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A GARDEN FOR EVERY HOME
Feed Yourself That Others May Not Go Hungry

By R. S. MACKINTOSH, Division of Agricultural Extension

GOVERNOR APPROVES

Every acre, every yard, under cultivation will count in Minnesota's patriotic undertaking to make and save food for the nation.

The Public Safety Commission approves and urges the plans formulated by the State Committee of Food Production and Conservation, by school authorities, and by garden clubs for adding to the state's production by intensive cultivation.

J. A. A. BURNQUIST,
Governor and Ex Officio Chairman of
the Public Safety Commission.

The foregoing statement by Governor Burnquist was issued in response to a request from the crop subcommittee of the State Committee of Food Production and Conservation in the beginning of a more intensive campaign for a garden for every home in the state.

As the first move in this campaign the crop subcommittee has commended the use of this bulletin which gives explicit directions for planning, planting and cultivating a garden, and may be had without cost by addressing the Office of Publications, University Farm, St. Paul. The Crop subcommittee also makes the following appeal to the people of Minnesota:

"Let the Minnesota slogan become 'A Garden for Every Home.' Let every loyal citizen become self-sustaining in food supply as far as possible, in order that out of Minnesota's surplus, means may be found for helping to feed a hungry world in the months to come. The army of food producers has quite as great an opportunity for national service as the army that goes to the front. The American people must this year feed not only themselves but also millions of dependents in other parts of the world. Special attention should be given to crops that may be canned, preserved, or dried. Co-operative purchase or purchase by municipalities of machinery for food preservation is recommended."

A SQUARE-ROD GARDEN

A small garden well tilled is better than a large garden in weeds.

Even a garden of this size can be made to produce a large amount of food.

Thousands of gardens of this size will produce a lot of food material this year. A larger garden is more desirable, but space may not be available. One hundred and sixty of these make an acre. Garden as many square rods as you can.

After the soil has been fertilized, spaded and raked, if weather conditions are favorable the seeds can be planted as follows:

Rows 1 and 4.—Mix radish and carrot seed together and sow from twenty-five to thirty seeds to each foot of row as soon as the soil is ready. A trench about one inch deep is opened for the seeds. Use the radishes when large enough so as to give the carrots a chance to grow. About June 1, set out six tomato plants 3 feet apart. A few carrot plants will have to be pulled out where the tomato plants are set.

Rows 2, 3, 5, and 6.—Early peas. Sow about fifteen seeds to each foot of row in a furrow about four inches deep. Use an early dwarf variety like the American Wonder. Peas can be sown as soon as the garden is ready.

Row 7.—Sow lettuce in a furrow 1-inch deep and set tomato plants as in the carrot rows.

Rows 8 and 9.—Plant string beans in hills 12 inches apart about the middle of May. Cover to the depth of 2 inches.

Row 10.—Sow spinach the same as the lettuce in row 7. Set tomato plants as already described.

Rows 11 and 12.—Sow about fifteen beet seeds per foot of row the same as radish and carrot.

If the soil is rich and one is careful when working the garden it is possible to grow spinach between all the rows. The carrots and beets should be used while young, either on the table or canned for winter. The tomatoes are supposed to have all the space when they need it. Considerable space will be saved if the tomato plants are trained to a single stem and fastened to a strong stake.

Plan for a Square-Rod Garden

Row No.		Inches between rows
..... 1.....	Radish and carrots followed by tomatoes.....	12
		18
..... 2.....	Early peas.....	12
		18
..... 3.....	Early peas.....	12
		18
..... 4.....	Radish and carrots followed by tomatoes.....	12
		18
..... 5.....	Early peas.....	12
		18
..... 6.....	Early peas.....	12
		18
..... 7.....	Lettuce followed by tomatoes.....	12
		18
..... 8.....	String beans.....	12
		18
..... 9.....	String beans.....	12
		18
..... 10.....	Spinach followed by tomatoes.....	12
		18
..... 11.....	Early beets.....	12
		18
..... 12.....	Early beets.....	12
		18

Sixteen and one-half feet

Sixteen and one-half feet

A GARDEN FOR EVERY HOME

HOW TO PLANT AND CULTIVATE

The vegetable garden is very important on account of the food that is produced. It is true that most vegetables do not contain as much food material as do meat, milk, wheat, or eggs when compared pound for pound, but they do provide mineral matter and bulk, and make the meals more varied and attractive. Iron is one of the most important mineral elements found in many vegetables, and spinach furnishes it in large amounts and in available form. A full supply of vegetables makes it easier for the housewife to prepare the meals. "Eat More Vegetables" is a good slogan for all to adopt.

Community Gardens

In some localities it is impossible to get sufficient land for each person to have a garden all his own. Very often larger tracts of land can be obtained and divided into small lots for individual gardens. In this way a group of persons work together. It encourages community spirit because it brings all types and conditions of people together for the purpose of producing something of real value. A very simple organization is needed to control the larger affairs as, renting land, allotting gardens, and plowing. A friend told the other day of the value of community gardening in his town. "It has been a success in every way. Boys often say that they like to hoe and pull weeds."

Plants are living things, consequently they must be treated properly if they are to reach full development. They must be provided with a congenial climate; enough room in which to develop; a soil which contains sufficient plant food, moisture, and air, and is in proper physical condition. It is the work of the gardener to provide the ideal conditions for each kind. Some plants do best in light soils while others prefer heavier soils.

Success in gardening depends on the skill of the workers. Market gardeners and florists must know how to do their work, and no one can expect to succeed unless a close study is made of soils and plant needs. This year, however, many persons should do their best to grow all the food they can, even if they are not so successful as the market gardener must be. To do this they must keep the garden well cultivated all the time.

Succession and Companion Cropping

Nearly all parts of the garden should produce more than one crop during the season. Succession cropping means that one crop follows another in the same place. Companion cropping means that two or more crops are grown near together while small, and that as one matures, additional room is provided for the later crop. For instance, radish seed are sown with carrot seed. The radishes are soon out of the way and the carrots have all the room. Many combinations are possible and profitable. To keep a crop growing all the time is the best way to manage a garden.

The Soil

An ideal garden soil has a rich sandy loam surface, underlaid with silt or clay. The surface should be six to eight inches deep and free from sticks and stones, sods and rubbish. The soil must contain a large amount of decayed vegetable matter and a large supply of plant food. Soils lacking in plant food cannot produce vegetable crops. However, such soils are made productive by the addition of rotted stable manure, hen or sheep manure, or fertilizers manufactured from certain wastes from the slaughter houses and packing plants. Some of the latter products are dried blood, tankage, and ground bone. The so-called commercial fertilizers are usually distributed near the rows of plants and worked into the soil. An application of one pound of dried blood or nitrate of soda for each 150 feet of row at least once in the growing season is usually enough. Such materials should not be allowed to come in contact with the foliage.

Sod land must be carefully worked, in order to get it into the best condition for plant growth. As a rule, sod land cannot be used for onions or other delicate crops. Potatoes, corn, beans, or squash usually succeed on such soil. All rubbish should be removed and the soil spaded or disked both ways, or plowed six to eight inches deep, and raked or harrowed several times to form a fine firm seedbed.

Garden Plan

A plan should be worked out before planting anything in the garden. An evening can very profitably be spent working out a plan for the garden. It need not be elaborate, but simply a list of the rows and distance apart and what each is to contain. It is possible in some cases to grow two or more crops on the same land each season.

Seeds

Do not wait too long before getting the necessary seeds. Unless good seeds are used, the crop will not be a success even if the weather is favorable and proper care given in every case. Poor seed is dear at any price.

Seed-Sowing

Before any seed is sown the land should be harrowed or raked fine, and if necessary rolled or planked. It pays to make the seedbed fine, as this greatly lessens the subsequent labor. Seed should always be sown in freshly stirred soil, giving them an even chance with the weeds. It is well to sow radish seed with some of the kinds which germinate more slowly. They will come up quickly and cultivation may begin even before the other plants are up. The depth at which seed may be sown varies with the size of the seed. Celery and other very fine seed should be just barely covered with light soil. Carrots, parsnips, and similar seeds may be planted from three-quarters of an inch to an inch deep; coarser seeds, such as peas, beans, and corn, from two to four inches deep, depending on the soil. If the soil is heavy or moist, shallow planting is best; if dry, the seed must be put in deeper.

Firming

Firming means pressing the soil over the seeds after they are sown. It assists in bringing the moisture about the seeds and aiding them to germinate more quickly. Firming is always needed in dry soils. If the soil is wet or clayey, too much firming may pack it so that the seed can not push through.

Transplanting

For earliest use it is often advisable to start such vegetables as cabbage, tomatoes, and celery in the house or hot-bed and transplant them to boxes, pots, or coldframes before the weather is warm enough to set them in the open field. When it is time to move the plants to the field they should be hardened off by reducing the amount of water given them, and exposing them freely to the air, to partially stop their growth.

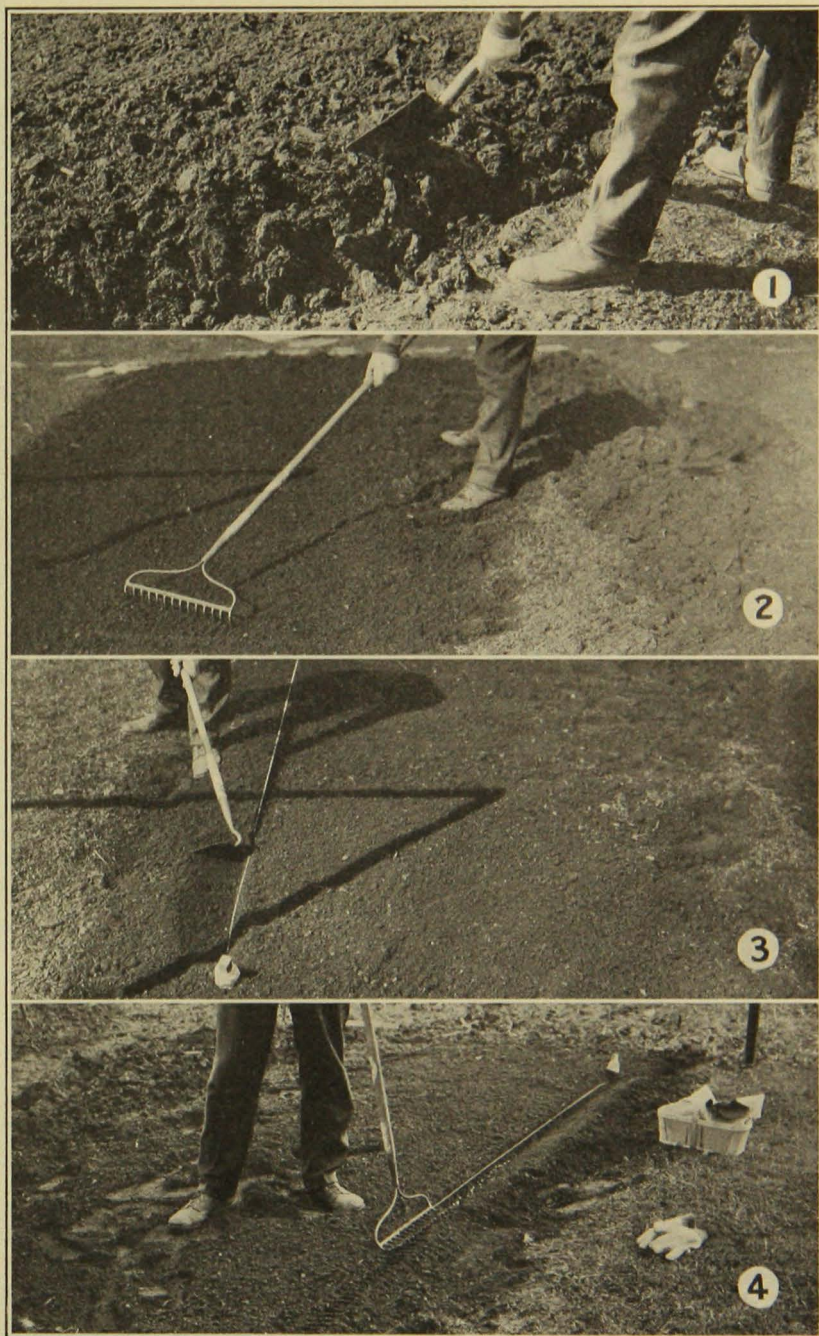
Success in transplanting depends on several conditions: good, healthy, stocky plants which have been well hardened off must be used, and the soil must be in good condition. Before the plants are moved the soil around them should be thoroughly soaked with water, and some of it should be taken up with the plant. It is also a good plan to cut back the tops from a third to a half in the case of plants like cabbage and celery, to prevent more evaporation taking place from the leaves than the roots can stand.

In setting out plants, see that the roots are put in fine, moist soil and well firmed, so that the small roots may at once take hold of the soil.

Plants go into the field in much better condition from pots than from a seedbed. As pots are expensive, berry boxes, tin cans with the ends melted off, or paper pots can be used.

Thinning

In the home garden, seed are sometimes planted thickly in order to be sure of a full stand. This method is not desirable, as the extra plants are, in effect, weeds and must be removed or the remaining plants will be weakened. A better way is to use only the best seed, test it before planting, and then space properly in the row. If the plants are too thick, thin as soon as they are large enough to handle. In many cases the thinnings can be used to advantage in the kitchen.



Working the Garden Soil

- (1) Spading—The last stroke of the spade is used to break the lumps.
- (2) Raking the surface to make an even and fine seedbed.
- (3) Using the hoe in opening a furrow for small seeds.
- (4) Using the rake in covering seeds.

Watering

It is usually necessary to water the garden several times during the summer. When water is applied, it is best to use enough to wet the soil thoroly to a depth of several inches instead of putting on a little at a time. When the surface is dry cultivate it thoroly. A good dust mulch prevents evaporation.

This year the aim must be to grow the kinds of vegetables which give the most valuable food, in order to permit the shipment of the grains and corn out of the country to feed others. The important crops are the following:

Beans

All varieties of string, shell, pole, lima, and dried beans should be grown. Some are used when green for immediate use, and some are canned for winter use. The navy bean can be used to advantage in the large gardens. One must not work around the vines when they are wet, because of the danger of spreading certain leaf diseases.

Beets

Beets are an important root crop for use as "greens" while small, and later for use in various ways. A large supply should be canned for winter use. One cannot take from a can a better product than has been put in. Therefore beets should be canned when about $1\frac{1}{2}$ inches in diameter.

Cabbage

When properly cooked, cabbage makes a very valuable food. The cabbage worm is very troublesome, but can be handpicked or poisoned with Paris green. For a full supply, early and late varieties should be used.

Carrots, Parsnips, and Turnips

Carrots, parsnips, and turnips are important root crops for small and large gardens. Carrots and turnips planted early are ready to use in from six to ten weeks. A second planting the last of June will give a supply of tender roots for winter. Parsnips have the advantage that part may be dug for fall and winter use, while the rest can be left for use the following spring. Those left in the ground through the winter should be dug in the spring as soon as the ground is thawed out.

Lettuce and Radishes

Lettuce and radishes are in demand at all times. Several plantings of radishes should be made to give a fresh supply during the spring and fall.

Onions

Onions are an extremely important crop. They must be sown early, if seed is used, on well-prepared land. Weeds choke the small plants; consequently clean tillage must prevail.

Peas

Several plantings of peas are necessary to keep a succession. The surplus can be dried or canned.

Potatoes

The potato is the most important vegetable crop. Plant in hills about twenty-four inches apart. Cover the seed pieces with three to four inches of soil. May be planted as late as June 20. Cut tubers into about one-inch cubes with one or more eyes on each piece.

Eyes and seed ends of potatoes used for the table may be saved and planted by hand in the garden. The most satisfactory way is to plant eyes or small seed pieces in soil in a shallow box kept in a warm, light place in the house—the plants to be transplanted to the garden as soon as soil and weather warrant, or from May 20 to June 20. It is not advisable to plant these small pieces outside until the soil and weather are warm.

Begin now to cut off the "seed" end of the tubers used each day for the table and put into a box of soil. The box should be 3 to 4 inches deep, 14 to 16 inches wide, and 20 to 24 inches long. Fill with fine garden loam and keep in the house in as light and warm a place as can be found. Be careful to select the best potatoes for this purpose.

Pumpkins and Squash

Vine crops that furnish a large amount of food material are pumpkins and squash. In small gardens, the vines can be trained on fences and shelves provided to hold the fruits. The vines need lots of room.

Spinach and Swiss Chard

Not so important as some of the other crops are spinach and swiss chard. Spinach is important for the iron it contains. The large leaf stems of the chard may be used in place of celery if desired. Both crops are useful for canning.

Tomatoes

Probably the most important vegetable mentioned in this selected list is the tomato. It is used in many ways. In the garden it is better to train the vines on poles or supports instead of letting them spread on the surface of the ground. In the square-rod garden plan, room is provided for 24 plants. These should produce all the tomatoes needed by a large family. In the northern sections only the earliest varieties should be used.

Other vegetables may be grown, but it is deemed advisable to urge the use of the foregoing because they produce so much food material.

"Eat more vegetables" is a good slogan to follow. Meatless days will not be hungry days, if there are plenty of vegetables. Perhaps some will find that a vegetable diet will prove a blessing. Somebody has said that it is better to eat vegetables than to take patent medicines.

Grow enough for the daily needs and to can, dry, or preserve for two years. We may know where our food supply is for today, but do we know where it is for a year from today? It is a well-known fact that the quickest way to replenish our food supply is to raise vegetables.

Planting Table

The planting table gives brief notes regarding certain vegetables that can be grown in this section. In using the table, care should be taken to plant the seeds when conditions are right, rather than at the exact date given, because the planting dates vary from year to year with the seasons.

The varieties, amount of seed needed, and notes regarding the time of planting, distance between rows and plants are given below in tabular form.

Several plantings at ten-day intervals should be made of radish, lettuce, and sweet corn to provide a succession; a second planting of beets, carrots, turnips, and rutabagas, in late June to provide young roots for winter use. Two or more plantings of peas and string beans will provide fresh supplies of these important crops.

Nothing has been said about asparagus and rhubarb because they remain in the garden from year to year. A garden is not complete without 25 or more hills of asparagus and at least 5 of rhubarb. A few young roots of horse-radish set in rich ground will provide a good lot of roots in one or two seasons.

Every little seed says:

I am tiny, but I am willing to do my bit.

Please, dear planter, give me a good soil in which to grow, protect me from weeds, cultivate to conserve the plant food and water in the soil, and at the proper time take me for whatever noble purpose you wish.

Garden Planting Table

Vegetable	Varieties	Amount of seed needed†	Seed for 100 feet	Distance between		Depth to plant	When to plant	Length of row for average family
				Rows	Plants			
*Beans, String	Wardwell, Bountiful, Refugee	1 qt.	1 pt.	Inches 18	Inches 4	Inches 2	May 15	50
Beans, Pole	Valentine, Kentucky Wonder	½ pt.	½ pt.	36	24	2	May 25	50
*Beet	Detroit, Eclipse, Egyptian	2 oz.	2 oz.	12	3	1	Apr. 10	50
*Cabbage, Early	Wakefield, Winningstadt	1 pkt.	½ oz.	24	15	1	Apr. 15	25
*Cabbage, Late	All Seasons, Danish Ball	1 pkt.	50	36	18	Plants	June 1	25
*Carrot	Chantenay, Danvers Half Long	1 oz.	1 oz.	12	2	½	Apr. 10	50
Cauliflower	Erfurt, Snowball	1 pkt.	50	24	15	Plants	May 1	40
Celery, Early	Golden, White Plume	1 pkt.	½ oz.	24	6	Plants	Apr. 15	30
Celery, Late	Winter Queen, Giant Pascal	1 pkt.	½ oz.	36	6	Plants	June 25	75
Celeriac	Erfurt	1 pkt.	24	6	½	May 25	30	
Cucumber	Boston Pickling, White Spine	1 oz.	½ oz.	48	36	1	May 15	40
Egg Plant	N. Y. Spineless, Black Beauty	1 pkt.	35	24	18	Plants	June 1	20
Endive	White and Green Curled	1 pkt.	1 oz.	18	6	½	Apr. 15	20
Kohl Rabi	Vienna	1 pkt.	¼ oz.	18	2	½	Apr. 15	25
*Lettuce, Leaf	Grand Rapids, Simpson	1 oz.	½ oz.	18	4	½	Apr. 10	15
Lettuce, Head	Boston, Hanson	1 pkt.	½ oz.	18	6	½	Apr. 10	20
Muskmelon	Gem, Osage, Montreal	1 oz.	½ oz.	48	48	1	May 25	100
*Onion	White, Yellow, and Red Globe	2 oz.	½ oz.	16	3	½	Apr. 10	100
*Onion Sets	Any Color or Kind	1 qt.	16	2	3	Apr. 10	40	
*Parsnip	Hollow Crown, Guernsey	1 oz.	½ oz.	16	2	½	Apr. 15	50
Parsley	Moss Curled	1 pkt.	¼ oz.	16	2	½	Apr. 10	5
*Peas, Early	Alaska, American Wonder	1 qt.	1 qt.	21	2	2	Apr. 10	100
*Peas, Late	Telephone, Champion of England	1 qt.	1 qt.	36	4	2	Apr. 20	200
Pepper	Bell, Ruby King, Cayenne	1 pkt.	50	24	18	Plants	June 1	15
*Pumpkin, Pie	Long or Round Pie	1 pkt.	½ oz.	72	60	1	June 1	40
Radish, Early	Scarlet Globe, Icicle	2 oz.	1 oz.	16	2	½	Apr. 10	25
Radish, Winter	California, Spanish	1 pkt.	1 oz.	24	6	½	Apr. 25	25
*Rutabaga	Purple Top, Yellow Swede	½ oz.	½ oz.	24	10	½	Apr. 10	40
Salsify	Sandwich Island	1 pkt.	1 oz.	16	2	½	May 10	25
*Spinach	Long Standing, Bloomsdale	1 oz.	1 oz.	12	2	½	Apr. 10	150
*Sweet Corn	Bantam, Crosby, Stowell	2 qts.	¼ pt.	30	18-30	1	May 15	400
Squash, Summer	Scallop, Crookneck	1 pkt.	½ oz.	48	24	½	May 20	10
*Squash, Winter	Marrow, Hubbard	1 oz.	½ oz.	72	72	½	May 20	40
Swiss Chard	Lucullus	1 pkt.	2 oz.	24	6	½	Apr. 25	20
*Tomato	Earliana, Bonny Best, Stone	2 pkt.	25	48	48	Plants	June 1	75
*Turnip	Purple Top, Egg	½ oz.	½ oz.	18	2	½	Apr. 10	75
Watermelon	Dark Icing, Tom Watson	1 oz.	1 oz.	72	60	1	May 25	100

*Most Important Vegetable Crops.

†If all of the seed is not needed, save the rest for future use.