

MORE, MORE, AND MORE AT M.G.C.M. ANNUAL SPRING PLANT SALE
Tues day, May 8, 1979
Linden Hills Park Recreation Building, 43 rd and Xerxes Avenue South

M O R E . . . AT THE COUNTRY STORE. Opens at 5:15 P.M.
MORE ITEMS OFFERED for the first time at the Country Store. There will be ROSES and BEDDING PLANTS, competitively priced.
MORE PERENNIALS and SEEDLINGS from MEMBERS' gardens.
Allow MORE TIME to browse and buy exciting additions to your garden.

M O R E . . . AT THE AUCTION. Starts promptly at 6:45 P.M.
MORE HANGING BASKETS and PATIO PLANTS.
MORE FLOWER VARIETIES - from AZELEAS to ZINNEAS.
MORE SPECIALTY ITEMS, including DWARF FRUIT TREES and a fine selection of GRAPE VINES.
MORE VEGETABLES. Bring food prices down by growing your OWn.
MORE PLANTS DONATED by our generous commercial grower members.
MORE DRAWINGS, FUN ITEMS, DOOR PRIZES.
MORE spirited but generous AUCTIONEERS, led by Dwight Stone.

MORE. . . PARTICIPATION, FUN, FELLOWSHIP
MORE GOOD FOOD from De-Laria's. Dinner at 6:00 P.M. Price \$4.25.
MORE DONATIONS NEEDED FROM MEMBERS' GARDENS. Try to bring some item for sale if possible. Please label each plant, giving name of plant, color, growing information. If you have questions, suggestions or need help digging or transplanting your plants, call Kent Canine, 874-4149 or Bob Livingston, days, 333-0246.
MORE GUESTS WELCOME. Bring a gardening friend or potential new member. The MORE the MERRIER.
MORE MONEY EARNED (WITH YOUR HELP), to renew the Club Treasury. Proceeds are used by the Club to support the Arboretum, the Fragrance Garden and other worthwhile garden related projects.
MORE MEMBERS WORKING enthusiastically to make YOUR PLANT SALE a success. Special thanks to all 14 members of the plant sale committee.

Bob Livingston, Co-Chairman, Plant Sale

SEEDS - the miracle of the plant world. Where do they come from? How are they grown? And saved? What part do they play in our life?

Seeds are one of the building blocks of modern civilization. If no volume of seed, no large scale agriculture. If no agriculture, no surplus food. If no surplus food, no cities. So seeds are essential to our way of life.
"Seeds are the germ of life -
a beginning and an end,
the fruit of yesterday's harvest
and the promise of tomorrow's."
Some good, easily accessible general reference on seeds would be the USDA Year Book on Seeds printed in 1961 which covers all types of seeds used in commerce. Another new small publication is one called Flower Seed Description by the Ranson Seed Laboratory at Santa Barbara, California which has pictures, illustrations and tables on various flower seeds.

The paragraphs above, provided by Larry Corbett and Bruce Johnstone, provide the setting for a series of articles beginning in this issue of the GARDEN SPRAY.

## SEEDS

## By D. Bruce Johnstone

A seed is a ripened, mature ovule with dormant embryo plant plus varying amounts of stored food and with a protective coating.

Many seeds, for example the cereal grains such as corn, wheat and cereal grains, are actually fruits botanically because the single ovule that develops into the seed merges and grows right into and with the ovary wall or fruit, so that fruit and seed are indistinguishable - but functionally "seeds".

Seeds are all basically sexually formed - with a pollen grain (sperm) of the male element from the stamens fertilizing the ovule of the female element from the ovary or pistil. This is the basis of change, evolution and plant breeding throughout the plant world.

Seeds are the primary mechanism for plant species survival and distribution - the sole means, or nearly so, of all annual type plants. Seeds in their dry, dormant state may carry a species over years of time and thousands of miles distance until activated with contact of moisture and warmth in the soil.

Seeds vary in their viability or longevity tremendously from some which remain viable just one season, up to others which will live for 10, 15, 20, or more years under optimum conditions. All seeds hold their viability or germination best and over the longest period under conditions of low humidity and relatively low, even temperatures.

Seeds vary tremendously in their size; viz. - orchids are dustlike in their size and shape, Kalanchoe has $2,500,000$ seeds per ounce, Begonia $1,000,000$ seeds per ounce, Petunia - 285,000 seeds to the ounce, Sweet Peas - 350 seeds to the ounce, and the gigantic Coco de Mer Palm Tree of the Seychelle Islands bears twin fruits that sometimes weigh up to 50 pounds each. Surprisingly there is little relation between seed size
and the size of the plant into which the seed will grow. For example, the Giant Sequoia has seeds that are relatively small ( 5,600 seeds per ounce), whereas the ordinary Shelbark Hickory bears seeds weighing $1 / 2$ ounce each.

Some seeds are oily; such as flax, some starchy, such as corn; some high in protein, such as beans and other legumes. Many seeds are edible and a prime source of food and feed such as the cereal grains, nuts and many legumes. Uthers are extremely poisonous such as Castor Beans, Datura, and many others.

Seeds differ tremendously in the time required for germination under optimum conditions. Many of the Crucifers such as Cress, Radish, and Mustard will germinate in four to five days, whereas many perennials and many shrubs require from one to several months.

Most seeds occur singly whereas others such as Beet, New Zealand Spinach, and others occur in boils or clusters of from 2-5 seeds in one unit (multiple seed).

Seeds are very diverse in their appearance, structure, size, color, texture and shape. Some are round, others elliptical, spindle-shaped, flattened, cottony, awl shaped, etc., etc. - but are constant enough within a species to be an identifying character.

Many seeds have a dormancy period right after harvest and do not reach their ultimate peak germination for several weeks up to several months after harvest. Certain seeds have a very hard seed coat and need to be scarified mechanically or with acid to allow moisture to enter for quick germination. Certain seeds such as Nasturtium, Geranium and others have a hull that is best removed for fast germination. Many of the tree and shrub seeds must be stratified in layers of soil or sand over winter with alternate freezing and thawing to normally germinate.

Some small costly seeds such as Hybrid Petunias and Snapdragon are frequently pelleted with an inert clay coating material to make seeding by an amateur easier and more economical. Many agricultural seeds are "treated" or dusted or coated with a fungicidal material and some are immersed in hot water for a certain period to destroy seed borne fungus spores.

A very basic truth about seed is that one cannot tell quality or performance by the appearance of the seed itself. It takes a full season, several months and a grow-out to actually know the quality of the crop that the seeds will produce. A laboratory test will fairly quickly give germination and purity but only a trial planting and observation will indicate the trueness to variety, performance, etc.

Varieties within a species are rarely distinguishable, and certain unrelated (or not closely related) types look so very similar even under a microscope that they cannot be identified by trained seed analysts (especially true in the Brassicas). Here again the only way of positive identification is a grow-out test, so this indicates the need of extreme care in handling and labeling the seeds from harvest to usage.

## CHANGE OF ADDRESS and TELEPHONE

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The April program opening with more gorgeous slides of members' 1978 gardens collected by Chet Groger was followed by a discussion of "Gardening Under Lights" (gardening practises, really) by members Dick Hulbert and Bob Smith. Both were concerned about alternatives to the energy crunch escalating costs of electricity. "Lights are fine; but we'd better be looking for ways to get around their use"..."The old reliable horse manure may again have to be used instead of the heating cable in the hot bed."

Other advice: Grow your own transplants if you want to try the new, the unusual... Water your plants at the base with the aid of your sprayer. Pump gently so as to get a minimum of pressure... Take a four inch square of sod. Invert. Use like a peat pot to plant melon or cucumber seed.
Mervin Eisel, the scheduled main speaker, developed laryngitis at 4 p.m. The redoubtable Dr. Leon Snyder, equipped with Eisel's slides which he had never seen, took over for him. With scarcely a pause for reflection he named the shrubs and trees shown, cited the uses and characteristics of each, told what the arboretum's experience had been, and indicated what likelihood there was that the material could be obtained in local nurseries. That man never ceases to amaze!

- Culled from an article by $\frac{\text { RE TRANSPLANTS }}{\text { hil Menges in }}$ the American Vegetable Grower.

Three characteristics of a transplant apply fairly generally: 1) Younger usually perform as well or better than older transplants. 2j crowding in the plant growing area tends to delay the time of first harvest. 3) There seems to be no advantage in having relatively large or well-hardened transplants.

With tomatoes younger transplants (five to six weeks) gave higher yields and better average fruit size than older plants (10 weeks). When transplants had open flowers that set fruit soon after field setting, yields were seriously reduced. Removing clusters with open flowers restored yields of older plants but fruit sizes still were smaller and maturity was delayed.

With cabbage four-week old plants with about four true leaves produced slightly larger heads and generally were ready to harvest about as early as older plants (eight weeks and seven to eight true leaves).
Peppers and eggplants behaved somewhat like tomatoes. For these two crops about ten days longer growing time in the plant bed is needed.

Have you advance news of an event of gardening interest coming up that should/could be included in the SPRAY. Get it to Ed Culbert by the 15 th of the month.

Garden failures are of interest, too. Share yours with your fellow gardeners both verbally and through the SPRAY.

House plants should be in for a good spring huase cleaning. Repot overgrown pots. Refresh the soil in those not overgrown. Buy a conmercial mix which assures good drainage and little compaction. Choose new foliage plants--small ones for the small areas, big ones for the sun room, entry and patio. Give them light (not sun) and fresh air (not wind). Reward them with a feeding of a liquid application. Groom them, bloom them, train them, hang them, give them a trim, give them a friend.

If you are growing plants in used pots, use a solution of clorox for disinfecting and killing any virus which might be present. For a few pots use 3 tablespoons Clorox to one quart water. For a larger quantity use 3 cups Clorox to 1 gallon water. Scrub the pots well and rinse in clear water. Always use rubber gloves.

THREAT TO CHRYSANTHEMUMS -- Again (1978) a small planting of chrysanthemums was found infected with the dreaded white rust disease from Asia or Europe. The planting, in a home garden in New Jersey, was destroyed as part of the U.S.D.A.'s attempt to stamp out the disease before it becomes widespread. In 1977, the first year it was found in North America, infected mums were discovered in 14 different properties, and stringent eradication efforts were carried out. Apparently brought into the country on infected cuttings, in violation of our quarantine laws, this fungus appears as white pustules on undersides of chrysanthemum leaves, with corresponding depressions on the top sides, and progressively deformed foliage. Flowers are not much affected, but plants are spoiled. If you find such symptoms on any of your mums, inform state or federal plant disease specialists or your county agricultural agent.

BRING A PROSPECTIVE MEMBER TO THE AUCTION!

WE'LL SEE YOU AT THE AUCTION. SEND YOUR RESERVATION.

## Return to

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