...so proud of ...-linen –" ...Experience

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Efficient Farming

FERTILIZER HINTS.

Now is the time to consider the spring fertilizer needs of the farm. By placing your order now, you will not only be co-operating with your dealer, but you are more likely to get the analysis you want.

When buying fertilizers consider the analysis of fertilizer rather than the brand. A particular analysis may be sold under many brand names. Just because a fertilizer is sold as a "Corn and Wheat Grower," or "Bean and Beet Special," etc., it is no indication that it is best for your particular soil condition. The Ontario Agricultural College is ready at all times to give information regarding the proper fertilization of crops on different types of soil.

Always insist on high analysis fertilizers. A high analysis fertilizer is one containing fourteen or more units of plant food. A low analysis fertilizer contains less than fourteen units. A 1-8-1, containing ten units of plant food, is a low analysis material. A 2-16-2 contains twenty units of plant food and is considered a high analysis fertilizer.

A high analysis fertilizer costs more per ton but less per unit of fertilizing material. Twenty units of plant food, contained in one ton of 2-16-2 fertilizer, costs $40.80. Twenty units of plant food contained in two tons of a 1-8-1 fertilizer costs $[illegible]. By using a 2-16-2 at half the rate of a 1-8-1, the same amount of plant food will be [illegible] and $17.80 saved on every ton of 2-16-2 used.

[illegible] are [illegible] on most types of soil in Ontario. The points of consideration are: (1) the proper analysis to use; (2) the proper rate of application; (3) the proper method of application, and (4) crops adapted to the soil type.

The use of phosphoric acid is the most important consideration in fertilizing crops on Ontario soils. Both heavy and light types respond to this ingredient. Nitrogen is essential on the lighter types and badly run down heavy types. Potash gives good returns on the lighter types particularly when used with alfalfa or the clovers.

It is a good practice to top-dress wheat and rye in the spring with sodium nitrate at 60 to 100 pounds per acre, or ammonium sulphate of 40 to 75 pounds per acre just as the plants are emerging from their dormant stage. This practice is particularly good on the lighter types of soil or soils of low fertility. If the soils are alkaline in reaction or have no lime requirement either one may be used. On acid, or sour soils better results will be obtained where sodium nitrate is used.

Acid phosphate at 250 pounds per acre is usually sufficient for oats or barley when seeded alone. If the crops are grown in a rotation with no manure or green manure in the rotation, a 4-12-0 or 2-16-2 will be better. If alfalfa or any of the clovers are seeded with oats or barley, it is advisable to use a fertilizer containing more potash on the lighter type soils, such as an 0-12-6 or 4-8-6.

A complete fertilizer is one containing nitrogen, phosphoric acid and potash. It must contain all three ingredients. A mixed fertilizer does not necessarily mean that it is a complete fertilizer. It may contain only one or two ingredients.

Fertilizers should be used to cut the cost of production and help maintain the fertility of the soil. It costs no more to prepare the seed bed, plant the crop and cultivate a fifty-bushel crop of corn than a twenty-five-bushel crop. Increase the yield per acre and cultivate fewer acres. This will allow more of the farm to be seeded to soil-building legumes.

Poultry

Chicken Cholera, caused by a germ known as the bacillus avisepticus, spreads very rapidly. The germs are given off with the bowel discharges and soon contaminate the food and water supply. Birds will also carry infection on their feet.

The disease is accompanied by a high fever, which causes birds to become unusually thirsty, and they will be found hovering near the water trough. It makes itself apparent in from three days to a week's time after the infection, depending on the resistance of the bird and the virulence of the infection. Frequently it acts very rapidly, and the first knowledge that the poultryman will have will be when he finds a few dead birds among the flock.

In other outbreaks the individual bird will be noticed to have loss of appetite accompanied by high fever. Birds are very weak, and reel and stagger as they walk. The feathers are ruffled and a sick bird sits by itself, showing no vigor and a rapid loss of flesh. The comb grows darker in color, and there is a severe diarrhoea of a greenish-yellow color. This condition may last for from a week to ten days, and the bird may be attacked by convulsions and die early.

First remove all birds that are apparently healthy and put them in clean quarters. Thoroughly clean up and disinfect the pens, including the runs, which the sick birds are kept. Remember that the attendant can carry infection from one place to another, and be careful to wipe the feet thoroughly on an old sack saturated with stock dip. Dead birds should be deeply buried in quicklime. Feed in narrow, shallow troughs in which the birds cannot stand. Remember that sunlight is the best disinfectant possible. Disinfectant with a good dip and whitewash with an antiseptic whitewash.

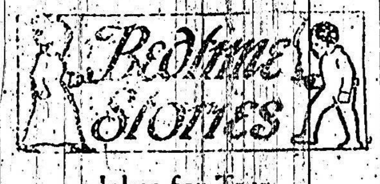
Use enough potassium permanganate in the drinking water to turn it the color of weak coffee. Give one-half grain of sulpho-carbolate compound in hot mash, for each bird, two or three times daily. You can secure these tablets from any druggist, who keeps them for use of human physicians. —Dr. George H. Conn.

Care of Grease.

The cans or boxes in which axle or cup greases or lubricating oils come packed, usually become more or less greasy or oily out the outside. In time, the shelf, bench or floor where they are kept becomes grease-soaked. This is not only unsightly and messy, but also increases fire hazards. To avoid this, cover the shelf or floor with a piece of tin, galvanized iron, zinc, or other smooth sheet metal. Then, if this is wiped off occasionally with a rag or a piece of waste, it becomes easy instead of hard to keep clean.

Mending Tubes on the Milking Machine.

When the rubber tube on the milking machine leak air, and we do not have a new part on hand, we use the little patch vulcanizer intended for automobile tires. These little outfits are known as five-minute vulcanizers, and have their own heating elements and vulcanizing patches all ready to make a repair on the milk tubes or inflations in a jiffy. A break one inch long can easily be mended, and the repaired part will outlast the rest of the rubber tube.—J. L. J.



Jokes for Two.

Robert had been playing April-fool jokes all the morning. At last even he was tired.

"Will you help me put a new cover on my kite?" he asked Miriam, his sister.

Miriam shook her head. She thought Robert deserved punishment.

"All right, I didn't want you to anyway. April fool!" he cried and ran out to play with two new boys across the street.

Miriam had played with Robert ever since breakfast and had not been cross once when he "fooled" her. Now she thought it was most unkind of him to go off and play with a boy he had never seen until yesterday.

"I don't care!" she said to herself and sat down by the window to think. She could see the boys playing under the trees. They seemed to be having such a good time! The new boy had brought out his radio set to show to Robert. Miriam felt like crying. Sometimes boys were very mean.

By and by Miriam smiled. "H'm! I guess Robert Kenyon is not the only one that can play an April-fool joke," she said.

Miriam did not tell anyone about her joke, and during luncheon no one would ever have guessed that she had one in mind. But as soon as Robert had gone back to play with his new friend she busily set to work with the scissors and paste pot and a roll of paper and some string.

She worked steadily, and just when she had finished her little joke and put it away she heard Robert's whistle.

He opened the door of the closet where he and Miriam kept their play clothes and games and things. Since he was talking very fast about the new boy, he did not notice that Miriam was fidgeting. Robert hung up his cap and started to close the door. Then far back in the corner he saw something that made him stare. He caught it up and brought it out to the light.

"April fool!" Miriam called, dancing round her brother. "April fool!"

Robert's eyes grew big and a broad smile spread over his face as he stood looking at the object in his hand. It was his old kite, with a new glossy covering of tan and blue, with L.S., which stood for Lincoln School, in tall silver letters in the centre of the blue, and a beautifully knotted tail that Robert knew at a glance was "just right."

He grinned sheepishly at Miriam. "I guess I was kind of mean, sis," he said. "But it was great of you to stay in alone all afternoon and mend that old kite!"

"I didn't mind," she answered, and her eyes were bright and shining. "Last tag!" she cried and darted away to the kitchen.—Nellie Josephine Phipps, in Youth's Companion.

The European Corn Borer.

A series of experiments were conducted by the Dept. of Entomology to ascertain what percentage of the corn borers perished while still very small or during the first few days after hatching. In these experiments 8,100 eggs were used. It was found that an average of a little more than 75 per cent. of the borers perished. We think that further work of this kind will prove very valuable in determining the effect of moisture, temperature and sunlight, not only on the borers themselves, but also on the moths, and will enable us to form a much more accurate estimate of the rate of increase and damage likely to take place in a normal years, says Prof. Lawson Caesar, Ontario Agricultural College.

It is not altogether what a hen eats that makes eggs and flesh, but what she digests and assimilates.

Uncle Si says he likes to have company for meals well enough, but he does hate to keep passing things, and they never seem to ask for what they want.

Inoculation of Legumes.

Leguminous plants such as alfalfa and the clovers have on their roots small bunches or "nodules" containing bacteria. These bacteria can take nitrogen from the air and give it to the plant. As a result the plant is more vigorous and has a higher feeding value. This nitrogen from the air helps to build up poor soil.

If a field has grown the same legume with an abundant supply of nodules for three or four years then the field is, in all probability, inoculated with the right kind of bacteria for this particular crop. If it is necessary to bring bacteria from an outside source, a nearby field which is known to be inoculated is a satisfactory source. Distribute this soil over the field to be inoculated at the rate of 200 to 300 pounds per acre. Make this distribution before seeding, on a cloudy day, and work the soil in immediately. If such soil is not available, inoculate with pure cultures, which you can get, with directions, from any seed store.

There are several strains of these bacteria. One strain will infect both alfalfa and sweet clover; another infects the common clovers, such as red, alsike, mammoth and white. Separate strains may also be had for field and garden beans, soybeans, field and garden peas, cow-peas, sweet peas and vetch. A field inoculated for sweet clover will also be inoculated for alfalfa and in the same manner a field inoculated for one of the common clovers will be inoculated for all the various common clovers.

The Rose Bed.

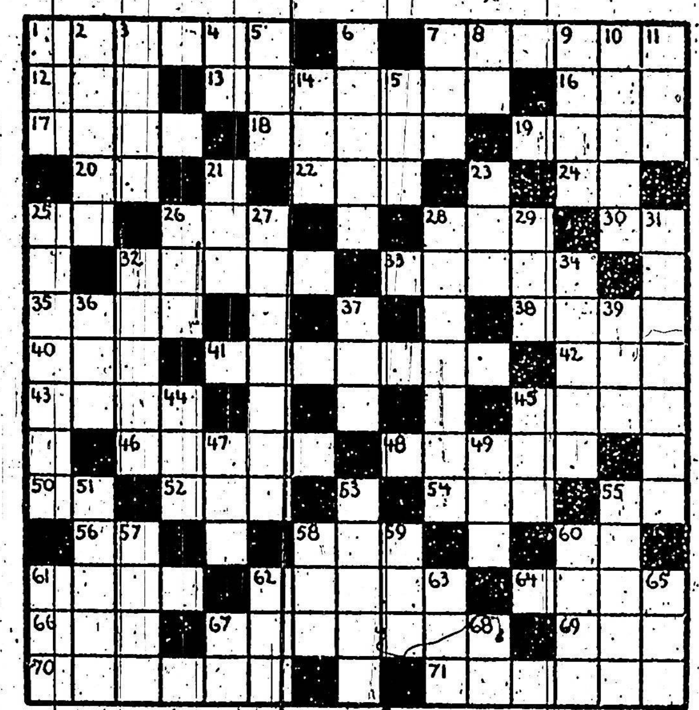
Mr. Wm. Hartry, a director of the Ontario Horticultural Association, addressing the annual meeting held in Toronto in January, described his method of making a new rose bed. The space to be worked was 5½ feet wide and 12½ feet long. The sod was first removed and laid on one side. The good top soil was taken out and placed at the other side. The hard subsoil beneath was removed to a depth of eighteen inches and wheeled away. A tile drain was laid in the bottom and connected with one that ran through the garden. Next, the sod that had been taken from the top was filled in and this was covered with several inches of well rotted stable manure. The excavation was then filled to the top and above it, layer upon layer of good soil and manure. This work was all done before the roses arrived. The planting stock of twenty-eight roses arrived in the forenoon and were immediately plunged into a tank of water, where they were left until sunset when they were in good condition for planting. The plants were put in about twenty inches apart. The varieties planted were Primer, Columbia, Sunburst, and American Beauty, all of which did well. The following year the planting was extended to forty-eight plants, the new varieties added being Dunlap, Madame Butterfly and Hoosier Beauty.—Ont. Hort. Asso.

Home-Made Yeast for Poultry.

Yeast is becoming an important factor in the growth of poultry and increased egg production. Poultrymen may make their own at a cost less than the commercial product. Place one quart of hops in about two and one-half quarts of water, and boil for ten minutes. Then strain and pour the liquid over one quart of wheat flour. As soon as this mixture reaches a temperature of 100 deg. F. (milk warm), add a cake of commercial yeast, and let it ferment for two days. Keep in a warm place, as a chill will destroy it. After it has fermented, stir in five pounds of cornmeal, and let it stand for three or four hours to rise. Then remove from the pan and place on newspapers to dry. When dried it is ready to be fed.

Improper handling of farm manure is probably causing more plantfood to pass into the air as ammonia or into the creek as seepage than ever reaches the field.

CROSS-WORD PUZZLE



©THE INTERNATIONAL SYNDICATE.

HORIZONTAL

1—A great island N. of Canada
7—A synagogue ruler whose daughter was raised from the dead
12—Girl's name
13—A city in Venezuela
16—Suffix, meaning "of the nature of; like"
17—A cape on the coast of Newfoundland
18—A tambourine
19—An entrance or passage (mining)
20—One of the churches (abbr.)
22—Achieved
24—Prefix meaning "from, out of"
25—Personal pronoun
26—A kitchen utensil
28—Preposition
30—Close to, by
32—A woodland deity
33—Merciless
35—A wading bird
38—An entrance way
40—Man's name (familiar)
41—Kind of ship Columbus sailed in
42—Relative pronoun
43—Fiber of a tropical American plant
45—A laborer on a Mexican estate
46—Ago (poet.)
48—Sorrow or suffering (poet.)
50—A weight (abbr.)
52—A stay-rope
54—Middle (abbr.)
55—Preposition
56—Part of verb "to be"
58—Member of a City Council (abbr.)
60—To exist
61—A country of S. E. Asia
62—An implement for separating grain by beating
64—Exclamation of regret
66—Possessive pronoun
67—A military title
69—Man's name
70—To summon and gather together
71—A province in east Canada

VERTICAL

1—To shut out
2—To conform
3—Front
4—Suffix used as an adjective termination
5—Man's name (familiar)
6—Toil
7—A container
8—Like
9—An excursion by any means of conveyance
10—A city of east-central New York
11—Fixed in opinion
14—Uncooked
15—To peruse
21—A small bed
23—Girl's name (familiar)
25—Standing at the beginning
26—A step, a dance
27—Despotism
28—Liberty
29—A color
31—A city of Ontario, Canada
32—A city in Punjab province, India
34—Reduce in value
36—A receptacle
37—A vessel for holding liquids
39—Interjection
44—Farm product
45—Seed-case
47—Possessive pronoun
49—Cover of a receptacle
51—A large group of South African tribes
53—To utter heedlessly
56—To vex
57—A lump
58—A high mountain
59—Prefix meaning "through"
60—To tell tales
61—Purpose
62—At a distance
63—Liquid (abbr.)
65—A cavity or receptacle
67—A degree (abbr.)
68—Name unknown (abbr.)

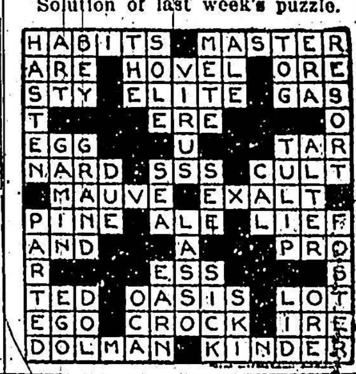
Horse Talk.

Start now to get horses' shoulders ready for spring work. Bathing with salt water will help toughen the shoulders. Work horses lightly at first.

Wind-puffs, or worse, often come from putting the colt on a heavy pulling job when he is first broken. Careful—the colt must get used to hard work a little at a time.

Harness sores can be prevented more easily than cured. Put the old harness in good shape or get a new set. A poor harness, patched up with wire, is a sign of a poor farmer.

Solution of last week's puzzle.



Method of Producing Horticultural Shrubs

By Prof. A. H. MacLennan, O.A.C.
For the Can. Horticultural Council.

Under the term horticultural shrubs, such a wide and varied list of plants is involved that of necessity the subject of producing these shrubs is one demanding not only a knowledge of the technique of propagating but a knowledge as well of the nature of the plants themselves. This latter idea is borne out by the fact that certain plants can be propagated successfully by the sexual or seed method while others which will not come true to type from seed must be propagated by grafting, budding, cuttings or some other of the asexual methods.

It is not the purpose of this article to outline in detail the propagation methods for all types of horticultural shrubs, but merely to draw attention to the more common ways and to cite examples of shrubs on which these methods are used.

In the case of sexual propagation the field is limited to plants which are self-fertile and consequently will come true to type from seed. Some of the more common shrubs grown from seed are the Barberries, Viburnums and certain of the Hawthorns. With seeds which are contained in a pulpy fruit it is necessary to allow the fruit to ferment in order that the seed may be readily separated out. Some seeds are sown as soon as ripe while others are held over till the following spring and in some cases for a year or more. Stratification is the term applied to the freezing of seed to help crack the seed coat and this practice is followed by many nurserymen.

Seed is generally sown in light sandy soil and when planted in the fall the ground should be mulched with straw or leaves to give protection during the winter. Cold frames make a good bed for starting seed.

Some of the evergreen shrubs are grown from seed in this country although the majority of them are imported from European countries where labor is cheap and the climate more favorable. Evergreen seedlings require shading during their early life and are very liable to damp off if the soil has not been disinfected. Sowing the seed thinly in sandy soil and growing the seedlings with a minimum of water will help to quite an extent to check damping off.

Probably the most common method of producing shrubs is by cuttings. Almost any plant can be propagated in this way although in some cases better methods have been devised. There are various types of cuttings, the most popular of which are the hard and soft wood cuttings.

Hard wood cuttings are usually taken in the fall from well ripened wood of the previous season's growth. The wood should be cut into pieces from 6 to 8 inches in length, usually with three or four buds on each. There seems to be no great difference as far as ability to root is concerned between cuttings which are taken through a bud and those which have their first bud farther up the stem, although many growers favor the former method.

Success in rooting cuttings depends on the production of callus over the lower end of the stick. Callus is a spongy material laid down by the activity of certain plant cells in an effort to close over the cut and it is from this callus that roots arise. Callusing can be hastened by burying the cuttings upside down in moist sand so that the root end will be exposed to a warmer temperature than the rest of the cutting. In this way the buds are not so likely to become active too soon. These cuttings may be planted in the fall as soon as they have callused or they may be stored in a cellar over winter in boxes of moist sawdust or sand and set out in the spring. Many of the common shrubs such as Deptzia, Wiegella, Forsythia, Hydrangea and Spirea are usually propagated by this method.

Hardwood cuttings are sometimes used in propagating evergreens, more particularly those types which cannot be grown true to type from seed. Since evergreens are usually slow in rooting the heel and mallet types of cutting are often used. These consist of a small portion of the main stem along with the cutting, the idea being to provide an extra supply of stored food on which the cutting may draw while it is forming its callus. Ordinarily evergreen cuttings are set out in the fall and given winter protection. Cold frames are often used for this purpose.

Soft wood cuttings may be taken in early summer from new wood. They are usually set in a propagating bed of sand and are kept sheltered from the sun and wind until rooted. This method is usually practised in the greenhouse or in frames. Cuttings should be planted out as soon as they have rooted.

Grafting is used as a means of propagating some roses and some of the evergreens. With most shrubs, however, results can be obtained more quickly by using cuttings. Budding, which is really a form of grafting, is used on roses, Hawthorns, lilacs and the various types of flowering plum. This method can be used on almost any type of shrub and is particularly useful in the case of rare stock as it is economical of material.

Another method which is sometimes used is mound layering. This consists of cutting back the bush severely to force the development of numerous young shoots. At the same time soil is heaped up in the centre of the bush. The new growth coming up through the soil will form roots and can be cut off from the parent plant the following year.

The care of newly propagated stock is a subject worthy of brief consideration. Ordinarily the seedlings or rooted cuttings are set out in nursery rows, sufficient room being given to allow proper development. Frequent and thorough cultivation is absolutely necessary in the nursery if the young shrubs are to make good growth. Shrubs should never be left in the same place in the nursery for more than three years as they will have a tendency to spoil their form by crowding and to develop long tap roots which make them poor transplanters.

Nothing has yet been said regarding the producing of new varieties of shrubs. Ordinarily these are the result of crossing two varieties within the species and of growing the seed which is produced. If proper precautions have been taken to insure a successful cross, the grower should expect some seedlings which would combine the characters of the two parents. In this way, some superior individuals may be produced which may then be propagated asexually.

Occasionally new varieties may originate from bud sports. For no apparent reason a certain twig on a bush bearing green leaves may show a red or purple color. Usually these sports can be propagated asexually and will come true to the type. There is some evidence to show that variations can be produced by grafting on different stocks, but this is not followed to any extent in the production of horticultural shrubs.

SOME OF THE NEWER ROSES

It will be many years before the old stand-bys in roses such as J. B. Clark, Hugh Dickson, Mrs. John Laing and Snow Queen, will be entirely replaced, but new roses are constantly appearing and it is well to consider whether or not some of these might be added to one's stock.

Mr. A. [illegible] Webster, an Ontario grower, has made a careful analysis of the newer varieties and has published his conclusions in The Flower Grower. Ophelia, he states, continues to head the list in sum total of good qualities. So satisfactory is this variety in regard to sense resistance, hardiness, profusion of bloom, conformation, growth and fragrance, that it should be included in even the humblest collection.

Mrs. Henry Morse, a pink variety, ranks high. The color is silvery pink on the inside of the petals, deep rose on the reverse side shading to orange at the base. It has proved to be a constant bloomer.

Richmond, that wonderful red, and Los Angeles, copper shading, battled all through the season for third position on the list.

Chas. K. Douglas, a scarlet rose, produces a wealth of bloom on long stiff stems. It lacks fragrance, however, and its petals are not dense.

Next in rank in the collection came Souvenir de Claudius Pernet and Geo. C. Waud. The former is a glorious yellow and the latter a beautiful carmine rose. Of the two only the latter has perfume. Both varieties are charming, particularly in the bud, and the flowers are produced on fine stems.

Una Wallace, an excellent of its excellent growth, [illegible], shape and fullness of bloom, length of stem, sweet scent and general excellence came next in rank. The color is often cherry rose.

Ninth position was awarded to Emma Wright, a semi-double rose of wonderful shade.

Mabel Morse stood high throughout the season as did Madame Abel Chatenay, then came Ethel Somerset, a shrimp pink, followed by Gruss an Teplitz, Jonkheer J. L. Mock, Christine, Diadem, Geisha, and a number of others of varying degree of charm and usefulness.

This list is sufficiently long to be a guide to those who would make a trial of some additional plants for their rose beds.

For the purpose of helping to establish the relative merits of different varieties of roses for culture in Ontario a rose demonstration plot has been established at the village of Markham. This is one of the official flower demonstration plots of the Canadian Horticultural Council. The Markham plot is supported by the local Board of Trade, the Women's Institute, and the Toronto Rose Society. It occupies an acre of ground and further land will be added to accommodate the additions that will still be made. The plot has a sunny exposure and is being given the protection of a boulevard of shrubbery. Ten rose-growing firms in England, Holland, the United States and Ireland, have contributed planting stock which includes twelve hundred plants, comprising one hundred and fifty named varieties. The Dominion Experimental Farms, it is expected, will contribute a quantity of plants for study and demonstration purposes to the Markham Rose Demonstration Plot. —Can. Hort. Council.

An April Fool Party.

Use the following rhyme for your invitations:

On April First just for once
To be a really truly dunce,
And come prepared for some stunts,
For good news waits for her (or him)
who hunts, [illegible]

Provide each guest with a bag of beans and tell them that everything is to be done with the left hand. Guests shake hands with the left hand, pass to the left and [illegible] with the left hand. A bean is [illegible] into an inverted dunce cap each time this rule is broken. After refreshments are served guests should report the number of beans they have left and the prize should be awarded to the person having the smallest number, a decision which will fool everybody. The person having the largest number of beans should be required to do some foolish stunt for having not been sufficiently "foolish" to enter into the spirit of the evening.

Ask each guest to bring some article (well wrapped and disguised) to be used for a "parcel game." Seat the guests in a circle, each holding a parcel which has been numbered, then have a lively tune played upon a piano or talking machine and instruct the players to pass the parcels as rapidly as possible "round and round the circle until the music stops. The person in charge calls out a number and the person holding the parcel having the number which is called becomes the owner of that parcel. The music and the passing of the parcels is resumed and repeated until all the parcels find owners. The contents of the packages should be as ludicrous as possible—a shirt waist box containing a dish-cloth, and a candy box containing a yeast-cake, are good examples.

Serve any refreshments preferred, but mix your April Fool dishes with the other articles of food. Cotton doughnuts, individual pies filled with sawdust, and chocolate creams made of confectioner's sugar mildly flavored with pepper will fool your guests with apprehension for the other refreshments.

Mangels Have a "Sweet" Tooth

I once heard a farmer neighbor say that mangels are the hardest thing to grow on the farm. I think I know why—in the years I have known him man I have never seen him spread a pound of lime. You can't grow mangels without lime any more than you can clover. Lime and manure, good seed and cultivation are the combination needed for mangels. When I drive around and see acres of stunted, stringy-looking mangels struggling to make growth, I say to myself—"Acidosis."

There's no dark secret about growing mangels provided you furnish them with enough manure to grow on and lime to keep them sweet. I limed my plot last fall and it was heavily manured during the winter. Fall spreading is best for lime. It works down and in with the alternate freezes and thaws. The first time I put in mangels, however, I limed in the spring, and certainly grew some big roots. Pretty nearly scared me, they grew so big and fat—like a red-headed boy raised on raw milk and spinach. I didn't know then that, unlike the iceberg, the mangel's bulk projects mainly above the surface.

I grow red mangels, though I understand there is no difference in feed value between red and yellow varieties. I drill the seed with my garden seeder, setting the index to feed not too thickly. They can be thinned after the stand is definitely established to about a foot apart. I put mine in early enough to assure a full season's growth. Keep them cultivated, and they will certainly produce. —H. A. B.

If you want a surprise, plant a plat of certified seed potatoes alongside a plat of the common stock, as we did last year. We never saw potato plants grow so fast or so well blossomed as the certified seed, while the common stock was at least two weeks behind, though planted the same week. There were no missing hills or leaf-curl on the certified plants, while the stand of the other plat was irregular and showed a slight trace of disease. Mrs. C. H. Estey.

BINDER TWINE SITUATION

A Canadian industry in which a good deal of scope exists for development and for new establishments is that of the manufacture of binder twine. Canada is one of the greatest consumers of binder twine in the world, using for an average crop a volume in the neighborhood of 100,000,000 pounds, whilst with the great acreage coming under cultivation each year and bigger crops, this is steadily increasing. Notwithstanding, however, that this commodity is so essential and the annual demand assured, Canada is producing herself but a relatively small proportion of her requirements. Furthermore, though binder twine is on the free list, its movement is necessarily subject to hitches in transport, and failures in binder twine are not entirely unknown at the most critical time of year to the farmer. The supply of binder twine is really an important national consideration, and certainly Canadian requirements should be made in the Dominion.

The situation in Canada is a rather curious one, the Dominion importing binder twine to a very considerable extent whilst her export trade in the commodity is by no means negligible. In the last fiscal year Canada imports of binder twine amounted to 54,427,211 lbs. valued at $[illegible]99,596, of which 52,159,[illegible] lbs. worth $5,541,454 were from the United States and the remainder from the United Kingdom and other countries. Exports in the same year amounted to 15,589,616 lbs. valued at $[illegible]16,[illegible], of which 10,519,7[illegible] lbs. valued at $1,036,271 went to the United States, and the remainder to the United Kingdom, Argentine Republic, British South Africa, Denmark and other countries.

QUANTITIES RECEIVED FROM HOLLAND.

In the twelve months ending Oct. 31st, 1924, Canada imported binder twine to the extent of 30,[illegible] lbs. valued at $3,607,648, which was a decline of approximately 80 per cent. from the previous year. In that period 40,236,128 lbs. valued at $5,076,162 was exported, a decline of roughly 80 per cent. from the previous year, but an increase of about 80 per cent. over the year 1922. Details of the countries of import and export are not available at this time of writing. Large quantities of binder twine were, however, shipped to Canada this time from Holland, these arriving by way of the Panama Canal at Vancouver. This Dutch twine was reported to be of superior strength and quality to other importations which selling at the same price.

According to the last report of the industry in Canada, the Dominion possesses nine plants manufacturing binder twine. Five of these are situated in the Province of Ontario, two in Quebec, and one each in Nova Scotia and British Columbia. These were responsible for a production of 31,891,713 lbs. of binder twine of a value of $3,491,500. It will be seen from these figures that Canadian plants can only provide about one-quarter of the annual binder twine consumption.

Binder twine is so essentially a product of consistently steady demand, and so absolute a necessity to the first industry of the Dominion, that Canada should be producing all her own needs in this regard. All conditions in Canada are equally as favorable for manufacture as in the United States, the Dominion's principal source of importation. Both countries are under the same necessity of importing the raw materials for manufacture from British East Africa, Java, Mexico, and the Philippine Islands. The demand for binder twine in Canada not only will always exist, but there is absolute assurance of the volume needed steadily increasing, which should make the establishment of plants in Canada a peculiarly profitable means of industrial expansion.

Turning to the Hemlock

Eastern hemlock was valueless as a lumber tree twenty years ago, and only the bark was used, but it is now a very valuable timber.