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ORCHARD AND GARDEN NOTES.

April 15.

Treat all potatoes for scab before planting.

Plant some Swiss chard or leaf beet for greens.

All old wood should be removed from the rose bushes.

The cover can soon come off of the tulips and strawberries.

Small white onion sets are the best. If they cannot be obtained, yellow sets should be used.

Alaska is one of the earliest peas to sow. Alderman and Gradus are good second-planting varieties.

As soon as the garden can be worked, plant onion sets, and spinach, lettuce, radish and onion seed.

Cold frames should be put in use now for such transplanted garden crops as celery and cabbage, and for sowing late celery, cabbage, and annual flowering plants.

Horseradish, rhubarb, and peonies should be planted early, if planted in spring, since they are among the first plants to start.

Has that order for fruit trees and plants gone to the nursery? There is still time to send it, though it is rather late.

Sweet peas should be planted early in a sunny location. Any good garden soil will do, the richer and better prepared, the better. They should be planted at least two inches deep.

The elder and hardy hydrangea may be pruned any time before the buds begin to swell. Most spring-flowering shrubs should not be pruned until after flowering.

It is a good plan to roll a lawn early in the spring to get it smooth and make it easier to mow, as well as to help hold the moisture.

Bone meal and wood ashes in equal quantities make a good lawn fertilizer. Apply at the rate of one pound per square rod, or 300 or 400 pounds per acre, at one time.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

ORCHARD AND GARDEN NOTES.

April 22.

There is still time to do pruning and top-working.

Pansies, zinnias, asters, and petunias make good flower beds.

Plan to set out at least one tree or shrub on Arbor Day.

Dahlias and cannas should be started for setting out later.

Peas, beets, carrots, Swiss chard, and radishes may be planted the last of April.

Sweet alyssum, golden feather, and lobelia are good annuals for borders. Sweet peas, asters, calendula, pansies, stocks, and cosmos are excellent for cut flowers.

If the weather is warm and settled, plant a little Golden Bantam sweet corn late this month.

Muskmelons may be started in paper pots or strawberry boxes about five weeks before they can be set in the field.

About 2,500 or 3,000 acres of sweet peas are grown in California for seed alone. They will, on an average, yield about 800 pounds per acre.

Kohl Rabi is one of the garden vegetables that should be more widely grown. It is much like the turnip in quality, although easier to grow.

The wild cucumber, gourd, scarlet runner bean, and morning glory are excellent quick-growing vines for covering unsightly fences and stumps.

Nasturtiums, portulaca, California poppies, and bachelor buttons will do well on almost any soil so long as there is plenty of sunshine. Start an asparagus bed this spring. A small plot of well-enriched land will produce a nice lot of asparagus. Conover's Colossal and Palmetto are good varieties.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

The Summer Session of the College of Agriculture and the Summer Teachers' Training School will be held on the University Farm campus, June 15-July 25. During the week of July 20-25, a conference of high-school agricultural teachers, similar to the one of last year, will be held.

ARBOR-DAY PLANTING.

Tree-planting is closely associated with Arbor Day and is a splendid way in which to celebrate the day, at the same time building for the planter a monument that grows larger and more valuable as the years go by. Every unplanted school and home yard and every street should have some attractive shrubs or trees planted this year. The essentials for success are the same for the one as for the other.

First, get a good tree of the variety desired. For street trees there is nothing better than white elm or hackberry. Hard and Norway maple and occasionally mountain ash may be used to advantage on the lawn. The trees may be taken from the forest, but usually nursery-grown trees are preferable, since they have been transplanted once or twice and have a much better fine root system than those taken from the woods.

If trees are moved from wild conditions, it is well to select those that have stood at the outer edge of the forest, or in the open, since they have not been drawn up, and consequently are better proportioned and usually have a better root system. A tree should have a good top, although this is less essential if the roots are fine and numerous. It should at least be free from disease and insects. The age and size will depend on the method of handling, the distance it is to be carried, and the purpose for which it is used, but the tree should not be over four inches in diameter.

The top is usually cut back to within seven or eight feet of the ground, leaving a well-rooted pole. There is some objection to this method of treatment. Unless occasional attention is given to thinning this head, crotches are likely to be formed and, in the case of wind-swept districts, the branches may be broken off. Some people prefer to use smaller trees and shorten the branches rather than cut back to a pole. The important thing in any case is that the tree have a fine, active root system.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

PROTECT THE ROOTS.

In digging the tree, preserve as many of the roots as possible, especially the fine roots which feed the larger ones. Do not let these roots dry in the sun or wind. They should be protected with burlap, canvas, or straw until they are set in the ground. This is especially true of evergreens. Exposure of the roots to the sun or wind for one minute will set the resin in the root and stop further development of the plant. This is a matter that does not seem to be well understood, or at least heeded, by our tree planters. Thousands of evergreens are destroyed each year by careless handling, either in the nursery or, as is the usual case, by the planter. One cannot be too careful in handling either the evergreen or the hardwood trees to keep the roots from drying.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

SELECTION OF SEED POTATOES.

In selecting potato tubers for seed purposes, the grower should keep in mind the following well known principles:

1. Select seed true to variety and type.
2. Avoid abnormally elongated and tapering tubers as they are degenerated or run out and will produce only low yields.
3. As a general practice discard the small tubers for seed purposes, as they were obtained largely from poor hills. Small tubers produced by high yielding hills, however, are preferable to larger tubers from poor hills.
4. If you are dependent upon bin selection, use tubers weighing at least five ounces for seed and you will find that this will eliminate a large percentage of the inferior strains.
5. Plant hills with one seed piece and during the summer mark the most vigorous hills with stakes and save the tubers that yield best and are truest to type for next season's seed plot.
6. If hill selection is carefully carried out, there will be little, if any, need for change of seed. There are records of several growers who have maintained their yield for long periods by careful selection.
7. If your seed stock has been run out by improper selection, purchase new seed true to variety and type from a reliable grower or seedsman.
8. Stick to the standard varieties that have been proved by trial successful in your locality and avoid or test only in a small way the new or little-known sorts.—Richard Wellington, Assistant Horticulturist, University Farm, St. Paul.

FREE TRIP TO STATE FAIR OFFERED.

In Many Counties No Boys Have Entered Contest, So Ask Your County Superintendent.

The Minnesota State Fair is looking for 86 of the keenest, wide-awake farm boys from sixteen to nineteen years old, in the State. It wants to give them a free trip to the State Fair, September 7-12. The trip lasts a week, and the expense to the boys is only a few dollars for clothing and incidentals. This inducement, however, will not be offered to Minnesota rural boyhood later than May 1, and it behooves the prospective eighty-six to get busy at once.

The boy, to win this trip, must write the best essay on corn, clover, alfalfa, or livestock, submitted to the County Superintendent by any boy in the county. This essay is to contain from 400 to 700 words. On May 1, each County Superintendent will judge all essays submitted in his county, and the boy who ranks highest in his county will be given a free trip to the State Fair early in September.

As soon as the lucky eighty-six boys arrive at the Fair they will be given special cots and uniforms. Some bedding and clothing must be brought by each boy. The Farm Boys' Camp will be in charge of E. C. Higbie of the Morris School of Agriculture. Trips will be made to all the exhibits on the grounds, and special instructors will explain everything. Some time will be spent by the boys ushering in the grandstand and livestock pavilion.—Ray P. Speer, State Fair Grounds, St. Paul.

LAWN-PLANTING POINTERS

Do not overplant the yard. Have a reason for every plant set. Plant in groups—never in straight lines.

Corners and abrupt angles may often be rounded by shrubs. Vines on a building lighten the somber effect of the stone or brick.

Peonies, iris, phlox, and giant daisy are among the best perennials to use. It is often an advantage to screen the rear of the lot by a hedge or group of shrubs.

Just enough vine should be used on a porch to shade it and partly screen it from public view.

Masses of one color are better than too great a mixture. A few well-chosen plants are best.

Shrubs at the base of a building relieve the set, formal character and seem to "tie" it to the ground.

Large trees or plants should always be set in the background. Gradations from these may be made to the front.

Wild grape, Virginia creeper, bitersweet, or the climbing rose are excellent for the porch.

Use shrubs that have beautiful foliage or colored fruits. An all-season effect is usually wanted. One of the best-clipped hedges in Minnesota is made of buckthorn; dogwood, Alpine currant, and willow are also good. Do not plant thick unless immediate results are wanted.

Shrubbery makes a good background for flowering perennials. Vistas of objects in the distance may often be framed to advantage with shrubs.

Highbush cranberries, viburnum, lantana, rose rugosa, wahoo, sand-thorn, Tartarian honeysuckle, snow-berry, and dogwood supply colored foliage and fruit.

Flowering currant, June berry, mock orange, spirea Van Houttei, common elder, barberry, lilac, caragana, and dogwood are a few shrubs that blossom early.

Scattered planting over a lawn should never be tolerated. Keep the plants at the sides of the lot and base of the building. They may be used to prevent crossing of the lawn, especially if planted at the corners.

The most important feature of the home grounds is a good lawn. A mixture of forty pounds of pure Kentucky blue-grass, five pounds of redbud, and three pounds of white clover per acre makes a good lawn.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

LOOK FOR THE SEED LABEL

All agricultural seeds, according to the new seed law, must be labeled. The best way to enforce this law is to have the buyers of seed insist on a label. The market for unlabeled seed will then disappear. All farmers should protect themselves by always insisting on the label when they buy seed. Farmers should not buy seed labeled "Uncleaned Seed" unless they have absolute confidence in the person from whom they buy the seed.—W. L. Oswald, In Charge of Seed Laboratory, University Farm, St. Paul.

TRACTION ENGINEERING SHORT COURSE.

The growing use of traction engines in general farm work has made it advisable to offer a special course of instruction in the use of power machinery. The Fifth Annual Short Course in Traction Engineering will open Tuesday, May 5, and continue for five weeks, closing Friday, June 5. Those wishing to take the course should register and secure boarding places not later than Monday, May 4, as work begins promptly Tuesday morning.

Good board and room will be furnished on the campus for \$17.50 for the term. The tuition for the course is \$15, payable at the time of entrance. Each student is required to furnish work-clothes and note books, and be prepared for the expense of car-fare on trips of inspection.

Any person of good moral character who can read, write, add, subtract, multiply, and divide, and who has had one season's experience with plowing or threshing outfits, or its equivalent in other lines, will be admitted to the course.

The regular school sessions will be held every day from 8:15 to 4:30, except that Saturday afternoons will be devoted to visiting places of interest in and about the Twin Cities. Some of these are: The State Capitol and its power plant; the State Prison, at Stillwater, and its manufacturing plants; the factories of the Northwest Thresher Co., The Gas Traction Co., Minneapolis Steel & Machinery Co., and the Minneapolis Threshing Machine Co.; the Pillsbury A flour mill; and the power plant of the Twin City Rapid Transit Co.

The course includes: Physics, blacksmithing, steam boilers and engines, gasoline engines, pumps, babbling, soldering, pipe-fitting, tube-setting, belt-lacing and rope-splicing.

Those who take the course and receive the diploma may have an engineer's license, which is required by the State of any one who runs an engine. For further information, address J. M. Drew, Registrar, University Farm, St. Paul.

FOOD FOR CHICKS.

Chicks should not be fed until at least 36 hours old. Fresh water and fine grit must be supplied. The first feed may be a hard-boiled-egg mixture with stale bread, bread soaked in sweet milk, but squeezed dry, or commercial chick feed. Young chicks should be fed every two hours during the first week, but only what they will eat up quickly. Fine charcoal and grit should be supplied in a hopper, as instinct leads the chicks to eat these.

When the chicks are old enough to leave the hen, roosts may be put in the coop if it is of sufficient size to hold the brood. A yard or creep should be furnished that will keep out the grown stock and allow the chicks to feed by themselves. Hoppers filled with a dry mash of equal parts of wheat bran, wheat middlings, cornmeal, and sifted ground oats will aid in keeping the chicks growing and getting new feathers. The grain feed, i. e., cracked corn and cracked wheat or chick feed may be supplied in hoppers, and with drinking fountain for water and milk the time required in caring for the several flocks may be thereby greatly reduced.

Sweet or sour milk and cottage cheese are great aids in supplying a growing ration while the chicks are small. The use of these animal products of the farm will save the expense of beef scraps which most poultrymen are compelled to buy. When the chicks are half-grown they will find worms, grasshoppers and bugs, if given range by moving their roosting coops or colony houses about the grounds.—N. E. Chapman, Poultry Specialist, University Farm, St. Paul.

HATCHING CHICKS.

Chicks hatched in April or May give the best results. Those hatched later than this do not usually grow so well, owing to the warmer weather and the lack of worms and of nice, juicy grass and they do not have the time to develop for early winter layers. If they are hatched earlier than the first of April, it costs more to rear them; and the eggs, as a rule, are high in price and less likely to be fertile. They require warmer coops; and it also takes a great deal more time to look after the little ones. There is danger of the very early pullets moulting just as winter sets in, thereby spoiling all prospects of an early winter egg yield. When they are hatched in April and May everything is in their favor. They thrive and grow, and make much stronger and better birds.—C. E. Brown, Poultryman, Northwest Experiment Station, Crookston, Minn.

PREPARE THE SEED BED WELL

A Few Reasons for Putting the Soil in Good Shape Before Sowing.

The soil is the home of all crop growth, and much depends upon the preparation of that home for the crop that is to be grown. The preparation of the seed bed will vary somewhat with the character of the crop and the quality of the soil in which it is to be grown; but in all cases it must be remembered that if a seed is to germinate readily, it needs air, warmth, and moisture, and that if a plant is to thrive and have a vigorous root development, it needs a mellow, yet compact, seed bed, in which the soil particles are neither baked together nor in an open or lumpy condition, but are sufficiently packed together to allow a free movement of moisture in the soil, and which can still supply the needed amount of air. When prepared in this way, and thoroughly united with the subsoil below, such a seed bed offers, under favorable conditions, a most excellent opportunity for root development and continued growth.—Agricultural Extension Bulletin 20, University Farm, St. Paul.

PLANTING TREES.

Dig a hole somewhat larger than is absolutely necessary to hold the roots and be sure to spread all roots well. Twisted or bunched roots are likely to decay easily. It is well to cut off the ends of the larger roots with a sharp knife, especially if they have been bruised. Set the tree or plant in the middle of the hole. It may be leaned slightly toward the direction from which the wind comes. Fill in about four inches with the richest top soil obtainable. If the tree is set in sandy or poor soil, it is always a good plan to take out considerable soil from the hole and fill with good rich soil. Trees or other plants will not do well on sand. They must have plenty of plant food.

After the tree is set and about four inches of soil thrown in over the roots, tramp the soil well so that it is firm about the small feeding roots. This is perhaps the most important point to remember in setting a tree or plant of any sort. Water may be added, although it is better to put it in the hole a few hours before the tree is set. Fill in with more soil and keep tramping it until the top layer is put on. The last four or five inches should not be tramped very much, since we want a dust blanket to help hold the moisture in the soil. It is well to leave a dish or hollow about the tree to catch and hold the water from the rains.

If the position is exposed to high winds, it is usually a good plan to drive a stake into the ground and tie the tree to it to prevent the wind from blowing the top and loosening the root system.

Sometimes it is desirable to mulch the soil with several inches of straw litter, but as a rule, cultivation is preferable. Mulch should be applied to the depth of about six or seven inches when the ground freezes in autumn.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

FREE RANGE FOR INCUBATOR CHICKS

When incubator chickens are from 8 to 10 weeks old, we give them a free range, and feed them from hoppers, which are filled once a week. These hoppers have two compartments, one for the meal mixture and the other for the cracked grains. Some poultrymen water their chicks only once a week. They use a good-sized barrel, fill it with water, and haul it to a shady place where it will keep cool. The barrel is fitted with a tap, which is set so as to let the water drop into a pan just fast enough to keep up the supply without waste. This plan is followed till the time for rounding up the chicks for the winter.—C. E. Brown, Poultryman, Northwest Experiment Station, Crookston, Minn.

INCUBATOR MANAGEMENT.

In the use of incubators and brooders one must strictly follow the directions of the manufacturer. As the instructions for operating vary somewhat with different machines, no definite directions will be given. In general, fill the lamp daily, and keep the wick clean. After testing out on the seventh day, turn the eggs twice and cool them once, daily until the eighteenth day. Do not open after that date until the brood comes off.—N. E. Chapman, Poultry Specialist, University Farm, St. Paul.