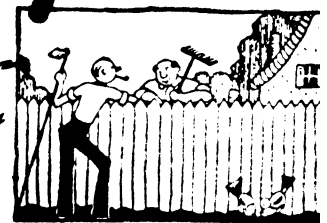




The Garden Spray

BULLETIN OF THE MEN'S GARDEN CLUB OF MINNEAPOLIS, INC.



Member--Men's Garden Clubs of America • Minnesota State Horticultural Society

June 1974, Volume 32, Number 6

Men's Garden Club of Minneapolis

June Meeting and Flower Show

Tuesday, June 11, 1974

Place: Mount Olivet Lutheran Church
Knox Avenue South at Fiftieth Street, Minneapolis

Time: 6:00 p.m. Flower Show
6:30 p.m. Dinner - Price \$2.25
7:15 p.m. Program

As president Jim noted in his May letter, the first of the two flower shows this year will be held at the June meeting. This will be a sort of warm-up for summer. There will be no entry list so bring anything you have. There will be a special Queen of the Show goblet. You also stand a good chance to collect points which, together with those from the fall show, will count toward annual trophies and more goblets.

Come early. Have your material ready and in place by 5:45.

Following dinner RICHARD H. FORSYTH, Assistant Professor of Landscape Architecture University of Minnesota, will discuss "PLANTING DESIGN in the NE MINNESOTA ZOOLOGICAL GARDEN".

ALSO in JUNE: ARBORETUM BUILDING DEDICATION

Wednesday, June 26, LIBRARY DEDICATION (Invitational)

Thursday, June 27

- 10:00 a.m. KERMIT OLSON MEMORIAL LECTURE in auditorium
- 12:30 p.m. Lunch - (box lunch picnic)
- 2:00 p.m. BUILDING DEDICATION
- 4:00 p.m. RECEPTION
- 6:00 p.m. ASSOCIATES BANQUET
Program: Awards and Dedication of Morgan T

Friday, June 28 OPEN HOUSE FOR ARBORETUM MEMBERS

OVER THE GARDEN FENCE

Many thanks for all your help in making another successful plant auction (approx. \$500 net). Our appreciation to Bud Christenson, Bruce Johnstone and Darwin Price for their many hours of planning and hard work. Also our grateful appreciation to the generous folks who donated plants and materials. Auctioneers Ev Haedecke and Dwight Stone were terrific as usual and successful in extracting that last stray dollar from our pockets. And let us not forget the contribution of those who came to purchase these materials with whom our efforts could not be converted to cash.

We are looking forward to sharing, at the Christmas Party, the celery Bob Smith won, and on the July tour will be looking for the beautiful trail mix verbena donated by Dick Donahue, owner of Lehman Gardens. Take good care of it Evald, we envy you.

Two years ago, at the plant auction, I purchased a rhododendron donated by the arboretum. The plant has been growing beautifully and this year I was so pleased at having saved all the flower buds by placing a wire fence around the shrub and filling it with leaves. I watched with anxious anticipation as the flower buds swelled and took color and then a late frost came unexpectedly and destroyed my dream. Well, maybe next year will be better.

The Fragrance Garden is under way. The spring bulbs were a beautiful sight in early May and the bedding plants were put in June 1st. Your help will be needed for maintenance during the year. Won't you offer your help at least once during the growing season to Carl Holst or John Lillibridge. Many hands will make the job easier and it is so rewarding knowing we help create and maintain this bright spot.

Welcome aboard to new members Clarence Knoblauch, a rose grower of Al Nel calibre, sponsored by Carl Holst and Nate Siegal, and Ray Marshall sponsored by Carl Holst. We will have an opportunity at the June meeting to meet and welcome them to our fellowship.

The June meeting will be a triple feature with our Spring Flower Show, R. Forsyth explaining the plan for the new county zoo, and the flower show judges explaining the finer points of judging. Dinner will be served at 6:30 to allow the judges time to organize the show before dinner. See you then and keep your thumbs green!!!

--Jim Perri

MAY IN REVIEW

The May auction was as good as a flower show. The plants for sale were, such a thing is possible, better grown than ever before. The sprinkle of rain served only to keep excitement down to mere fever heat. In keeping with the spirit of the times there was a greater variety and supply of vegetable plants. A number of the fellows brought guests. Bert Zats brought a bodyguard--three stalwart fine looking boys who examined his purchases with a connoisseur's eye before packing them away. Ev. Haedecke and Dwight Stone alternated as auctioneers. When Dwight donned that big white butcher apron, one could almost smell sawdust on the floor. And, as usual, the fellows seated in the back rows seldom made it up to the front table to check the extras at the bid in price.

The lady bugs are winning the "war" in the mountainous state of Colima in old Mexico. The Vegetable Health General Board said 11 million insect-eating Ladybugs have been released on lemon plantations to end a plague of

THE STORY OF F₁ HYBRIDS

by L. W. Corbett

In a previous article we discussed the development of new varieties in the open pollinated group. You will recall that a cross may be made and then selection for type is carried on through eight or more generations. In the development of F₁ (first family) hybrids the process is to develop inbred lines which when combined will give you a superior product. If a hybrid is to establish itself it must be better than other similar hybrids or open pollinated varieties.

Note the number of F₁ hybrids in today's seed catalogs. Good hybrids have vigor, uniformity of maturity or of plant and flower size, and increased yield. They often have more disease resistance. Corn hybrids increased yield 30 to 35 percent. In vegetables hybrids reduce the cost of handling and preparing for market. In flowers we get plant uniformity, size of bloom, long blooming period and general all over good performance.

Not all hybrids turn out to be good. A very large testing program is necessary to determine their value and adaptability--more so than open pollinated types. Their disease resistance may be more narrow. The question is often asked, "Why not save seed from this hybrid?" You, of course, can if it will seed; but the resultant plants will not be like the hybrid. Generally speaking one fourth would be similar to parent "A", one fourth similar to parent "B" and one half similar to the hybrid. You move from first family to F₂ second family and pick up the genetic breakdown.

The secret in F₁ hybrid work is to find one or more good inbreds that will combine with a wide range of material and yet transmit the desired characters. It is not easy and it also takes a lot of luck. Inbreds are made by selfing that is taking pollen from the same individual plant or flower and putting it on the pistil of the same flower or flowers on that individual plant. This inbreeding has a tendency to weaken the line but it increases the uniformity of characters, i.e. all plants become very similar in appearance for all characters. Once the inbreds are established, you have the problem of maintaining them in a constant form. Then comes the testing program of making thousands of combinations and finding out what they will do under various conditions.

Corn is a grass and because the male or pollen bearing parts are in the tassels and the female parts are the silks on the ear it was an ideal subject for research. Most flowers are perfect, that is they have both male and female parts in the same flower. To make a hybrid the anthers or pollen bearing parts are removed before the pistil is receptive. In corn you just pick out or cut off the tassel from the inbred that is to be the female. In commercial production of sweet corn, six to eight rows of females are planted to every two rows of males. After the tassels are removed the wind will distribute the pollen from the male rows. You save seed only from the female rows.

Tomatoes are self pollinated. To make a hybrid the unopened flowers are opened by hand and the flower emasculated--that is the anthers removed. This must be done while the flower is very immature. Pollen is transferred to the emasculated flower. This is the standard method of making hybrid flowers or vegetables. A lot of careful hand work is involved.

Nature for some reason makes certain plants sterile. A sterile tomato plant can be maintained by vegetative cuttings. In fact, any plant that will root by cuttings can be maintained as a sterile. The big problem is that most ster-

made of these various plant characters.

Dr. Herry Jones of the U.S.D.A. found sterile onions. The sterility factor was tied in to the cytoplasm. To maintain the sterile factor a complicated system was developed. The "A" line is sterile but it cannot maintain itself. A sister line was found that was fertile. This is known as the "B" or maintainer line. When "A" is crossed with "B" all of the progeny are sterile. These steriles are used as the female and are crossed with a good proven parent called the "C" line. This cytoplasmic sterility is used in onion hybrids, corn hybrids and several flower hybrids.

The newest method is "line incompatibility". This is the method used in making hybrids of cabbage, broccoli, radish, turnip--in fact all crucifers. Japanese breeders are years ahead of our American breeders in this field. Briefly stated you study hundreds of plants that are sterile with their own line. We say the plant is incompatible but when crossed with another line becomes compatible and seed is formed.

The incompatible lines are maintained through bud pollinization, all done by hand. One Japanese grower told me he hired 10,000 people for bud pollinization work at the height of the season. It is a very difficult job to get and maintain a line that is 100% incompatible. In the commercial production of seed a single row of each line is planted. If one line is not 100% incompatible it must be discarded and seed saved only from the one true line.

Nature is fickle. Nothing is constant. Cytoplasmic sterility will change with temperatures and with plant injury. Man keeps experimenting trying to improve, to increase beauty or to increase food and fiber. It is an interesting but never ending struggle.

WE'VE READ RECENTLY THAT...

Aster yellows isn't a virus disease after all. It is caused by a bacteria-like mycoplasma so tiny it passes through bacterial filters and can be seen only with an electron microscope. But, it is spread by leafhoppers while feeding. The disease is destructive world-wide except in hot areas where air temperatures stay above 90° F. for extended periods. High temperatures inactivate the mycoplasma in plants as well as in leafhoppers.

The mycoplasma causing aster yellows overwinters in plants and in adult leafhoppers. In cold northern states, leafhoppers overwinter in the egg stage. Eggs hatch in spring, and by mid-summer have increased to large populations of adult leafhoppers. The mycoplasma must "incubate" inside the leafhopper for nine to 45 days before the insect can transmit it to a healthy plant.

The mycoplasma also "incubates" in the plant. Depending on temperature, it may need nine to 40 days before a leafhopper can acquire and carry it to another plant. At temperatures below 50 or above 86, no infection occurs. When temperature is 68 degrees, 18 days are needed; at 77 degrees, nine days.

In both leafhopper and host plant, the mycoplasma becomes systemic during the incubation period--that is, it increases throughout the plant or insect. But, high temperatures can inactivate the disease organism in both plant and leafhoppers. The insects if kept at 88 degrees or higher for 12 days will become non-infective. In living plants the mycoplasma is destroyed when temperatures stay at 100 degrees for two or three weeks.

VEGETABLE GARDENING REALLY ISN'T THAT EASY IN VALLEY

writes Vic Thornton in the Phoenix Gazette for March 8, 1974. Gar Andersen clipped the page while on winter vacation and mailed it to your editor for the Garden Spray readers enjoyment. Says Thornton:

Vegetable gardening is an exciting challenge. Sure, and perhaps a great way to beat skyrocketing inflation. But here in the Valley of the Sun--unless you're really hep to the vegetable syndrome--you're likely to get a lot more exercise than produce pattering around in your patio garden.

We're not knocking exercise or sunshine--they're great--and so is a vegetable garden. But actually what can we expect from now until September? PEANUTS, popcorn, sweet potatoes, cucumbers, cantaloupe, okra, and peppers.

They're great, but how about beets, carrots, peas, cabbage, or potatoes? Forget 'em. They're cool weather crops--don't stand a chance here in the summertime.

How about tomatoes, corn or string beans? If you hurry, you may get something going. Tomatoes, rich in vitamin A and C, may be set out from transplant for the next week or so. And you're likely to harvest a bountiful crop before June--providing you plant the early bearing varieties....that likely to mature in the 55 to 65 day range.

THOSE BIG luscious beefsteak tomatoes--pride of the midwest--simply can't grown here. They take too long to mature. Our summers are just too warm. Plant physiologists tell us that most tomatoes just simply refuse to set fruit once the daily mean temperature exceeds 80 degrees. The plant will thrive and pretty yellow blossoms will appear, but no tomatoes. The blossoms drop. No fruit sets....

Strangely enough the smaller cherry or bite-size tomatoes defy our summer highs and set fruit throughout the hot season. If you'd like to try a sun fire producer--and they're mighty tasty--ask your nurseryman for mini or cherry tomato plants....AND IF YOU really want to see them produce--try mixing a tablespoonful of treble superphosphate or even superphosphate about two or three inches below the plant....

If you're a neophyte at vegetable gardening--and want quickish results--try radishes. You can almost see 'em mature.

Sweet corn can be a tasty treat....Eggplant is a warm weather leader. FRUIT SEED now you can plant just about any kind of summer squash you fancy. Cantaloupe, honeydew, Crenshaw and casaba melons all love the summertime....Onions, peppers and sweet potatoes--with proper attention--will do well.

But don't spin your wheels--or waste your time--trying to grow lettuce, cauliflower, cabbage, carrots, or beets. They're cool weather crops and beat a hasty retreat as the temperatures rise.

You can get more than exercise out of a backyard vegetable garden--but it takes patience and know how.

NEW MEMBERS (Clip and Paste in Roster)

Knoblauch, Clarence F. 729-3140

Marshall, Raymond D. 922-225

DRIFT THE SPRAYER

We may need to start a reprint service. Bruce Johnstone's February *SPRAY* article and Dick Lehman's February article on *Chrysanthemum Culture* were reprinted in the March bulletin of the Minnetonka MGC. Phil Smith's 1969 article on *Delphiniums in Minnesota* was reprinted in their April issue. Dick's article also appeared in *GREEN FINGERS* the Toledo, Ohio MGC publication.

Bruce Warner came back from vacation with this recipe for a: "Home Made Garlic Solution to be Dabbed on Young Plants With a Brush"

"Wrap up a pound of garlic in a bag and smash it with a hammer to pulp. Soak this for a couple of days in a bucket of water, then sprinkle it or dab it onto the plants to prevent bugs from eating them."

Sounds like it might discourage kids from raiding the apple trees, too.

Last year a young neighbor got some 10 x 10 creosoted timbers to edge and to raise his garden beds above ground level. The creosote wrecked havoc with his plantings, especially the tomatoes. This year he's using the timbers as a retaining wall between some bushes and the alley. He's learned to beware of anything that has penta or creosote as a preservative. Copper naphthanate is safe.

A new plant food called PRECISE is now on the market. 3M Company's *Precise* is a timed release plant food. Easy to use it results in greener, healthier house and garden plants with more and larger flowers. Each application of the tiny ready to use PRECISE capsules contains 3-4 month's supply of nutrients proven effective on roses, tomatoes, and just about all indoor-outdoor plants.

Return to
THE GARDEN SPRAY of MGCM INC.
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