual injection point would be $1 \frac{5}{16}$ cu. inches and at 15 in. spacing $1 \frac{1}{4}$ cu. inches. Where large areas are to be covered, the material can be obtained in drums holding 55 gallons, approximately 520 lbs. net weight of contents, and in 1 and 5 gallon containers holding approximately 10 and 50 pounds respectively.

Effect of Soil Conditions

It has been proved by various experiments that for best results it is quite important that the soil, at the time of application, be in fit condition for planting. Rough or uneven ground, or soil that is full of trash, or too dry or too wet for easy working, does not permit as satisfactory control as land that is in proper shape for normal seeding operations. It was also found that best control was in sandy soil. Larger quantities of D-D, or closer spacing of applications may be required in heavy clay and silt soils.

Temperature of the soil at the time of application appears, within reasonable limits, to be unimportant. D-D has given good control when applied at soil temperatures as low as 38 degrees F. and as high as 85 degrees F. The moisture content of the soil at the time of application appears likewise to be relatively unimportant, provided the soil is not too wet or too dry for normal working.

Toxicity to Seeds and Plants

Lettuce and bean seeds have been sown five days after the application of 200 pounds of D-D per acre without any noticeable injury. In case of corn and cucumbers it is necessary to allow a lapse of ten days. Until more definite data can be secured it is believed that a period of fifteen days should be allowed between treatment and seeding, or the setting out of herbaceous plants, which would include peonies. Where trees or shrubs are to be set out, three weeks should elapse between treatments and planting, and the ground should be spaded or disced three days before planting to permit complete aeration. Planting of treated ground may be delayed up to five months, if desired, without reducing control. Do not let it concern you if there is a slight D-D odor remaining in the soil. There are indications that D-D affords control of growing weeds and weed seed present in the soil at time of application.

Toxicity to Human Beings

Every chlorinated hydrocarbon is toxic to human beings to some degree, and unnecessary exposure to any compounds of this class is undesirable. The vapors of D-D, while not irritating, have sufficient odor to give warning of their presence, and breathing of noticeable concentrations should be avoided. The product is toxic if absorbed into the blood stream. It may also cause severe inflammation if allowed to remain in contact with the skin. The intensity of the effect varies with individuals, but experience shows that in any case prompt washing reduces its effect. Petroleum ether or soap and water are most effective in removing the material from the skin, but even washing with water alone is effective and beneficial. Immediate washing is essential and large amounts of water should be used, particularly if soap is not available.

UNDER NO CIRCUMSTANCES should the risk be taken of getting D-D into the eyes or mouth. No attempt should ever be made to siphon it by mouth suction, as swallowing the material may have the most serious consequences. If the liquid is swallowed, a practical first-aid measure is to drink soap water in sufficient quantity to produce vomiting.

Clothing on which D-D has been spilled must be thoroughly cleaned before being worn again. It is tenaciously retained by leather and rubber, and gloves and shoes which have been wet with the material should not be reworn so long as the odor of the product is noticeable.

Precaution,—D-D is toxic to plants. Only soil which is clear of plants should be fumigated with D-D. Do not treat soil within 30 inches of growing plants, whether they be herbaceous annuals or perennials, or wood plants such as trees or shrubs.

Soil fumigation is easy and simple with D-D but in order to insure satisfactory results, *BE CAREFUL AND ACCURATE.*

For water solutions of D-D, add 2/10 of one percent of D-D to the volume of water used. (This is equivalent to about 7 cubic centimeters— $\frac{1}{4}$ ounce—of D-D per gallon of water.)

Quantities of D-D are given in cubic centimeters. A cubic centimeter is approximately 1/30 of a liquid ounce.

* * * *

We are indebted to the Shell Chemical Corporation, 100 Bush St., San Francisco 6, Cal., for the information above. We believe that we will soon be able to do away with nematode infestation in peonies entirely if extreme caution is used to prevent reinfestation. Editor.

* * *

What Is D.D.T, 2-4-D And Many Other Spray Materials?

By DR. E. D. WITMAN, Research Chemist

For many years plants were protected from injury of insects, fungi or bacteria by inorganic chemicals such as lead, copper, sulfur, etc. Recently, new organic chemicals have been developed many of which show great promise. Following is a discussion of these and other spray materials.

Oils—The oils may be divided into summer type and dormant type. Each of these types is offered in both emulsion form (usually 67% or 83% by volume) and emulsifiable form (96% to 99% oil). The emulsions are light colored, creamy mixtures, while the emulsifiable (or miscible) form is

clear and forms an emulsion when added to water. Some special dormant oils contain small percentages of dinitro-ortho-cresol for more effective insect control. These special oils frequently require the addition of an emulsifying agent such as blood albumin.

Nicotine—This plant extract is often used in complex mixtures with other insecticides or with fungicides to form dual-purpose products. It is most commonly offered for sale as a 40% solution of nicotine sulphate. Products containing from 3% to 18% free nicotine along with oils in emulsion or emulsifiable form are offered. Also, free nicotine is formulated into dusts by absorbing it on diluents.

DDT—In powder form for dusting purposes DDT is made at strengths of 2, 3, 5 and 10%. Fifty percent dust concentrates are sold for diluting with inerts to make any of the foregoing percentages. All of these dusting powders are not-wettable and are not generally suited for making sprays. Fifty percent wettable DDT is used for spraying.

DDT is offered in two liquid forms. One is a solvent solution and the other is a water mixable (emulsifiable or miscible) form. The solvent solution may contain 5% DDT, in which case it is designed only for "wall treatments" or it may be a concentrate containing as high as 50% DDT. None of the solvent solutions of DDT will mix with water.

The water mixable solutions range from 20% to 30% DDT and are designed to be diluted with water to form emulsion, which may be either "wall treatments" or for use on plants, depending upon manufacturer's recommendations.

Special types of water mixable solutions containing up to 70% "isomers" of DDT are available. "Isomers of DDT are products recovered during the manufacture of aerosol grade DDT.

Dinitro-ortho-cresol.—This chemical finds use both as an insecticide and as an herbicide. It is prepared as a 40% wettable powder or as a 20% solution of its sodium or ammonium salts to be used in dormant fruit spraying. A 30% solution of the salts is employed as a contact herbicide. Dinitro-ortho-secondary butyl-phenol is chemically very similar to dinitro-ortho-cresol. It is used as a selective herbicide by diluting a 27% methyl alcohol solution of the ammonium salt with water. Used with oil emulsions, dinitro-ortho-secondary butyl-phenol is a contact herbicide. A special strength of this chemical is used with oil as a potato vine killer. The non-oil types of dinitro-ortho-cresol are used as selective herbicides in flax, grains and peas.

Still another dinitro compound, dinitro-ortho-secondary amyl-phenol is used as a contact herbicide especially in potato fields.

Dinitro-ortho-cyclohexyl-phenol—This is dinitro compound and particularly its dicyclohexylamine salt is different enough in its field performance to deserve special classification. On citrus a 40% powder of the "phenol" is used for control of mites. On apples, a 20% powder containing the dicyclohexylamine salt of the "phenol" is employed for the control of red mites.

Hexaethyl tetraphosphate—This new chemical is being offered for the first time this year as a 50% solvent solution which is mixable with water. It is very toxic to red mites and aphids as a contact poison and is quite safe on fruit and vegetable foliage at recommended dilution. It decomposes on standing in the presence of water and thus no residue problem is involved. However, spray, once prepared should be used the same day.

Hept is the accepted shorthand for the name of this chemical. It is also prepared in dust form—but for immediate use, since the presence of moisture in the diluent is enough to cause decomposition within a relatively short time.

Hexachlorocyclohexane—This very new chemical looks promising as a soil treatment for wireworm control and in certain other insect problems. It may be obtained in powder for dusting or for spraying. It has been dubbed HCCH. It is similar to DDT in that it is a highly chlorinated hydrocarbon.

Organic thiocyanates—These contact insecticides are offered in liquid form containing up to 40% active ingredients along with ajuvants of an oil nature. They are also available as dusts. The organic thiocyanates are useful in the control of such insects as mites, mealy bugs and aphids.

Xanthone—This chemical formulated into wettable powders alone or with DDT is useful for control of mites on apples.

Rotenone—Many mixtures of insecticides contain rotenone (and other extractives called rotenoids) because of its high value as a contact insecticide and its low toxicity to animals. In addition to being used in mixtures it is sold in dusting form (usually containing .75% rotenone) and in liquid concentrates containing up to about 3% rotenone along with oils and wetting agents.

Pyrethrum—Like rotenone, this plant extractive is widely used in mixtures of insecticides and fungicides. It is most commonly used as a contact insecticide for vegetable and flower insects.

Sabadilla—Introduced in U. S. during the war, sabadilla is offered in dust form as a contact insecticide. It is a plant extractive.

Flourine compounds—Of most interest to the orchardist is sodium fluoalminate. A 90% product is available for spraying as well as a 45% product with 25% sulphur.

The insoluble coppers—These compounds vary greatly in chemical nature but essentially they are designed as substitutes for bordeaux mixture. They contain metallic copper contents from 24% to 53%. Prepared bordeaux usually contains the equivalent of about 13% metallic copper and are slightly different in performance from the “insoluble coppers.”

The “insoluble coppers” are frequently used in mixed insecticide products.

Dithiocarbamates—Ferric dimethyl dithiocarbamate is offered in the form of a wettable powder containing 70% active ingredient. It is useful in control of apple scab, tomato anthracnose, tobacco blue mold and other fungus diseases. It is black.

Zinc dimethyl dithiocarbamate is white. It is useful in control of early blight and anthracnose of tomatoes and for various other vegetable diseases. It is sold as a 70% wettable powder.

Disodium ethylene bis dithiocarbamate is offered as a water solution which may be used alone or with zinc sulfate and lime as a spray. It is useful in control of vegetables.

Zinc ethylene bis dithiocarbamate is offered as a wettable powder and has shown very good control of vegetable diseases, especially potato diseases.

Quinones—Tetrachloro benzo-quinone is offered as a 48% powder. Its greatest use is as a seed fungicide. A close relative known as 2, 3-dichloro-1, 4-naphthoquinone is sold as an 67% wettable powder. It is useful in control of several crop diseases.

Sulfurs—Because of low cost, elemental sulfur is frequently used as a diluent for insecticidal or fungicidal dusts or sprays. Elemental sulfur is the main component of dusting sulfur (usually non-wettable and containing upwards of 90% sulfur), wettable sulfur and paste sulphur flotation sulfur). Such sulfurs are useful as fungicides on growing plants. Dry lime sulfur may be used both on growing plants and on dormant plants according to the strength of spray used. Liquid lime sulfur is confined mostly to dormant spraying because of its causticity.

Naphthaleneacetic Acid—Active constituent of "harvest spray," substance is formulated in solutions which are used at about the same rate of one pint per 100 gallons of water to delay drop of apples and pears. Most concentrated solutions are offered which are used at about $\frac{1}{4}$ pint per 100 gallons of spray. Still other formulations are sold which contain oils or oil of emulsions to either help the penetration of the ingredient or allow its application by special concentrate-sprayers. Dry powders containing sodium naphthaleneacetate are also available, concentrated and wettable for spraying and more dilute for application by duster.

Ammonium sulfamate—This "first cousin" of ammonium sulfate is an exceptionally good herbicide for killing woody plants such as poison ivy. It now shares this honor with the newly announced 2, 4-D compounds.

Sodium chlorate—Used either alone or in mixtures containing calcium chloride (to reduce hazards) to eradicate spots of deep rooted perennial weeds. Its use removes land from agricultural use for a period of about a year. It is ordinarily applied to be about 5 pounds per square rod.

Sodium arsenate—This chemical is sold in liquid and dry form as a soil sterilizing type of herbicide. It, however, finds wide use as a potato vine killer when used at weaker strength under which conditions it does not act as a soil sterilizer.

2,4-D—This is a new "hormone" weed killer is becoming widely used as a selective weed killer, killing most broad-leaved plants with a minimum effect on grasses, grains and narrow-leaved plants. Its action is systematic in plants and kills roots as well as tops. It has many advantages over previously known herbicides. It is offered in both powder and liquid form for preparing sprays, and also in dust form.

The powder forms may contain from 60% to 90% 2, 4-D. These powders contain either the sodium or ammonium salts, or components which form these salts when added to water. The liquids are either water solutions of alkanolamine salts or miscible oil solutions of the esters.

Borax—Applied at the rate of 20-30 pounds per square rod this chemical is an effective soil-sterilizing type of weed killer for certain noxious deep rooted perennial weeds.

Paradichlorobenzene—This chemical is sold as 100% crystals and also in solution in miscible oils for control of peach borer. It is generally applied to the soil and at a regulated dose to obtain optimum results.

Ethylene dichloride emulsion—These emulsions contain 85% to 90% ethylene dichloride and are used in soil application to control peach borer. The dose is regulated by the age and vigor of the trees.

Editors Note: The above article appeared in the Feb. issue of the American Fruit Grower. Dr. Witman is a well known research chemist and the author of "Lessons in Orchard Chemistry." There is so much to be known about these new sprays and chemicals we felt this article should be read by all our members. By looking at some of these chemical names of products it is readily seen why the simplification of names, by using terms as DDT, SALP, HCCH and others, is almost necessary.

Color in Evergreens

L. L. KUMLIEN

Of the six fundamental colors of the solar spectrum, the foliage of evergreen trees displays green, yellow and blue. The orange, red and violet colors are also seen but only in the buds, the flowers, the cones or the bark. To say that evergreens are of monotonous color is an admission of careless observation.

The development of a closer observation of the beautiful and delicate gradations of greens, blues and yellows will greatly increase our enjoyment of the marvelous handiwork of nature, as she freshens the new, unfolding buds, darkens the matured leaves, or needles, and at last tints them again with the touch of autumn.

On many species, the underside of the needles is in different color than the upperside. Generally, such needles are bluish beneath, sometimes having one or more fine white lines running the length of the needles.

Watch the verdant, green new needles of the Larch. See how they darken as the season progresses until they change to the pale gold of autumn. This tree is one of the deciduous conifers (which loses its leaves in winter). Most evergreens in the temperate zone have three distinct color changes a year; the color of the new season's growth, the color of the summer season, and the color of fall and winter.

In golden or yellow varieties of evergreens, some are bright yellow in the spring, when the new growth develops, and gradually darken during the season. Douglas Golden Arborvitae and Golden Prostrate Juniper for example. Others start out green and develop the golden tint in the fall. A familiar subject is the Goldtip Redcedar.

Blue evergreens, of which there are a large number, show many shades of blue, which vary by species and also by seasons and differ materially in their tones, from whitish blue to deeper shades of gray. Much of the color of blue evergreens, such as the familiar Blue Spruce, is not a pigment in the leaf itself, but a bloom or sheen, such as we find on grapes and plums. It can be rubbed off with the fingers, and, therefore, is oftentimes lost by the effect of snow and winter storms, to return again with the new growth in the spring.

Many horticultural varieties owe their existence to some peculiar color habit. The Andorra Juniper, for example, is bright green when making its new season's growth, changes to a grayish-green summer color and then undergoes a complete change of wardrobe for fall and winter, the color of which might be accurately described as dull, magenta purple. A somewhat similar phenomenon takes place in the Dundee Juniper, whose winter color is still a different purplish hue. Many examples might be given of the striking changes that evergreens undergo in completely changing color.

In the majority of species, the change of color is from one shade of green to another. Because of the limitations of commonly understood descriptive terms of color, we can only hope to direct closer attention and urge your personal observation throughout the year to gain the greatest enjoyment of your evergreens. It is not too far a stretch of imagination to say that no two species or varieties of evergreens are exactly the same color.

It is not only in difference of color but in texture of foliage that evergreens offer variety. Even though the colors are quite similar, the delicate

needles of the Hemlock give a vastly different effect than some coarse needled pine.

Other Color Variations

The new shoots of evergreens when brought to closer observation disclose remarkable differences in color. Some are downy or hairy, others smooth. Some are brownish, some reddish, some gray, some yellow, some purplish or blue, and olive green. We suggest that you will be greatly surprised if you examined some new shoots next spring.

Color in Cones

The most vivid shades of color in evergreens are found in the cones, particularly in the early stages of development. The richest gold and purple and crimson are all there if you look for them. Some are studded with shiny beads of resin which sparkle like jewels. If you want to surprise your friends with a most unusual bouquet, cut a few evergreen cones. And do not forget the powdery blue berries of the Junipers, cut with a spray of deep green foliage, or the crimson Yew berries with their almost black-green needles. Bring such a bouquet into the house. No color in evergreens? Nothing but somber green? You may as well say there is no color in a sunset. Editor's Note: Some of our members may feel that the above splendid article has no connection with peonies, but a beautiful background of evergreens makes a magnificent setting for a peony planting. There is nearly as much variation in color in peony foliage in the various shades of green.



Comments From Indiana

FRED E. WINSLOW, RFD 2, Salem, Indiana

The articles on diseases of the peony that you published in a recent bulletin was of much interest to me. The article on fertilizers was also good, but if I should offer a suggestion, was more general than practical. As an example of what I mean:—I bought a book written on fertility of the soil, by two of the supposedly best authorities on the subject, and waded through it, and found they did not touch on the practical side of the subject, (the available fertilizers of the soil), but treated the total chemical components, and even missed the means by which the insoluble fertilizers of the soil could be made available. Thus, the original question of what chemical elements or compounds are necessary for good peony growth, is still unanswered, so far as I can understand. Perhaps the general subject is best placed before us first and the practical one will be presented later.

My limited experience with peony diseases, and talking with some who have had more experience, leads me to wonder if most of the diseases of the peony is due to the presence in the soil of organic acids, due principally to the rotting and disintegration of organic matter in the soil.

As an example—a year or two ago I had a clump of fine peonies on which the stems turned black at the ground surface. It reminded me of the "damping off" experienced in the propagating bed, I cleaned out the black loam from around the clumps to the roots and added a shovel of crushed limestone. The rotting stopped. Next season, for experience, I removed the limestone and filled in with the black loam, rich in decomposing organic matter. The black rot started again, and again I removed the loam and added limestone. The rot stopped.

From my very limited experience, I am wondering if nematodes and Lemoine disease are not definitely retarded, or even prevented, by the presence of limestone. Limestone certainly does make peonies grow vigorously. Perhaps this vigor the limestone gives them helps the peony to be healthy and disease is at a disadvantage in attacking healthy plants.



Comments From Alabama

POPE M. LONG, Cordova, Alabama

The following letter came from Mr. Pope M. Long of Cordova, Alabama.

I think it is very interesting and am glad to present it to our readers for their comments. Mr. Long does not know that his letter is to be published but I am sure he will have no objection. This letter was written April 20th of last year and should have been presented some time ago. It was misplaced in my correspondence.—Editor.

Will wonders ever cease? To-day (April 10th) Mons. Jules Elie bloomed. Except for one hybrid, it was the earliest peony for my garden. It is usually mid-season or late, but this year it has broken the rule and bloomed first. In forty years this has never occurred before. WHY? I have not the slightest idea. The bloom is on an old clump in perfect health and the blossom is extra large, and color and form ideal for this variety."

I do not mean that Mons. Jules Elie bloomed earlier this season than any variety ever did in the past, only it was first of all in 1946."



Single Peonies

KATE L. BREWSTER, Lake Forest, Ill.

A garden without single peonies misses a season of bloom so delicately beautiful that it leaves the garden cycle incomplete. They come while the lilacs and flowering shrubs are at their height and becomingly link May tulips and iris.

If you have patience the real way to acquire single peonies is to grow them from seed, a lengthy process but with results out of all proportion to effort. Perhaps we have had exceptionally good luck or are blind to the defects of our offspring, but many that fill the borders at Covin Tree seem better than those available in commerce, possibly because there is little demand for this frailer and more charming form of a flower usually prized for its size and substance.

There is no trick in growing the seedlings, but it takes a long time to bring them to assured perfection. Ours are all the result of accidental fertilization, but as there are none but good varieties of peonies in the garden they are the scions of noble strains. The seeds are gathered and planted as soon as they ripen in the late summer and the next spring put up two insignificant leaves. They are left in their cold frame during that summer and the next and then set out in nursery rows until they bloom two or three years later. A fairly large percentage then show themselves to be a sort of nasty "American Beauty" red and are weeded out and thrown away. Those that give promise are left for another test year. Then the good ones are transplanted to permanent quarters while those that

give sensational promise are left to grow tall and strong with a view to dividing and increasing the stock, for only so can your one fine seedling propagate its kind.

But if you cannot bear to wait there are four available and inexpensive varieties which make perfect companions, overlapping a little and drawing out the sweetness. They are MADELEINE GAUTHIER (Dessert, 1908), pale pink; PRIDE OF LANGPORT (Kelway, 1909), a vivid pink with wiry, reddish stems; L'ETINCELANTE (Dessert, 1905), bright rose-color, and ALBIFLORA, THE BRIDE (Dessert, 1902), white. All have big yellow centers and bloom in clusters. If you love them enough to cut out the fading flowers daily, your gardens will have two long weeks of enchanting adornment.

There is another, too, that must be mentioned, the first of all peonies to bloom, the frail and exquisite AVANT GARDE, which each early May decks its soft grayish green foliage with crepe-like pale pink flowers filled with golden stamens. They last only two or three days, but during that time are a sight to see. There are three other peonies of this same type, but are less beautiful and floriferous, MAI FLEURI, LE PRINTEMPS and MESSAGEIRE. All were achieved by Lemoine by crossing *Wittmanniana* with *chinensis*. Their foliage is beautiful throughout the summer, less leathery and more glaucous than the ordinary type.

It may be your luck if you decide to grow peonies from seed to develop more complex flowers. We have six good double varieties which seemed worth increasing and naming. One, tall, peach-tinted, prolific, lasting, flat rosette, eight or ten inches across, is the apple of our eye. This tall blonde is named WALTER BREWSTER, though it resembles him only in dependability. Its fault is that it grows so tall that those torrential rains which seem to be turned on with the regularity of a mechanical shower as soon as peonies begin to bloom bows it to earth in spite of sturdy stems. Another with white guard petals, is more clearly yellow in its narrow inner petals than any peony that I know. It bears the name of my gardener who shares my enthusiasm, RALPH CLAUSEN. The other four are looser flowers, shading from pink to white, and would be very large if we did not prefer to let them grow in large clusters rather than to disbud them.

Nothing in the garden at Covin Tree gives us such pleasure as these true children of the garden, but if you do not like to wait this is the moment to buy. Single peonies are cheap and dependable, establish themselves quickly and persist through the years.



2,4-D Sprayer Contamination

R. H. LANDON

Ever since 2, 4-D preparations have come into general use to eradicate lawn and other weeds many gardeners have had disastrous results when the sprayers used to apply this chemical were subsequently employed for other sprays. This is due to the fact 2, 4-D differs from most other herbicides in that water alone does not remove it completely from spray equipment. Even after a sprayer has been used a number of times to apply other sprays enough 2, 4-D may remain in it to cause serious injury to susceptible plants. Therefore, all sprayers used in the application of 2, 4-D should be properly cleaned.

Whenever a sprayer has been used to apply 2, 4-D immediately it should be washed out several times with water and inverted over a rake handle, or suspended in some way, so that all parts can drain. The hose and extension must be flushed out, the screen back of the spray nozzle cleaned, and the valve held in the open position by the shut-off lock, or in some other way. It is as important to clean and drain the hose and extension as the tank.

After the preliminary washing the sprayer should be filled with a solution of household ammonia, 2 teaspoons per gallon of water, and allowed to stand for a day or two. The pump should be in the tank, and the hose and extension filled with the solution. The sprayer should then be washed out several times and allowed to drain.

When it is necessary to use a sprayer immediately after it has been used to apply 2, 4-D it first should be rinsed out with water several times and then cleaned with a hot solution of washing soda (sal soda). Four heaping tablespoons per gallon of water makes a solution of sufficient strength, it is not necessary to fill the tank with soda solution but enough should be made so that when it is sloshed around in the tank, with the pump in place, the interior is well washed. The screen back of the spray nozzle should then be replaced, and enough hot solution run through the hose and extension to thoroughly flush out these parts. The sprayer should be rinsed out with water a few times and allowed to drain so that no wash water remains in any of its parts.



I Would Not Want to Be a Peony Judge

HARRY L. SMITH, Redkey, Ind.

Such was the remark made by Mrs. Smith as we looked at ten or twelve blooms on a table.

That remark came to me frequently as I looked at the bloom at Rockford. I hope the exhibitors will be sympathetic with the judges. The finest bloom in the show might easily have been one of half a dozen equal competitors, or the finest display could have been a "Photo Finish" between three or four.

The judges were selected and had to make decisions. I hope they were satisfactory to every one. From *Minnesota Horticulturist* February, 1947.

The blooms I liked best were *Cooper's 103*, *Pink Daze*, *Alice Harding*, *Elsa Sass*, *Elizabeth Huntington*, *John Howard Wigell*, *June Rose*, *Minuet*, *Victory*, *Mrs. F. D. Roosevelt* and a very pink *Lady Alexandra Duff*.

The best blooms in my garden were *Alice Harding*, *Rosanna Shrader*, *Shirine*, *Zus Braun*, *Lottie Dawson Rea*, *Marilla Beauty*, *Myrtle Gentry*, *Blanche Elie* and the almost yellow, *Lady of the Snows*. *Pico* was the sensation among the singles; nine inch bloom that held up in rain and wind. I could easily discard my other white singles if they bloomed the same time as *Pico*.

I had much pleasure looking at the peonies and hope to attend another show.

I had no intention of trying to find fault with your peony show at Rockford but after attending and reading a report of the winners, two things disturb me.

First, there were several varieties I wanted to see but I failed to find them although the report lists them in the classes. That, I believe, is in the poor system of labeling. One does not care to risk an accident in reaching over a table to see a hidden label. I suggest a label on some kind of a holder placed on the table in front of the bottles.

Quite noticeable also was the fact that a very highly rated peony was missing from so many exhibits. If *Solange* is rated as a garden variety it would be very low. If its high rating is gained by being a show flower, why do so many lower rated varieties win over it? Maybe Roy Gayle can answer.

* * *

A Communication From Minnesota

E. H. LINS, Cologne, Minn.

Just have a letter from Mr. Elmer A. Claar congratulating me on my showing of *Dolorodell* at Rockford. Since our peonies were severely damaged by frost, just before Mothers Day, I could not show anywhere, and will not even have any for our Minnesota Show. I am wondering who had the *Dolorodell* at Rockford. (Both Mr. Karrels and Walter Lindgren had this variety. (Editor.)

Things don't seem right here this summer. My peony plants look forlorn and without bloom, (don't think we had 100 bloom) but I will have to snap out of it, trim them up and work them so that we might have something for next year.

This I must tell you. Remember last fall you sent me a *Victory*. At that time I did not have time to replant any peonies, so I kept them over winter in the cooler. After the early glads were planted I had to get at the peonies. You had your *Victory* well packed so I left it just as it was. When I opened the package I was horrified to note that the young roots had shrivelled. I thought sure this was the end but stuck it in a flower pot and put it in the ground. Let it soak a few days in the sink, then it stood around for a week. Finally I thought I would plant it anyhow. To my great surprise it came to and the plant seems no worse for the treatment it has received. In fact I think I have a nice *Victory*, just as good or perhaps better than if I had planted it last fall. It might have been winter killed. Now, by fall, it will have a better chance to winter.

* * *

Peony Vines

WILLIAM H. KREKLER, Copley, Ohio

You ask for ideas for the Bulletin, so here is one, a bit on the "crack pot" side.

This morning (May 10, 1946) I noticed a peony plant that earlier had been broken down, and is now growing in a dense, vine-like mat on the ground.

Would it not be a fine thing if some of our more able bodied members would develop a peony with very weak, vine like stems, so the plants when grown closely together would form a low, dense, ground cover about half a foot high. A broad bed, with the blossoms (preferably singles) protruding slightly above the foliage mass, like great cups floating on a green pool, methinks would be a thing worth striving for.

EDITOR'S NOTE: Something like developing a fish with legs so he could go out and hunt worms.

Where the Bulletins Go

I have intended for some time to make up a statement showing our members where the bulletins are mailed. The September-December issue just mailed has been taken as a basis for my tabulation. I have arranged the states in order of their standing and I hope after looking at the membership in your state you will be spurred to action and make an effort to change the standing of the states. The state of Illinois leads by a wide margin and I am glad to be one of the number. New York, as you will note, claims second place by a very narrow margin of five members over Minnesota which stands third. Wisconsin and Pennsylvania are not far behind. I hope the presentation of this membership list will be carefully considered by our members in these various states. Let us have a real revival and boost this membership over the thousand mark. There is but a short distance to go to reach this goal. This can be our first stop and breathing spot, and after a brief pause we can gird on our armor and prepare to approach the army of thousands of peony lovers who do not belong to the American Peony Society.

The cost of our bulletins is steadily increasing and to meet these advancing costs we must increase our membership. We are not alone in this respect as other Societies are experiencing the same difficulty. It should not be much of an effort to ask a peony loving friend who may visit your garden to become a member of our Society. They may consider it a real favor and become some of our most enthusiastic and progressive members.

We have from time to time made brief requests for our members to try and secure at least one member. If each member of the Society would do just this, it is an easy matter to see what would soon happen. Some of our members have secured several new members during the past year and seemed to have received considerable satisfaction out of doing so. Won't *you* try to share some of this satisfaction? I believe you will. We will wait and see if our predictions are justified. Here is the list and standings.

<i>Rating</i>	<i>State</i>	<i>Members</i>			
			16	Oklahoma	14
			17	Oregon	12
			17	North Dabota	12
1	Illinois	128	18	Tennessee	10
2	New York	68	19	Maryland	9
3	Minnesota	63	19	Texas	9
4	Wisconsin	53	20	Connecticut	8
5	Indiana	46	20	Kentucky	8
6	Pennsylvania	45	21	Colorado	7
7	Ohio	44	21	Washington, D. C.	7
8	Iowa	38	22	New Hampshire	6
9	Michigan	31	22	North Carolina	6
10	California	30	23	Arkansas	3
11	Washington	27	23	Georgia	3
11	New Jersey	27	23	Maine	3
12	Kansas	20	23	South Dakota	3
13	Missouri	19	23	Utah	3
14	Nebraska	18	23	Vermont	3
15	Massachusetts	15	23	West Virginia	3
15	Virginia	15			

24 Idaho	2	25 Rhode Island	1
24 Mexico	2	25 South Carolina	1
25 Alaska	1	25 Wyoming	1
25 Delaware	1	Europe	10
25 Florida	1	Canada	35
25 Mississippi	1		
25 Montana	1		
			873

I hope before the year ends there will be a material increase in this listing and some of the states showing very low numbers in regards to membership will be boosted up the ladder by interested peony lovers who will work for membership gains. I feel quite sure that many of our members will be surprised to see this listing. We have removed a number of names from our list for failure to pay their dues as we are assuming they do not wish to continue membership. With the cost of the bulletins we will have to request our members to be prompt with their remittances so we can take care of our financial responsibilities. We want our bulletins to reach our members at least every quarter and this will not be possible unless we have our dues collected.

We have no endowment fund to draw on, as I sincerely wish we had. We want to get out a new manual and this will cost money. We would welcome suggestions as to how this fund may be accumulated. It will take the entire dues we receive in a year, or even more to prepare and print this Manual. How will we meet our regular expense? These are questions that bother your secretary and should be food for thought for all our members, particularly those who would like monthly bulletins and a new Manual each year.



Peonies or Gladiolus—That is the Question?

L. E. MAY, La Porte, Ind.

I have written a number of articles about gladiolus but it never occurred to me to write about peonies.

I am primarily, (I think), a gladiolus grower hobbyist, hybridist, or whatever else might be called a rabid fan. This, I hope, may be published in a peony bulletin. I am sure we are all kindred souls, little understood by golfers, so called tired business men, bridge players; but enough of that. The flower is the thing.

Every flower hobbyist should have at least a few others that carry him through the season. Of course glads,—well never mind. I like flowers, but I like best, besides the one I have mentioned, peonies and then hemerocallis.

I grow a few hundred varieties of peonies and have a thousand or more plants. How any flower lover in the peony country could be without them, I wouldn't know.

The candid comments of varieties in the Bulletin are very interesting. I believe that the variety comments are the things that make any flower publication interesting, and really worth while.

I would like to make a few comments, bearing in mind that peony-wise, I am probably quite a novice.

I think *Kelway's Glorious* is pretty near the top.

Le Cygne beautiful but not constant enough for me.

A. B. Franklin a beaut when it comes right but so late and so double it sometimes has trouble opening.

Mars has been very good.

Elsa Sass I believe is one of the most beautiful of all whites. If I grew but one, that would be it.

Mildred May.—If you like *Marie Jacquin*, you will love this one. Purest white. I am raving about one named in honor of my wife but it is lovely.

Marilla Beauty. I don't know who or what *Marilla* was, but whatever it was, it couldn't have been that beautiful.

La Lorraine has been constant. Must be near the top.

Moonstone. Well named and uniform for two years,—not particularly good peony years either.

Therese old but always good.

Nick Shaylor must be in the first ten.

Minuet as good as the gladiolus of same name and that is plenty good.

Mrs. Deane Funk does not do well for me. Saw it at Mr. Napiers several years ago, bought it and haven't had any constant bloom. Is this characteristic?

James Pillow. Color very intriguing. Have bloomed it for two years. Doesn't quite have the yellow undertone I expected.

Walter Faxon. A shade that is almost perfect.

Mme. Emile Debatene. Uniform and one of the best.

Helen Hayes. A new one of *Murawska* in the rose shades. Bomb type.

Philippe Rivoire. One of the best of dark reds. Not large but beautiful and one of the few reds with a pleasing odor.

Matilda Lewis proved very good.

Chippewa was also very good.

Toro-no-maki. I like this variety better than *Isani Gidui*.

Tomate-Boku, very pretty but such a slow grower, and so late. *Ama-no sode*, *Franklin's Charm*, and *Dignity* are all good Japs. So much for my particular peony likes.

What do I think best? Well,—*Kelway's Glorious*, *Mme Emile Debatene*, *Elsa Sass*, (Boy! what a peony), *Marilla Beauty*, *Matilda Lewis*, *Mildred May*, *Nick Shaylor*, *Philippe Rivoire*, *Phyllis Kelway* and *Therese*.

Editors note: Here the story ends. It is unlike the unfinished symphony.

Mrs. May found these notes after Mr. May's untimely death, and sent them to me to be published. Mr. May's activities were chiefly devoted to the raising of fine gladiolus which he did in a large way in addition to his regular official duties with the Sherwin Williams Paint Co. He formerly lived in Chicago but moved to La Porte where he would have more room to devote to growing flowers. He commuted daily between La Porte and Chicago. Of late years he had become much interested in the growing of peonies. He was associated in business with a Mr. J. R. Hopkins of Deerfield, Illinois, who passed out of this life about a month after Mr. May. Understand Mrs. May, with the help of others in her family are carrying on the work of growing flowers for flower lovers, chiefly gladiolus.

Give Me Land, Lots of Land

F. O. HUBERT, 1011 Elm St., Beloit, Wis.

Perhaps the first twenty-five years with peonies are the hardest. It has been about that long since I planted the first roots of *Festiva Maxima*, *Edulis Superba* and *Felix Crousse*, the beginners trio.

There have been thrills, success and failure crowded into those years of growing peonies for the pleasure of it. Have experienced nematodes and root knots, botrytis and rots, hail, frost and storm, but worst of all has been suitable soil and lack of space.

Mine must be a peculiar problem, for I have never seen any mention made about lack of space in any of the bulletins. Four feet between plants is fine if you have a ten acre field, but I soon found my collection expanding and the home grounds shrinking.

All too soon it became a case of Mr. Anthony my problem is "I'm in love with another peony but where shall I plant it?" Probably such old favorites as *Avalanche* and *Claire Dubois* should have been tossed out long ago, but they still must be considered respectable company for many growers still list them. Maybe I should have been more strong willed and resisted the newer varieties.

The finest blooms that the yard produced were displayed on my wife's antique dining table for a season or two. An upset vase, the second season of this display prompted the suggestion "Freddie! wouldn't the ping pong table be an ideal place to display the peonies?" Thereafter, for several years the "Annual Show" was set up on the ping pong table in the basement recreation room.

The doubles opened up beautifully while the singles and semi-doubles folded up like a tent in the basement room, which probably accounts for my prejudice against singles to this day. The worst feature of the deal was so much running up and down the stairs that I knocked ten pounds off my bony frame every peony season. Oh sure! we had visitors to the show. I was well prepared to tell them the names of varieties and point out the delicate beauty of a well grown *Therese* or orate on the elegance of *Martha Bulloch*.

The two questions most generally asked were "couldn't we sell the blooms" and "why did I want so many peonies, anyway?" but I was literally in peony heaven for a few brief days.

Shortly after the peony season ended my feet would come down to earth again and I was quite a normal human until the fall peony catalogs arrived; or likely I'd meet George, the local nurseryman who had the habit of throwing out such hints as, "I'm getting in some new ones this fall,—*Myrtle Gentry* or *Grace Loomis*" or "How would you like *Hansina Brand*? I'm going to divide that plant this fall." That would generally be enough to crack my resistance wide open and I would end up with one or two new ones to plant that fall,—so each Spring a new peony thrill to await.

By chance, one spring, seedlings came up near some plants and I must have contracted seedling fever. Seed was gathered early in August that year when still yellow and sown at once. Seed was more plentiful than space so I wasn't too particular about the matter. To my surprise the greater number of them came up the next Spring.

When World War II got under way and a "V" garden became a "must."—"Mr. Anthony,—the space problem again." I was forced to agree with

one of my best friends, who would say "But you can't eat them." The world was at war and we had to eat and I was expected to do something about it; but tearing up the flowers didn't make sense to us, so the problem was met by renting a vacant lot in the outskirts of town. The peony plot held fast but suffered neglect, and the annual show was abandoned in favor of weeding excursions to the vegetable garden. While before I had one good garden it was now two poor ones it seemed. The bind weed grew so fast it would almost start running up the hoe handle while I stopped to mop my sweaty brow.

An opportunity to acquire a spacious building site in an excellent subdivision east of the city came to us during the summer of 1943 when a young man up for induction into the army decided to sell it before leaving. This plot was overlaid with rich clay loam, the kind I had always hankered to get my hands into;—ideal peony soil. We decided to make some use of this land until building conditions would be stabilized after the war. We divided some of our old favorites and a few visions of the newer peonies to take out to the new plot. Plowmen were all at war or in war plants the fall of that year, so the writer forfeited another ten pounds of muscle and bone tearing up enough heavy sod by back wrecking methods to make this planting.

The year 1944 brought more gas rationing; a bigger and better victory garden, and less time for peonies. A vegetable garden was made out at the ridge, as we now called the new ground, to conserve gas.

The first year bloom on the peonies in the country showed great promise. A tornado in late June passed within a few feet of the plants and did everything but tear them from the ground. Four of the self sown seedlings bloomed for the first time that Spring and strangely enough three of them were full doubles. By now, the seedlings had grown like wayside weeds fighting for breathing space so they were moved out to the wide open spaces where they could have life and have it more abundantly.

My weight dropped to a new low and my enthusiasm for peonies hit a new high that year. There was frost and more frost the Spring of 1945 and the ridge planting suffered severe damage. Surely that just couldn't happen another year. That's what I thought then. Shirley poppies sowed between the plants the previous fall came up and furnished a riot of color to the peony bed that summer. Everybody driving along the highway came to a halt to admire them. I became uneasy lest the O.P.A. learn of this and force me to surrender the remaining garden gas coupons for not sticking to beans and broccoli.

The Spring of 1946 proved that frost, like lightning, can strike twice in the same place, for on April 27th the temperature fell to 22 degrees, and the peonies were bombed out for another year. With two full years on vacation to fatten and store up vitamins and minerals, we look for something good out there in 1947.

Alas, an ever present threat hangs over the heads of those seedlings however, in case of a sharp decline in the price of building materials.

In closing, we attended the 1946 National Show at Rockford, Illinois, last June and were much impressed with the beautiful exhibits. We had never seen such fine flowers. It was also a pleasure to meet Mr. Peyton, Mr. Brand, Mr. and Mrs. Moots from Kansas and others we cannot recall now, and lastly the genial Secretary and Mrs. Christman.

This was our first visit to the A.P.S. National Show and our greatest peony thrill.

Editor's Note:—Hope springs eternal in the breast of a peony lover. Very few flower lovers could have their plans eliminated by erratic climatic conditions for two years in succession and still be hopeful for the coming one. It surely takes intestinal fortitude and plenty of it.



Notes From Kansas

MRS. LEE BROWN, Topeka, Kas.

Thanks a million to the ones who make the Bulletins. I certainly enjoy reading them over and over and tagging along with our wonderful friend, Mr. Peyton on all those tours and shows.

Now in "That Party for Twenty" of Mr. van Loon's, Lady Alexandra Duff would have given place to Minnie Shaylor, as the Lady has never done much to improve my garden, but then maybe I am too democratic for Royalty, anyway, my Scotch trait, (never throw anything away), is all that has left her in my peony patch, a very small affair of only 100 varieties. I am going to give her an "especial look" this year. I certainly cannot resist adding my poor poem to Mr. Neal R. van Loon's. I certainly do enjoy his writings.

To youth's so young, it seems to me,
Just being a Lord, is much to long at thirty-three;
But he who has peonies at his nose,
Can breathe life's best, where e're he goes.

And forty-nine is much too young,
Your smelling life has just begun;
But as you pile up years to three and one fourth score,
You'll smell 'em more at sixty-four.
So here's to Jimmy Mason and all his clan
Help make fragrant, peony land.

Never could understand why fragrance wasn't demanded more. Everyone has a nose, so why not enjoy life with it, as well as our eyes.

Am always interested in all the comments and comparisons, but what I like is a plant that can hold up its immense blooms and invite you to bury your nose in its fragrant petals.

Special thanks go to you and Mr. Peyton, and to the many others you invoke into helping you.



Bravery

Brave is the man to challenge John M. Lewis. Brave also are the peony growers who enter the show room in competition with those Minnesota growers.

It was quite evident at the show that they know how to grow and show peonies. They have the added advantage of having soil that produces more color than most sections.

Originators of *Mattie Lafuze*, *Victory*, *Pink o'Daren*, *Dorothy J.* and others should be very proud to win in that company. I hope to soon give them a challenge with a couple of seedlings.

A Member of A.P.S.

Editor's Note:

The party writing the above did not sign his name but we hope he makes good his promise to challenge the originators of the above fine peonies.

Secretary's Notes

Spring is but a few weeks away as I write these notes and what a welcome season it will be, and should be for all peony lovers, for many of them will see for the first time what they spent their good cash for last fall. Let's hope none of them will be disappointed.

There is nothing like gardening to work up a good appetite and at the same time give one supreme satisfaction for what they have accomplished.

President Truman urges gardening in the following statement read to the National Garden Conference at a meeting held in Washington, D. C. recently.

"An important factor in winning the war was the magnificent contribution of food production by our Nation's Victory Gardeners. In peace this potent force should be kept organized and encouraged in its pursuit of the art of gardening.

The value of gardening in building strong bodies, healthy minds and happy people has never been greater. Today we need physical strength to increase production of all commodities the nation needs; we need moral strength to combat inflation and other economic dislocations; we need spiritual strength to see us through the trying days of post war readjustment. We need clear minds to cope with the problems of establishing a lasting peace. Today we need relaxation, happiness and congenial relationships among our people.

These needs can be met in great part by a continuing program which involves the participation of millions of Americans in home gardening. Eating more nutritious foods, improving home surroundings and aiding community development will make this land of ours an even better place to live in."

I think this will stand reading several times to get the full import of the message.

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There was such an unusual delay in getting out the last bulletin and was my face red when I had an opportunity to read the completed bulletin to note that I had neglected to make the correction on first page listing the officers. Mr. M. C. Karrels of Milwaukee, Wis. our new Vice President's name did not appear as it should have, in fact it was omitted in the June issue.

Again on reading Mr. Ralph Schroeder's article I find that the linotype operator in making corrections inadvertently removed a line of type reading as follows:

"Mr. Napier says that this is his last show. I doubt it. He may cut no more flowers for a bench show but the show in Blue Island will go on for years."

The above paragraph is what was originally set up and how it should read.

In the article, "Significance of Periodic Soil Tests a line was left out and an extra line inserted that makes the first sentence absurd. As I did not get a chance to read the corrected first copy of galley sheets, these errors got by unnoticed, as well as several other small ones.

We will make it a point to read the final sheets the next issues and see if we can avoid these embarrassing and aggravating errors and omissions. If you don't think it some job, try editing a paper some time. You get the original "galley sheet," read it carefully, and make the necessary corrections, return it to the linotype operator for corrections and if the job is hurried too much, additional errors are made in making the corrections originally made and these must be caught and corrected. Some fun,—and we have a few members who are clamoring for a monthly bulletin. I can see where it will be necessary for me to take application for entry in a psychiatric ward if this is carried out, or delegate my duties to some other poor soul with more fortitude and perservance than I possess. If it were a full time and a full pay job, it would be another matter, and more diligent and painstaking care could be exercised in the composition and arrangement.

With the approach of another growing season, (and this also includes the approach of an insect and pest horde), it behooves us to become acquainted with some of the ways and means of combating them and rendering them helpless, or better still, lifeless. For that reason we are including in this issue some of the various combination of the very effective drug known commonly as DDT. (Dichloro-diphenyl-tricloro.) We hope you will find its useful. This DDT, in a 5% solution will be found most effective in spraying peonies for thrip infestation, which recently is becoming quite a problem. Buds partly developed, which fail to open, are often thrip infested and they can be readily seen if the petals of the flower are removed quickly and examined carefully. Look for a tiny insect which apparently looks utterly incapable of producing the damage inflicted, resulting from its depredations or presence on the flower buds.

We are also presented a method for the eradication of nematode, or eel worm, that is so damaging to peony roots. The method of soil sterilization seems to be an effective and positive means of eradicating this pest and should prove of great benefit to peony growers. It has been effectively demonstrated and results have been most favorable. The cost is not prohibitive and applicators can be secured for the proper distribution at a nominal cost. It is a pretty potent and penetrating element that will doubtless remove earth worms, wire worms, etc., as well as nematodes. We could easily dispense with all but the earth worms which have proved themselves of great service and assistance in keeping the soil in good condition, and by some they are considered indispensable. Before another year we should get reports of results obtained by this treatment, or method of eradication. I know such reports would be helpful to our readers and we will be only too glad to present them.

Check on your peonies this year and send us reports of their performance. If you can send in some good photographs with a gloss finish permitting good plates to be made, we will be glad to present them to our readers. With the new camera just announced over the radio and through the press, requiring no dark room to develop the pictures, most anyone should be able to get satisfactory photographs, for it will be possible to develop the photo in a few seconds time and any errors can be corrected by making additional shots of the same subject until a satisfactory reproduction is obtained. It is stated that color photos can be made with the same process. We will gladly welcome such a camera as it should revolutionize the art of taking pictures. We will have to see if the press reports are borne out in the performance of this new development in photographic cameras.

There has just come to my desk a new and concise Chemical and Technical Dictionary containing 50,000 definitions that has many new and exclusive features that will be found most helpful and useful to the layman as well as the scientific and research worker. Most of us who have not specialized in technical and chemical vocations realize our lack of knowledge of terms and words used to express and explain the various processes. Even though we are a specialist in a certain line and know our own particular field, we find that we are usually only slightly acquainted with the terms used outside the sphere of our activities, and will welcome the assistance offered by this comprehensive and carefully compiled dictionary.

The book contains 1120 pages, is 6 by 9 inches and is priced at \$10.00 per copy. Write the publishers, Chemical Publishing Co., Inc., 26 Court Street, Dept. FM., Brooklyn, 2, N. Y. for particulars showing a full description of the contents of this outstanding publication. In addition to being indispensable for chemists and chemical engineers, metallurgists, physicians, pharmacists, students, executives and salesmen, it is also valuable to the layman as it is a real encyclopedia of knowledge, containing explanations of unfamiliar terms in every branch of industry and science; enabling the layman to easily find the meaning of constantly used technical terms; newly developed products and the functions of modern instruments used in chemistry, medicine, engineering, etc. which are made clear for everyone. The definitions are concise, clear and to the point. Thousands of abbreviations, contractions and many useful tables add to the value of this book. It will prove a most worthy addition to your reference library. We recommend it most heartily.

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We are presenting in this issue the schedule for the Boston Show. Read it carefully and come prepared to exhibit in one or several of the classes presented. You can help us make this a most outstanding event by your participation in some of these classes. Both the amateur and professional have been provided for, and if you have one or one hundred you will find a class provided to meet your requirements.

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We had hoped to have something more definite to report on the new peony book on specie peonies being prepared in England for distribution but to our knowledge this book has not yet been sent out. Later received this grand book.

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Have you ever had your peony foliage turn yellow? The peony, among several other plants such as rose, privet, plum, cherry, grape iris, strawberry, and a few others, is susceptible and it may be lime chlorosis that is the cause of trouble.

Symptoms can be determined very easily. The yellowing may cover the entire plant or it may occur only on certain branches or parts of the plants. The veins on the yellow leaves usually retain their green color longer than the balance of the leaf and form a green network on the yellow background. Some leaves may become almost white and then die and drop from the plant.

Soil treatment with a mixture of sulphur and iron sulphate has been found most effective. This chlorosis condition can be corrected by spraying but it is more effective by applying it to the soil. These treatments should be made early in Spring before growth starts, for best results. Mix equal parts of iron sulphate and flowers of sulphur. This should be placed in a trench around the affected plants and covered with earth. Use about a half

pound around each plant. Water freely after application of the chemical and complete the filling of hole. If plants are small, cut the amount of the mixture application accordingly.

The critical period in the protection of many tender perennials often occurs during the last half of the winter period. Many are prone to believe that after February has passed, most of the danger is over. Now is a good time to re-examine winter coverings to make sure that they are still securely in place and sufficient in amount. Winter winds may have blown the covering off the plants that you feel are fully protected. First year planted peonies need protection to prevent heaving and this heaving occurs in early Spring and can result in considerable loss.

Dues have been coming in quite merrily. If you have not sent yours please do so at once. This will avoid the necessity of sending you a statement and thereby lessen some of our work. I can assure you it will be appreciated.

Mr. Fred Hoffmann of Mt. Prospect, Ill., wrote me as follows:

"I want to drop you a line about a little thing that happened to my peonies this summer. I had a clump of peonies to bloom in June and this same clump bloomed again the 9th of August with six blooms. All blooms were full shaped and perfect. I never saw anything like that before and I wondered if anyone else ever had the same thing happen."

With the new camera just announced it should be possible to secure some fine pictures as they can be developed on the spot in a brief space of time and if the first shot is not what is wanted it will be possible to take additional pictures until the desired one is obtained. In addition to black and white, color is also a possibility. Don't wait for these new ones to come on the market for they may not be as good as the equipment you now use, and see if you can't get some good pictures with a gloss finish to send me. See that they are correctly labeled or supply text that will fully describe the scene. Individual pictures of flowers or group pictures will be most acceptable. We want more illustrations in the bulletin.

Most of us who grow peonies also grow iris, and many would like to grow Japanese iris. The following letter from Mr. W. A. Payne, R.F.D. 3, Terre Haute, Indiana should be helpful and valuable.

"I mulch my Jap iris rather well with straw the first two winters. The second season will give the best flowers with these iris. I have found they will always come through without mulching after the second winter, in my locality at least. Like the bearded varieties some varieties are more hardy than others and will come through the second winter OK, without protection while others will suffer or kill out entirely. Of course most everything needs mulching the first winter after planting until it becomes established.

As to fertilizer, cow manure either rotted or fresh is best of all. For commercial fertilizer I use a formula I mix myself which is suitable for rhododendrons, etc. You may be able to get a commercial brand at some of the supply concerns. Any kind that is recommended for rhododendrons will be OK.

The formula I use is the following:

- 120-lb. Cotton Seed Meal
- 48-lb. Acid Phosphate
- 24-lb. Sulphate of Potash (Substitute Muriate)
- 8-lb. Ferrous Sulphate

I have had excellent results with this, I even apply it to the young seedlings in flats as a top dressing and they respond well. For larger plants as a top dressing I use a handful or two depending upon the size of plant.

Never use bone meal or ground limestone for Jap iris or plant in ground which has been limed within several years without first acidifying."

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Here is hoping we may see you and renew our acquaintance at the Boston Show. We hope you will like this bulletin and the information it contains. I know it will not interest you all nor is it possible to get out an issue that will meet the requirements of all our members. We can only make them cover a number of subjects and trust that every one of our members will find something of real interest and value to them.

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I am again making my annual request for articles for the bulletin, in fact these entreaties are constantly being aimed at YOU with the avowed purpose of arousing some latent talent among our members. I know there is plenty of it and am pleased that we have brought out some of it. I am rightly proud of our membership and know that in this group of peony lovers there are many who could provide most interesting and informative articles if they would take the time to send them in. When your peonies are in bloom and at their best, make comments on the different varieties you have, together with any other information or experiences you have had with peonies that may be of interest to our readers. Look over this bulletin and you will find a number of very informative articles that have been sent in by our members. This is really what makes good bulletins and we would like to have you do your part in making them so. We know you can do it and when you see your article in print, you will be proud of your effort.

N. F. Christman

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Department of Registration

Colonel J. C. Nicholls, 114 Overlook Road, Ithaca, New York wishes to register:

Iwo (Nicholls, 1946). J. M. R. Seedling No. 145. Mikado, Unknown. Petals rose-red, staminodes bright golden yellow. Plant is of medium height and flowers of medium size. It is a good color and makes a good garden flower.

Mr. L. W. Cousins of 472 Tecumseh Avenue, London, Ontario, Canada, presents the following seedling peony for registration:

Ann Cousins (Cousins, 1946). D. L.M. W. Full double pure white with rose fragrance. Flower medium to large in size. Stems are of medium height. The open flower needs some support. The foliage is large. The plant is a vigorous and healthy grower and a dependable bloomer. The quality of the bloom is excellent. This variety has never been offered to the public and all the stock is in the originators garden.

The following variety originated by Myron D. Bigger, R.R. 4, Topeka, Kansas has been presented for registration by Mr. Bigger.

Snow Mountain (Bigger 1946) Seedling No. 22-37 D.M.W. Tall, strong stemmed, bomb type double, opening light creamy pink, fading white. The bloom grows into a high mountain of snow white petals. Mid-season bloomer. Foliage medium dark green, clean and healthy. Buds open without trouble. Plant and flower similar to that of *Mons. Jules Elie* with the exception of color.



New Members Since Last Issue of Bulletin

Andrews Nursery Co., Faribault, Minn.
 Battin, Mrs. Viola, Strawberry Point, Iowa.
 Beierl, Herbert J., 375 North Forest Road, Williamsville, 21, N. Y.
 Blazak, Dr. Stanley E., 904 Walden Ave., Buffalo, 11, N. Y.
 Craig, Lawrence E., Salix, Iowa.
 Cuthbert, Mrs. Josephine W., 3435 Laguna Ave., Oakland, Calif.
 Dierking, John, Box 68, St. Clair, Mo.
 Freese, Mrs. S. J., Rt. 4, Albany, Ore.
 Garden City Perennial Gardens, Miss Mary M. Stump, Propr., Box 247, Fremont, Neb.
 Gedge, Matthew T., 286 Walnut Street, East Aurora, N. Y.
 Gibson, A. P., R.F.D. 1, Minneapolis, 9, Minn.
 Hallen, Ray, Hallen's Peony & Iris Gardens, Northbrook, Ill.
 Hebron Peony Farm, Thos. R. Mysyk, P.O. Box 525, Hebron, Ill.
 Hillard, Mrs. Davis A., Rt. 3, Box 280, Fort Collins, Colo.
 Hime, C. H., 1848 Laura Ave., Wichita, Kas.
 Jones, Harry L., Rocky Brook Farm, Middleville, N. J.
 Keuling, Edgar L., Box 53, Hendersonville, N. C.
 Laurel Glen Nursery, c/o Mrs. Arthur W. Perry, Signal Mountain, Tenn.
 McCutcheon, Miss Margaret, 121 Main Street, Newton, N. J.
 McKnight, A. D., 30 Marlin Drive, Pittsburgh, 16, Pa.
 Mack, Edward, 2661 S. Howell Ave., Milwaukee, Wis.
 Mawhinney, Mrs. J. F., Darien, Wis.
 Men's Garden Club of Rockford, Mr. Earl Elliott, Librarian, 813 N. Main St., Rockford, Ill.
 Pittman, H. F., 257 N. Cooper Ave., Lockland, Cincinnati, 15, Ohio.
 The Pennsylvania State College, Patterson Hall, Room 101, State College, Pa.
 The Rakestraw-Pyle Co., Willowdale Nurseries & Farm, Kenneth Square, Pa.
 Rubenbauer, Mrs. C. M., Marshalltown, Iowa.
 Scott, Mrs. Arthur Hoyt, Todmorden Farm, Media, Pa.
 Sektor Seti Spetz Bibliotek, Akademii Nauk S.S.S.R., Pyzherskij, per 7, Moscow 17, U.S.S.R.
 Steinbach, Frederick, Spinnerstown, Pa.
 Stoll, Frank, 48 Hawthorne Street, Brooklyn, 25, N.Y.
 Wallis, W. J., Brevard, N. C.
 Washington State Federation of Garden Clubs, Mrs. F. B. Eylar, Rt. 2, Box 610, Renton, Wash.
 White, Harold W., 1725 Maplewood Lane, Glenview, Ill.
 Wilder, Mabel O., Castle Rock, Colo.

Life Member

Belvedere Peony Farm, Helen B. Bryan, Mgr., Howison, Va.

One October Day

FRANK STOLL

In that part of God's country known as Sussex County, New Jersey, whose rolling hills are greener, whose lakes are bluer, and whose landscapes form a continuous panorama to thrill an artist, October 14, 1946, was all the poets have sung of "October's Bright Blue Weather." Furthermore this was one of those rare seasons when the first frost had not laid low the tender wayside and garden plants. Instead temperatures had almost nightly hovered close to 32 degrees, then given way to a merciful fog, thus coaxing rather than forcing the transition of autumn coloration. The result was an exceptionally long period of vivid colors, truly a spectacle—a picture such as God alone can paint!

How gratifying all this to the hearts of nature enthusiasts as well as to gardeners, for it was on this afternoon that we had arranged to plant the new peony bed. I said "we," since I was to have, and did have, the supervision and assistance of Neal R. van Loon, the most rabid peony booster of Sussex County. Indeed, van Loon's outstanding success with peonies verified by his rating as an exhibitor, not only make him the source of inspiration among the more modest peony growers of his county, but brings Sussex County into the limelight it well deserves as a peony growing nucleus.

For convenience of motor cultivation it had been decided to plant a single row 140' in length. The earth had been removed to form a trench 1' deep x 4' wide x 140' long. This trench was filled to a depth of 1' with tough, old sods, chiefly of orchard grass from around an old stable. These sods were inverted so far as was reasonably possible. This can be best accomplished by placing the sods upright in the barrow, then inverting the entire load at dumping point. My wheelbarrow is a generous, wooden box-type, and I had wheeled 180 full loads to fill the trench. Some form of truck would both expedite and ease the operation, if such equipment be available, and also if such truck could be manipulated in the spots from which the sods are taken.

Now our trench is rather uniformly filled to a depth of 1', a line of tall stakes set up, or a cord stretched to form the line of the plants in the middle of the trench. We next set numbered plant-stakes, 1—40 at 3½' intervals but 1' off from the line of tall stakes. At each plant-stake and under the line place a well-pruned 3-5 bud peony root on top of the sod and hold it upright as it is covered with a mound of 4' or more of good soil. We were fortunate enough to have compost of leaves, grass, sand, soil, etc., of six years decomposing. A record was kept of the specimens planted to correspond with the number-stakes. The following varieties had been secured with difficulty, since good stock is so scarce this fall:

Marilla Beauty, Florence Nicholls, A. B. C. Nicholls, Arcturus, George W. Peyton, Lady Kate, Hansina Brand, Mrs. A. M. Brand, Ruth Elizabeth, Angelus, Alesia, Ella Christensen, Minuet, Matilda Lewis, Sanctuary, Myrtle Gentry, Elsa Sass, Mrs. F. D. Roosevelt, Queen of Hamburg, Priam, Judy Becker, To Kalon, Dorothy J., Dr. J. H. Neeley, Philippe Rivoire and Tondeleyo.

When plants were all set, a generous amount of wood ashes was scattered over the entire row, also 100 pounds of gypsum. The application of wood ashes would be better deferred until spring. Lime in moderation could have replaced the gypsum. The entire row should be filled or rounded up well above the margin with more sods or soil, since the sod-filled trench

will settle by spring and a canal must be avoided. In spring time as soon as danger of frost is over and mounds will be carefully spread from over the eyes, leaving about 2' of soil covering. No manure fertilizer will be necessary the first year, although a dressing or mulch of well-rotted cow manure can be applied to advantage the following fall.

(*Frank Stoll, now retired, served for 30 years as Registrar & Custodian of the Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn 25, N. Y. Present address, 48 Hawthorne St., Brooklyn 25, N. Y.)



A Social Event

W. T. COE. Minneapolis, Minn.

For a number of years last past, a group of Minnesota peony growers have been meeting during the winter to discuss their favorite flowers. In 1945, the Bulletin published their recommendation of a list of select peonies and select candidates, which received wide publicity.

The group met April 13, 1946, as the guests of Mr. and Mrs. Howard M. Englund. Mr. A. M. Brand, of Faribault, was the guest of honor. Mr. and Mrs. Englund are royal host and hostess. A marvelous turkey dinner with all the fixings was served. After dinner several hours were spent talking peonies. The following items of interest to other growers were recommended.

The select list and candidate list of 1945 should be revised every five years. Argentine should be in the select list of whites. Mrs. Livingston Farrand was voted the choicest colored peony, and the price of \$15.00 is too low. It should be advanced to \$25.00. Stock of this variety is scarce and much in demand.

The small division, preferably only one bud, is the best for propagation, but of course it takes 3 or 4 years for it to mature, but when it does mature it makes a better clump and with new roots.

One bloom is all that a peony should be expected to produce the first year. The earlier a peony can be divided and reset in August, the better, and the new division should be planted at once. The idea of wilting roots before dividing is an error. A three or four year old plant is the best for division. A peony, well planted, cultivated and fertilized, each year, will produce good flowers many years. A. M. Brand reported that a peony 35 years old, a *Martha Bulloch*, in his garden, is still producing prize flowers.

Mr. Brand also reported that he had found it undesirable to grow peonies where peonies had heretofore grown, in fact he has procured entirely fresh land in which to plant new divisions.

Mr. Coe reported that even if a good deal of dirt is removed and fresh dirt put in, the new root is very likely to remain puny.

Mr. Brand said he was of the opinion that the ground, after ten years, would renew itself. The peony root seems to be a very gross feeder, and takes something from the soil that the new clump requires.

Combined Schedule

AMERICAN PEONY SOCIETY

Massachusetts Horticultural Society

to be held

TUESDAY AND WEDNESDAY, JUNE 17 AND 18, 1947, IN
HORTICULTURAL HALL, 300 MASSACHUSETTS AVENUE,
BOSTON, MASSACHUSETTS

NOTES: Those who intend to exhibit should get complete information from Mr. Arno H. Nehrling, Secretary, Massachusetts Horticultural Society, Horticultural Hall, 300 Massachusetts Avenue, Boston, Massachusetts.

The following schedules are as complete as they can be made at this date. Minor changes may have to be made.

Many classes formerly appearing in the schedule of The American Peony Society have been omitted as they are practically provided for in the schedule of The Massachusetts Horticultural Society. Study them both carefully. Every need has been cared for.

Originators and growers who wish to make special exhibits of the varieties they have originated or have for sale are asked to refer to classes Nos. 1, 2 and 3 in the schedule of The Massachusetts Horticultural Society. These are well suited for such exhibits.

The Annual Meetings of The American Peony Society and the Board of Directors will be held at the time of the Show at such place and hour as may be announced at the Show.

MASSACHUSETTS HORTICULTURAL SOCIETY JUNE EXHIBITION PEONIES

(*John Allen French Fund*)

	1st.	2nd.
M. 1. Display, to cover 400 sq. ft., any or all varieties. To be judged by Scale of Points No. 14. Plate valued at	\$100.	\$75.
2. Display, to cover 200 sq. ft., any variety or varieties, to be judged by Scale of Points No. 14. Plate valued at ..	50.	35.
3. Display, to cover 100 sq. ft., any variety or varieties, to be judged by Scale of Points No. 14	25.	15.
4. Twenty-five blooms, arranged for effect in vase or other container	8.	5.

(*John A. Lowell Fund*)

5. Collection of Peonies, any type, one of each, rating 8.5 or over, not to exceed 25 varieties	20.	10.
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NOTE: Attention is called to Judges' Rule No. 10 as applied to classes 6 to 16 inclusive.

6. Collection of 20 named varieties, any type, one flower of each	8.	5.
7. Six blooms, pink, one variety	3.	2.
8. Six blooms, white, one variety	3.	2.
9. Six blooms, red, one variety	3.	2.

(*Theodore Lyman Fund No. 2*)

- | | | |
|---|----|----|
| 10. Collection of not over 12 named single varieties, one flower of each, Japanese excluded | 6. | 4. |
| 11. Collection of not over six varieties, Japanese, one flower of each | 3. | 2. |
| 12. Collection of six named double varieties, white, one flower of each | 3. | 2. |
| 13. Collection of six named double varieties, deep pink, one flower of each | 3. | 2. |
| 14. Collections of six named double varieties, light pink, one flower of each | 3. | 2. |
| 15. Collection of six named double varieties, red or crimson, one flower of each | 3. | 2. |
| 16. Specimen Peony Bloom, any variety. For amateurs only | 3. | 2. |

Class 16 ends the Massachusetts Horticultural Society Schedule.

Forty-Third Annual Exhibition, American Peony Society.

The Medal Classes

Note—In the following four classes, all types of peonies may be entered, except that the combined number of Japanese and single varieties shown in any one entry shall not be more than forty (40%) per cent of the total number of varieties in that entry. Only named varieties may be shown and one bloom of each variety in a separate container. If warranted, three awards should be made in each class, the highest of which shall be the Medal of The American Peony Society indicated in the name of the class.

- A. 1. *The Gold Medal Class.* Collection of not more than 60 nor less than 50 named *albiflora* (*chinensis*, *sinensis*) varieties of which not less than 60% must be double or semi-double. OPEN TO ALL.
2. *The Out-of-State Class.* OPEN TO ALL except residents of the State of Massachusetts. Collection of not more than 20 named varieties, *albiflora* (*chinensis*, *sinensis*), of which not less than 60% must be double or semi-double. No medal will be given in this class.
101. *The Silver Medal Class.* OPEN ONLY to AMATEURS AND ADVANCED AMATEURS. Collection of not more than thirty nor less than twenty-five named *albiflora* (*chinensis*, *sinensis*) varieties of which not less than 60% must be double or semi-double.
201. *The Bronze Medal Class.* OPEN ONLY TO AMATEURS. Collection of not more than fifteen nor less than ten *albiflora* (*chinensis*, *sinensis*) named varieties of which not less than 60% must be double or semi-double.

In addition to the above medals The American Peony Society will award the following medals:

THE B. H. FARR MEMORIAL MEDAL in bronze, for the best double or semi-double *albiflora* (*chinensis*, *sinensis*) bloom in the show.

THE AMERICAN PEONY SOCIETY MEDAL in bronze, for the best Japanese type *albiflora* (*chinensis*, *sinensis*) bloom in the show.

THE AMERICAN PEONY SOCIETY MEDAL in bronze, for the best single type *albiflora* (*chinensis*, *sinensis*) bloom in the show.

THE AMERICAN PEONY SOCIETY MEDAL in bronze, for the best bloom in the show of any hybrid herbaceous peony or variety of any species other than *albiflora*.

The above medals will be awarded by a special group of judges to be appointed for the task and they may choose the blooms from any entry in the show, but they should give especial attention to the winners in the various specimen classes (MHS No. 16, APS Nos. 3 to 20 inclusive) and to the blooms selected by each group of judges as the best blooms in the classes they have judged. No entries by exhibitors may be made for these medals.

Other medals that may be awarded are: The American Home Achievement Medal (see Class No. 31). The James Boyd Memorial Medal (see Class No. 32) and possible Seedling Class medals. (See Classes 26 to 30 inclusive).

SPECIAL HONOR CLASS

- A. 21. Collection of ten named *albiflora* (*chinensis*, *sinensis*) double or semi-double varieties, three blooms of each and each variety in a separate container. OPEN TO ALL.

THE COURT OF HONOR

The Court of Honor shall consist of the following blooms:

1. The bloom awarded the B. H. Farr Memorial Medal as the best double flower in the show.
 2. The bloom awarded the Bronze Medal as the best Japanese type flower in the show.
 3. The bloom awarded the Bronze Medal as the best single type flower in the show.
 4. The bloom awarded the Bronze Medal as the best herbaceous hybrid flower in the show.
 5. The blooms winning the Purple Ribbon in the Specimen Classes Nos. 3 to 20 inclusive.
 6. The bloom winning first award in Massachusetts Horticultural Society Class No. 16.
 7. The blooms of any seedling or named varieties that may be awarded a medal of any kind, a First Class Certificate, a Certificate of Honorable Mention or any other special honor either by The Massachusetts Horticultural Society or The American Peony Society.
 8. The bloom winning the American Home Achievement Medal.
- These blooms must be collected and displayed on a special table located in a prominent position in the exhibition hall.

The owners of the blooms entitled to places in the Court of Honor must see to it that their blooms are properly labelled with the name of the variety and the exhibitor's name. They must also see that a card has been placed in the entry from which each bloom has been removed stating that this bloom has been removed. If this is not done serious errors are liable to be made in reporting the show.

SPECIMEN BLOOM CLASSES

OPEN TO ALL

Every exhibitor is urged to enter in the following classes his best blooms as it is from these classes that the various medals may be chosen and the bloom winning the highest award (Purple Ribbon) in each of these classes is placed in the Court of Honor.

The judges of these classes will make four awards in each class.

- 1st. The Purple Court of Honor Ribbon to the best flower in each class.
- 2nd. The blue ribbon to the next best bloom in each class.

- 3rd. The red ribbon to the third best bloom in each class and
- 4th. The white ribbon to the fourth best bloom in each class.

The judges must see to it that each bloom winning a purple ribbon is correctly labelled with the name of the variety and the name of the exhibitor and these blooms must then be removed from their original entries and placed in the Court of Honor at the place provided for it. They must also see that cards are placed in the entries from which these blooms have been removed stating the fact that they have been removed and giving the name of the variety that has been removed.

DOUBLE OR SEMI-DOUBLE (albiflora)

- A. 3. One bloom named variety, white.
- 4. One bloom named variety, blush or flesh.
- 5. One bloom named variety, light pink.
- 6. One bloom named variety, medium pink.
- 7. One bloom named variety, dark pink.
- 8. One bloom named variety, red.
- 9. One bloom named variety, yellow predominating. Note that Japanese and single type flowers are not permitted in this class.
- 10. One bloom named variety semi-double only. Any color. The variety shown must have the stamens distinctly visible and not hidden.

JAPANESE TYPE (albiflora)

- A. 11. One bloom named variety, white or flesh.
- 12. One bloom named variety, pink any shade.
- 13. One bloom named variety, red.

SINGLE TYPE (albiflora)

- A. 14. One bloom named variety, white or flesh.
- 15. One bloom named variety, pink any shade.
- 16. One bloom named variety, red.

HERBACEOUS HYBRIDS OR VARIETIES OF SPECIES OTHER THAN albiflora

- A. 17. One bloom named variety double or semi-double, any color.
- 18. One bloom named variety Japanese type, any color.
- 19. One bloom named variety, single type, any color.

TREE PEONIES

- A. 20. One bloom named variety, any type, any color, any species, any hybrid.

CLASSES OPEN TO ALL

- A. 1. Gold Medal Class. See Medal Classes.
- 3 to 20 Inclusive. Specimen Classes. See above.
- 21. Special Honor Class. See above.
- 22. Collection of named varieties hybrids or species other than *albiflora*. Any type or color admitted. No restrictions.
- 23. Collection of named varieties tree peonies, any type, species, hybrid. Any type or color admitted. No restrictions.
- M. 1 to 15 inclusive. Massachusetts Horticultural Society Classes. See above.
- See also Seedling Classes Nos. 24 to 31 inclusive.

ADVANCED AMATEUR CLASSES

Open to those who do not issue price lists or catalogues or sell roots, plants or flowers as their main vocation.

Only named *albiflora* (*chinensis*, *sinensis*) admitted. Those wishing to enter other species, hybrids or tree peonies should see above, Classes 17, 18, 19, 20, 22 and 23, American Peony Society.

A. 101. The Silver Medal Class. See Medal Classes.

102. Three blooms double or semi-double, one variety, white or flesh.

103. Three blooms double or semi-double, one variety, light pink.

104. Three blooms double or semi-double, one variety, medium or dark pink.

105. Three blooms double or semi-double, one variety, red.

106. Three blooms Japanese type, one variety, white or flesh.

107. Three blooms Japanese type, one variety, pink any shade.

108. Three blooms Japanese type, one variety, red.

109. Three blooms single type, one variety, white or flesh.

110. Three blooms single type, one variety, pink any shade.

111. Three blooms single type, one variety, red.

Advanced Amateurs may also enter any other classes in the schedule except Classes 201 to 209 inclusive. See especially Massachusetts Horticultural Society Classes 1 to 15.

AMATEUR CLASSES

Open to those who do not sell roots, flowers, or plants.

Only *albiflora* (*chinensis*, *sinensis*) named varieties admitted.

Those wishing to enter any other species, hybrid or tree peonies should see American Peony Society Classes 17, 18, 19, 20, 22 and 23.

A. 201. The Bronze Medal Class. See Medal Classes.

202. One bloom double or semi-double, white or flesh.

203. One bloom double or semi-double, pink any shade.

204. One bloom double or semi-double, red.

205. One bloom Japanese type, any color.

206. One bloom single type, any color.

207. Collection of five varieties double or semi-double, any colors. These may be shown in one container.

208. Collection of three varieties Japanese type, any colors. These may be shown in one container.

209. Collection of three varieties single type, any colors. These may be shown in one container.

In classes 207, 208, 209 varieties must not be duplicated and only one bloom of each variety may be shown.

Amateurs may enter any class in the show and especial attention is called to Massachusetts Horticultural Society Class No. 16.

SEEDLING AND NEW VARIETIES

The following classes shall be judged by the standing Seedling Committee of The American Peony Society.

Any new variety that has not been offered for sale in general commerce shall be recognized as a Seedling. It may be shown under either name or number.

Any variety of comparatively recent origin that has been named and offered for sale shall be recognized as a New Variety.

Each exhibitor is limited to five entries in classes Nos. 24 and 25, and to ten entries in classes Nos. 26 and 27:

- A. 24. *Albiflora* seedlings that have never been divided or propagated. One to three blooms of each variety may be shown. Only Certificates of Honorable Mention may be awarded.
25. Herbaceous hybrid seedlings or seedlings of species other than *albiflora* that have never been divided or propagated. One to three blooms of each variety may be shown. Only Certificates of Honorable Mention may be awarded.
26. *Albiflora* seedlings that have been divided and propagated. Three blooms of each variety must be shown. Gold, silver, bronze medals, First Class Certificates and Certificates of Honorable Mention may be awarded.
27. Hybrid seedlings or seedlings of species other than *albiflora* that have been divided and propagated. Gold, silver, bronze medals, First Class Certificates and Certificates of Honorable Mention may be awarded. Three blooms of each variety must be shown.
28. Seedling tree peonies that have been propagated or not. From one to three blooms of each variety may be shown. Gold, silver, bronze medals, First Class Certificates and Certificates of Honorable Mention may be awarded.
29. NEW VARIETIES that have been named and offered for sale. Three blooms of each variety must be shown. New varieties of any species, hybrids and tree peonies may be shown in this class. Gold, silver, bronze medals, First Class Certificates, and Certificates of Honorable Mention may be given.
30. Any named variety whether shown or not, may be awarded a gold, silver or bronze medal by the unanimous vote of either the Seedling Committee or the Board of Directors if they deem it worthy. Exhibitors may not make entries in this class (No. 30).
31. THE AMERICAN HOME ACHIEVEMENT MEDAL CLASS. This medal in silver is offered by the magazine American Home of New York, to the originator of the Best and Most Distinguished New Peony whether shown by him or some one else. The following conditions must be met:
 1. A specific entry must be made in this class. The number of entries made by any one exhibitor is not limited.
 2. Not less than three blooms of each variety entered must be shown.
 3. Any type, species or hybrid may be shown including tree peonies.
 4. The varieties entered must have distinctiveness as compared to existing varieties.
 5. No variety that has been offered for sale for more than three years prior to the date of this show may be entered.
 6. No variety that has won this award in any previous year may be entered.
 7. Every variety entered must be named and the name approved and registered with The American Peony Society. No award will be confirmed until this provision has been complied with.

8. The award shall be made by the standing Seedling Committee of The American Peony Society.
- A. 32. *THE JAMES BOYD MEMORIAL MEDAL* in silver is offered by the Pennsylvania Horticultural Society for *THE MOST DISTINGUISHED PEONY ENTRY IN THE SHOW*. No exhibitor may make an entry for this award. This medal will be awarded by the standing Seedling Committee of The American Peony Society assisted by the Show Chairman of the Massachusetts Horticultural Society or by some one designated by him to act in his place. They may employ any method they may deem proper in arriving at their decision.

FLORAL ARRANGEMENT CLASSES

OPEN TO ALL

Other flowers and foliage may be used but peonies must predominate. It is not required that the exhibitor shall have grown the flowers shown.

- A. 33. Basket.
34. Vase.
35. Bowl.

* * * * *

**PLAN TO ATTEND THE BOSTON PEONY SHOW AND ANNUAL
MEETING OF THE AMERICAN PEONY SOCIETY TO BE HELD
IN HORTICULTURAL HALL, 300 MASSACHUSETTS AVENUE,
BOSTON, MASS., JUNE 17-18, 1947.**

THE AMERICAN IRIS SOCIETY

The American Iris Society, since its organization in 1920, has published 83 Bulletins which cover every phase of iris growing. These bulletins go four times each year to all members, who may also purchase any back numbers in stock for 50c a copy. Because the bulletins are not for sale except to members a

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Orders should be addressed to the office of the Secretary, 821 Washington Loan & Trust Building, Washington, D. C., and checks made payable to the American Iris Society.

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Peony Manuals Disposed Of

Peony Manual supply exhausted. No more for sale until a new issue can be prepared. We hope to have a new manual ready some time late this year, if conditions warrant. You will be kept informed through the bulletin.