

The Daffodil Bulletin

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FROM THE PRESIDENT'S DESK

With the approval of the Executive Committee, a Photography Committee has been named to gather 35 mm. colored slides and black and white prints of daffodils as specimens, grown in clumps, used in arrangements, or naturalized. The chairman is Prof. L. P. Mains of Philadelphia. It is planned to put together several sets of slides for rental to meetings, and to establish a collection of prints for use in our own and other publications. Prof. Mains will be assisted by a group of our camera experts, but donations of first class, original slides and prints, correctly identified, are invited.

* * *

The fall meeting of the Board of Directors will be held Oct. 24, probably at Asheville, N. C., or Mansfield, Ohio, in order to bring together a representative group from our governing body. The actual site may be determined by a straw vote of the directors in September.

* * *

We welcome as a new director for the Northeast Region Mrs. C. H. Sample of St. James, Long Island, who has been named by the Executive Committee to replace Mrs. L. Stephens Crosby, resigned.

The sparks which fired the intense interest in daffodils throughout Tennessee were struck by Clarence Connell of Goodlettsville. He died June 18 after 78 years of useful living. With failing sight and an ailing heart he brought quantities of flowers to the Tennessee State Show at Nashville in April, regretted his inability to get to the Philadelphia convention, and left with this prophecy: "Nashville used to be the iris capital of the United States. Give us three more years and it will be the daffodil capital." He had rare qualities of quiet leadership.

* * *

Convention sites for 1961 and beyond will be considered by the directors in the fall. Suggestions or invitations will be greeted warmly by the undersigned.

—GEO. S. LEE, JR.

The Publications Committee has voted to make the price of the *Yearbook* \$3 to non-members. Additional copies to members, libraries and educational institutions will be \$1.25.

The tenure of approved judges of the ADS scheduled to expire December 31, 1959, has been extended for one year.

NUTRITION

By CAREY E. QUINN

I do not pretend to be a nutrition expert in the growing of daffodils as a scientist would regard the matter. But I have just completed an extensive examination of the known records and experiences available, and it is probably for this reason that our managing editor has asked me to summarize this question.

One of the oldest and most common questions asked by the average gardener when they see some well grown daffodils is, "what do you feed them?" And how satisfying it would be if you could hand out a pat answer—with a magic formula guaranteeing success.

Unfortunately there are many other related questions, and the visual apparent success at any given time may have little to do with what special nutritional program was followed.

For example, if the soil the bulbs were planted in was deeply dug—at least 18 inches—the feeding field for your roots was greatly increased by the capillary action of water and the increased length of roots thus encouraged. The result would be better daffodils in most soils, even if they had not been fed at all that year.

Again, in relatively poor soils, if a larger supply of water is provided, the daffodils will do better—often top form—because the more water, the more nourishment your bulbs get. Plants take on nothing in dry form, no matter how rich the soil or how much you feed. It is what is available that counts, and it takes water to make it available.

It must be remembered always that there are no plants that want or use just one nutritional element. I often hear the expression "feed this thing only bone-meal," or "feed that one only potash," and so forth. If such expressions are of any real value experience-wise, it means that a given soil is known to be deficient in the element mentioned. Then there is often the idea that feeding a plant or bulb too much of one element—say nitrogen—will cause harmful and unde-

sired results, whereas the undesired situation actually stems from malnutrition—i.e., the plant got the nitrogen it wanted but failed to get its normal needs in other elements.

It seems probable that all plants are selective and take mainly certain nutritional elements at one growth cycle, and the other elements at other times. In short, your bulbs need all the elements and take them if they are available at the right time in their growth cycle. You need nitrogen first to get your plant up and growing; then some weeks later you need phosphoric acid to give you root growth and floriferousness; and finally, you need potash after blooming to give you cell divisions, or bulb growth and strength. So the nutritional problem comes down to a program that gives your bulbs the sundry elements when they need it. And the nature of the soil plus the type of nutritional elements used has a lot to do with this. Slow acting fertilizers (often called organics) should all be used at one time—say in the early fall—in good garden soil. On the other hand, quick acting or quickly soluble fertilizers must be adapted to your daffodil cycle.

You might say that your daffodil cycle runs from September to May, with nitrogen needed in the first part of the cycle, phosphoric acid (super phosphate) in the central portion, and potash at the beginning of the last three months.

Getting your nutrition to your roots when they need it is complicated somewhat by the available forms of nutrition. There is little problem with reference to nitrogen because there are a number of both slow acting (i.e., cotton seed meal) and quick acting (i.e., nitrate of soda) forms; but phosphoric acid is more difficult—it means either bone-meal that is too slow to calculate or super phosphate which takes about three months to become available when put in the soil. All this means that nitrogen and superphosphate could or should be fed together in late summer or early fall so phosphoric acid would be available at mid-cycle when needed.

WINNING SEEDLING

Mrs. Ben Robertson of Taylors, S. C., was presented with an award of the ADS for the seedling daffodil she bred and exhibited at the annual meeting with 32 other seedlings produced by members. The award was by popular vote of those attending the convention. This was one of the new and interesting features of the convention and Mr. L. P. Mains, who with Dr. John Wister was in charge of this feature for the Philadelphia meeting, can be well pleased with the results.

Potash is even more difficult because the only readily available source is quick acting, and it means that a light dusting just at or before blooming time is the right timing.

Of course the daffodil grower's nutritional plans are finally complicated by fusarium basal rot that is the cause of most bulb losses. And basal rot thrives on nitrogen. In consequence, if you have any basal rot—and who doesn't?—you have to starve your daffodils a bit to keep down rot. Many of the big commercial growers set up a sort of basic nutritional formula such as 3-10-6, and then play it by ear. If, as the daffodils grow, they seem a bit off color or slow, add a light top dressing of nitrogen. No formula can fit every area, every ph, every soil—and every gardener must play it by ear, so to speak, with light feedings to match your cycle, and with light additions as found needed.

Generally, if your daffodils thrived last year I'd let them alone in the fall and give them a light sprinkling of a formula high in potash just before flowering time—potash is about all the bulbs will use at this time in their growth cycle, and unless you go hog-wild, there is no great danger of too much.

In summary, every successful daffodil grower must learn to get his daffodil bulbs *what* they need *when* they need it. He must learn to adapt this to his special cultural, source and health problems. And watch them.

FIRST ANNUAL TENNESSEE DAFFODIL SHOW

The First Annual Tennessee Daffodil Show was presented by the Middle Tennessee Daffodil Society in Nashville in April. It was an outstandingly successful show with excellent material, well shown. There were 896 entries made up of 2,100 blooms.

Mrs. Robert Cheek won the award for best flower-in-show with a well grown and groomed Crepello. Other sectional blue ribbons were won by Festivity and Daviot. Mrs. George G. Smith took the best group of three, and Mrs. Paul Garrett was tops in the best judges collection and the best novelty collection.

Among the judges were Mr. and Mrs. Walter Thompson, Mrs. Paul Garrett, Mrs. Walter Berry, Mrs. R. L. Hovis and Mr. George S. Lee, Jr., ADS President.

Mr. Lee was most particularly impressed with the quality of "their ten superb entries for the Quinn Medal." Among the ADS-accredited shows, ten entries is an excellent record for the Carey E. Quinn Medal. At Nashville it was won by Mrs. Donald Linton for a group showing Vigil, Coloratura, Balalika, Woodcock, St. Brendan, Limelight, Preamble, Lemon Drops, Ballygarvey, Tuylar, Slieveboy, Olivet, My Love, Entrancement, Mrs. O. Ronalds, Swansdown, Bethany, Roimond, Moondance, Altyre, Buncrana, Charity May, Fastnet, and Horn of Plenty.

Mrs. Linton also won the ADS Purple Ribbon for her collection of large cup daffodils.

The Publications Committee requests your attention to the deadline for material for the 1960 *Yearbook* which is September 1, 1959. The deadline for material to be in the hands of the editor for the next issue of the BULLETIN is October 1.

It has been voted by the Board of Directors to erect and staff booths at the New York and Chicago flower shows in the spring of 1960.

DAFFODIL CULTURE IN A CITY GARDEN

By MRS. HARRY W. HARRIS

Come into my garden in the old port section of Alexandria, Va., and I will tell you how I raise 400 varieties of "city" daffodils. My methods are not always ideal, but are adapted to limitations of climate, exposure, and most of all, space. Picture, if you will, a generous half-acre of wide border flower beds completely surrounded by an eight-foot ivy covered brick wall. Juniper, hemlock, cedar, magnolia interspersed with forsythia, spiraea, and 18th century rose bushes line this wall and create foliage background for groupings of daffodils, blue scilla, crocus, purple iris reticulata and colorful tulips. For such a setting I must choose top quality daffodils which combine the smoothness of show quality with great diversity of color, form and size for decorative interest.

I plant all the spring bulbs early in October, marking on a chart of the border beds each group as it goes in the ground. I strive to plant as one would weave an intricate pattern, keeping in mind color, height and texture of each group of daffodils, alternating them with brilliant specie tulips and vivid blue scilla. In soil rich in humus, with bone meal at the base, I plant the bulbs in groups 10 to 12 inches deep. Here the bulbs stay, and due to planting depth multiply very slowly. It is interesting to note clumps of daffodils purchased in 1947 blooming this year as they have for the past dozen seasons.

After bulb planting was completed in the fall I scattered 600 blue pansy plants through the borders for texture variety and added color, with very gratifying results the following spring.

When the ground has become sufficiently cold in November I use well rotted manure for a winter mulch. In the spring, as the daffodils start pushing their way through the ground, I lightly cultivate this mulch into the soil.

It is advantageous to plant the same variety in several different locations to prolong the blooming period of favorite

MULCHING THE DAFFODIL BED FOR WEED CONTROL

By MRS. GOETHE LINK

One of the main problems involved in maintaining a display garden is the amount of labor which is necessary to keep weeds and grass under control. For several years our display garden, which contains over 700 named varieties of daffodils, has been mulched with pine needles, not for the purpose of weed control, but for foot comfort during the blooming season. The needles were placed on the beds in the fall. After the blooming season the weeds began to come up through the needles and to keep the bed clean we had to remove the needles and cultivate. This is quite a chore since labels necessitate a hand job of raking.

Last fall after planting time the bed was covered with approximately three inches of peanut hulls. Blooms were slow to appear this spring in comparison to surrounding naturalized plantings, but the quality of bloom was excellent. Due to a very cold winter with no snow cover, many varieties which had been naturalized in the grass died out, while those under the peanut hulls survived.

After the blooming period the bed was carefully weeded and fertilized with 5-10-10, sprayed with Crag Herbicide according to directions, and a second

varieties, and in the north border to give semi-shade for brilliant cups and late doubles.

As the daffodils fade I start the necessary chore of fertilizing and carefully tying each clump and covering the ground with three inches of buckwheat hull summer mulch. This keeps the ground cool and moist, allowing the foliage to ripen slowly. By this time the borders are blooming with late tulips, larkspur, coreopsis, roses and pansies.

Thus in my city garden I try to combine the best possible cultural practices with careful study of plant composition, and it is rewarding indeed to greet the old, established blooms, and welcome the new varieties each year.

layer of peanut hull mulch about two inches deep was placed on top of the area. Even with an abnormal amount of moisture during the month of June, it is hard to find a weed in the bed.

The advantages of peanut hull mulch are: excellent weed control when applied three to four inches deep, winter protection against deep freeze, keeps ground cool in summer, conserves moisture, and is light in weight and does not pack or blow away. Disadvantages are: light in color for those who prefer a dark mulch, must be raked aside to dig bulbs, and extra nitrogen probably needed—however this last has not been observed so far.

THE NARCISSUS BULB FLY

By WILLIS H. WHEELER

At the Philadelphia meeting in April I promised to let the membership know about a new bulletin on the above named pest. The leaflet, No. 444 of the U. S. Department of Agriculture, is titled "The Narcissus Bulb Fly", and was published in March, 1959. It is by C. F. Doucette, the Department's specialist of many years on insect pests of bulbs, and an acquaintance of mine for many years. Anyone who has any bulb fly trouble should secure the leaflet. Write the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., and send 5 cents per copy. (The Superintendent doesn't want postage stamps).

An amendment to the by-laws effective January 1, 1960, provides for family membership of husband and wife at \$5 a year.

The ADS has honored itself by honoring Mr. B. Y. Morrison with a life membership. His fame as the hybridizer of azaleas is well known. The National Arboretum has a very large planting of his Glen Dale hybrids. But we know of his very long interest in daffodils. He was the source of inspiration and help to many early daffodil growers and daffodil shows in the National Capital area.

PRE-EMERGENCE WEED KILLERS

By KATHERINE L. BLOOMER

Certain bulb growers have materially reduced their labor costs by the use of pre-emergence chemical sprays applied immediately after planting bulbs. One that has given good results with daffodils, tulips and gladiolas is Dow's "Premerge." A publication by the State College of Washington Extension Service recommends the use of one and one-half gallons of Premerge in 30 to 50 gallons of water per acre. To quote from their recommendation, "This chemical at the rate recommended has no harmful effects on flowering, bulb yield or general plant vigor."

This treatment cannot be used after the foliage emerges. For full particulars on this material and where it may be purchased write to Dr. Lawrence P. Southwick, Dow Chemical Company, Midland, Mich.

After the foliage has appeared "Sesone" is recommended for other bulbous crops. Sesone, formerly called Crag Herbicide-1, has been used for a number of years to control weeds before they come up and become a problem. Mr. D. R. Ackerson of Union Carbide Chemicals Company, makers of Sesone, says, "Sesone kills the weed seeds before they sprout; it has no effect on plant leaves. In fact, it does not become a weed seed killer until after it is on the soil. It kills germinating weed seeds and not weeds or plants which are already up." For further details you may write Mr. Ackerson at the Union Carbide Chemicals Company, 180 South Broadway, White Plains, N. Y.

In either case, the American Daffodil Society accepts no responsibility for the use of these chemicals.

CORRECTION

In the account of the Washington Daffodil Society show it was stated that Mrs. George Watrous won the ADS Purple Ribbon for a collection of Jonquilla hybrids. This ribbon was won by Mrs. Paul M. Curran. Mrs. Watrous won the ADS Rose Ribbon for a seedling, John Evelyn x triandrus albus.

NEMATODES, WEEDS, AND DAFFODILS

By FREEMAN A. WEISS

The only reason for bringing weeds and nematodes together in connection with daffodils is that some of the soil fumigation treatments designed to control one are effective against the other. There is at best only a scant, if any, biological connection, as it was proved long ago that the race of the stem and bulb nematode that attacks daffodils differs from those on certain weeds and garden perennials to the extent that they will not cross-inoculate. As for the transitory root feeding nematodes that are sometimes associated with "decline" or "running out" conditions in daffodils, though they doubtless can and do subsist on roots of other plants too, there is no evidence that they multiply on weeds to the extent of increasing their threat to daffodils. They are, as of now, considered only minor pests.

If, however, one has in his daffodil plantings a problem involving the bulb nematode—the one which causes "spikels" in the leaves and rust-colored, ring-pattern pockets of decay in the bulbs—almost any of the chemicals that will rid the soil of this pest will also destroy weeds, including seeds. Thus one gets a bonus from their use. Included here are such highly toxic chemicals as methyl bromide and chloropicrin, which are very effective but require special equipment and precautions in applying, such as gas-impervious covers over the treated ground, and the use of rubber gloves and boots and respirators to protect the operator.

There are also some less exacting materials that are from fairly to highly effective against most soil-borne nematodes, and do not require elaborate application methods nor involve any human risk. They do require careful preparation of the soil, the same as for sowing seed, before applying, and a waiting period of several weeks after application before replanting the ground. It is already getting almost too late in the season (because

of lowered temperature which reduces their efficiency, and because of the waiting period after applying) to use these materials in ground that is to be planted to daffodils this fall. But if one's planting is to be delayed anyway, and if there is a suspicion that soil contamination of some kind, possibly by nematodes, is causing less than optimum performance of daffodils, it might be worth treating a portion of the ground intended for daffodils. One will thereby gain experience in using soil fumigants, and the nematode specialists say that you never know how much damage these hidden enemies are doing until you eradicate them from a sample area and compare the resulting plant growth with that of untreated ground. Moreover, you will greatly reduce or eliminate weeds.

One of the simplest general-purpose soil fumigants that could be used at this time of year is a product of the Niagara Company of Middleport, N. Y. It is known as Bedrench, and is a mixture of allyl alcohol and ethylene dibromide. No special equipment is needed to apply it—a garden watering can will do—and it is not necessary to cover the treated ground with a plastic sheet or otherwise. Under average temperature conditions prevailing now, treated ground can be planted after two weeks. As for all chemical applications to soil, the ground should be spaded before treatment just as one would prepare a seed bed. Clods should be crumbled, coarse debris should be removed; finally the surface should be raked smooth and free from lumps. The soil should be moist enough to work well; if it is dry at the time of treatment it should be wet down with about half gallon of water per square yard.

Bedrench is diluted by pouring one quart into 15 gallons of water, which amount should be evenly applied to 15 square yards. For small scale treatments no special protection for the operator is necessary, though one should handle the concentrated chemical only in the open air and should wear rubber gloves and avoid splashing or spilling it and breathing the fumes. In applying the diluted

chemical one should work from the windward side of the bed so as to avoid exposure to the vapor.

The Niagara Company also supplies an ethylene dibromide product without allyl alcohol known as Miscible Soilfume 75. It can be mixed with water in all proportions, for example two parts of water to one of chemical. It is intended primarily for application in furrows, six to eight inches deep, for example to a trench that is dug for planting bulbs, or a Dutch bed similarly prepared. After applying it the furrow or bed should be covered with soil to prevent loss of the chemical by evaporation, and then wet down well with water from a hose. After two weeks the furrow or bed can be opened and planted to bulbs. One pint of Soilfume 75 diluted with 30 gallons of water will suffice for 1,000 feet of trench. It does not have the weed capacity that Bedrench does, but is an effective destroyer of nematodes.

One should also mention the soil fumigant Nemagon of the Shell Agricultural Chemicals Company, as it is available in the form of granules for easy distribution and mixing with soil; furthermore, it can be applied in the presence of living plants one wishes to preserve. It is primarily for grooming season application, therefore next spring would be a more appropriate time to discuss its use in daffodil plantings.

Now for weed control where there is no indication of any need for a nematode eradicator.

There are now so many kinds of weed killers — pre-emergence, post-emergence, selective for broad-leafed weeds, selective for weed grasses, etc.—as to be almost bewildering. As far as daffodil plantings are concerned the principal weed problems come from winter annuals such as chickweed and annual bluegrass. Perennial weeds cause no great difficulty because they are largely eliminated by the thorough tillage which daffodil sites receive before the bulbs are planted. The summer annuals such as crabgrass, purslane (“pusley”), and spurge are also of secondary importance in daffodil beds because they do not start growth until

daffodils have about finished. As the daffodil foliage dies down the summer annuals can be destroyed by shallow hoeing.

With the winter annuals it is a different story. In the Middle Atlantic Region and the South, chickweed starts growing about the time daffodils are planted, and it flourishes all winter. Come spring, the daffodil bed may sport a lush green carpet of chickweed, which is hard to pull and impossible to hoe without damage to the daffodil sprouts. Annual bluegrass is just as bad.

I can say emphatically that, in my experience, none of the hormone type of weed killers such as 2,4-D, which one uses to such good advantage against broad leaf weeds in lawns, can be used around daffodils without serious risk of injuring them permanently. And they are not much good against chickweed and annual Poa anyway.

Weedkillers based on dinitro compounds, such as Sinox, are very effective against chickweed, and the methylurea compounds such as Neburon will kill both chickweed and Poa in their early growth stages. They are contact weed killers intended for application to foliage. For weed control in daffodil plantings it is preferable to use one that kills the weeds as they sprout or even prevents the seed from germinating. A herbicide known as Chloro IPC (isopropyl chlorophenyl carbamate) is made to order for this purpose. It is available in a variety of trade formulations (Miller, Niagara, Ortho, Wilson, and others) both in granular and liquid form. It can be applied with a dust gun, a fertilizer spreader, a sprayer, or scattered by hand. One application to daffodil beds, either newly planted or already in the ground (if the surface is free of weeds to begin with) can be made in the fall, another in early spring; this should insure a fairly weed-free daffodil garden by bloom time. The spring application should preferably be made before daffodils have spouted but with the granular form of IPC at least, it can be used with little risk after the shoots are up several inches.

**MEDAL AWARDED
TO DR. VAN SLOGTEREN**

At the April 25 meeting of the Board of Directors it was decided that the gold medal of the American Daffodil Society be made an international award. Mrs. Leon Killigrew, chairman of the Committee on Awards, recommended that the medal be awarded to Dr. Egbert van Slogteren. His work began in 1917 at Wageningen University, Lisse, Holland. He did much work in virus disease study to combat bulb diseases and to make Dutch bulbs safe for United States importation. He pioneered a method for sterilizing bulb fields by use of steam.

This motion was carried and the medal was presented in late July by Mr. Willis H. Wheeler, Second Vice President of the ADS, at a ceremony in Holland.

Dr. van Slogteren was notified of the award and of the presentation plans, and his letter of acceptance follows:

"Dear Mr. President,

"It certainly is a very great honor indeed for me that your Board of Directors has appointed me as the first recipient of the Gold Medal of the American Daffodil Society.

"The daffodils have been my first patients when I arrive in the bulb district in Holland, and for 42 years I have done my very best to promote the health and flowering capacity of these my favorite bulbs. That you show your appreciation for my work is a great honor for me and the greatest satisfaction I could have.

"I do expect Dr. Wheeler in Holland this month and . . . I am glad he will do the presentation of the Gold Medal as your representative. I have known him as a good friend for many years and we all have the greatest esteem for his knowledge, his integrity, and his personality.

"Please will you accept my very best thanks and my respected greetings for yourself, the other officers and for the members of your society."

The American Daffodil Society
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Lutherville, Maryland

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