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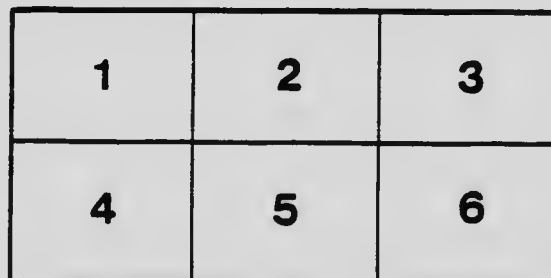
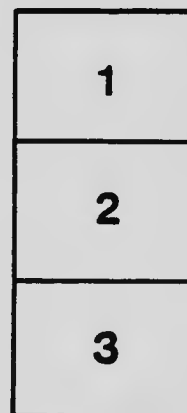
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Simmers' Vegetable Garden

CONTAINING

Practical Hints for the Amateur

REVISED EDITION

PUBLISHED BY

J. A. SIMMERS

LIMITED

TORONTO

-

ONTARIO

1917

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IN the following pages we have endeavored to place in the reader's hands a few plain, simple, cultural directions, which, if properly carried out and with a propitious season, will result in the planter receiving a due reward for his labor. Good vegetables can only be produced from high class seed, and with a view to assist the novice or undecided planter, we illustrate a few varieties of known merit and sterling worth.

While preparing this little book it seemed proper to add a few suggestions on the culture of flowers from seed. It is hoped that the hints there given and the lists of the several classes will so aid all lovers of flowers, but more especially the inexperienced, in making their selections, that they must be successful in their efforts.

TORONTO, 1917.

Simmers' Vegetable Garden

A FEW SUGGESTIONS ON THE WAY TO COOK VEGETABLES

VEGETABLES are at their best in their own season, just as nature develops them, not as man forces them. Gathered not quite full grown with the dew of the morning upon them, they are solid, tender, juicy, and full of flavor, fit for a feast of the gods. But the crispness, sweetness and fresh flavors are fleeting, and few but owners of, and neighbors to gardens know the prime flavors of the fruits and vegetables upon their tables. Therefore, in selecting vegetables for your table, choose first the freshest possible, select medium sized, and not overgrown ones, though small sized turnips and large rutabagas are best; egg-plants should be grown full, but not ripe. If vegetables are not fresh, refresh them by plunging them into cold salt water an hour before cooking. Old potatoes should be pared as thin as possible, and be thrown at once into cold salt water for several hours, changing the water once or twice. Wipe plunged vegetables before cooking. Old potatoes are improved by paring before baking. Irish or sweet potatoes, if frozen, must be out in to bake without thawing. Onions should be soaked in warm salt water an hour before cooking to modify their rank flavor. Lettuce, greens, and celery are sometimes best cleaned by using warm water, though they must be hrown at once, when cleaned, into cold water. To steam vegetables is better than to boil them, their flavors are held better, they are less liable to be water-soaked, and their odors are confined instead of escaping through the house. If they are to be boiled, always draw fresh water. Mrs. Rorer says, "Soft water should

be used for dry vegetables, such as split peas, lentils, and beans, and hard water for green ones. Water is made soft by using a half teaspoonful of bi-carbonate of soda to a gallon of water, and hard, by using one teaspoonful of salt to a gallon of water." As soon as the water boils, before it parts with its gases, put in the vegetables. Use open vessels except for spinach. The quicker they boil the better. As soon as tender, take them out of the water, drain, and dress for the table. Never let them remain in the water after they are once done. Fresh vegetables boil in about one-third of the time of old ones. A little bi-carbonate of soda added to the boiling water before greens are put in will serve to keep their color. A pinch of pearl-ash put into boiling peas will render old yellow ones quite tender and green. A little sugar improves beets, turnips, peas, corn, squash, tomatoes and pumpkins, especially if they are not in prime condition. A little lime boiled in water improves very watery potatoes. A piece of red pepper the size of a finger-nail, a small piece of charcoal, or even a small piece of bread-crust, dropped in with boiling vegetables will modify unpleasant odors. Vegetables served with salt meats must be boiled in the liquor of the meat after it has been boiled and removed. Egg-plant and old potatoes are often put on to cook in cold salt water. It is claimed that onions, carrots, and turnips cook quicker if cut in rings across the fibre. Clean all vegetables thoroughly to remove all dirt and insects. To free leaves from insects, throw vegetables, stalk ends uppermost, into a strong brine made by putting one and one-half pounds of salt into a gallon of water. Leave them in the brine for two or three hours, and the insects will fall off and sink to the bottom.



Iron Age, Double Wheel Hoe

WHAT PLANTS REQUIRE

The needs of plant life are so simple and easily supplied that it is surprising that they are so often overlooked. For germination, a seed requires only moisture and a congenial temperature; for subsequent developments, food, air and light, in addition to moisture and warmth. The water-storing capacity of the soil is just in proportion to its fineness and mellowness, and this moisture is drawn upward about the seed by firming the soil closely around the seed to assist the capillary attraction upward; rapid drying out is to be avoided at first by a light mulch or covering of straw and by cultivation. Too much stress can not be laid upon the need of cultivation, whereby a dust mulch is formed about the plants, preventing under evaporation and admitting air to the roots.

SITUATION

Wherever a choice of location is possible, a site sheltered from the north and west winds, level or with a gentle slope to the south and east is most to be desired. Such shelter from the raw winds that sometimes visit us even late in spring often makes a difference of from one to three weeks in earliness of crop. Accessibility to water supply is also an important consideration.

DRAINAGE

If the soil is not well drained, the first attention must be given to getting rid of the surplus water, which, if let alone, cuts off supply of air from the roots of the vegetables and stops their growth. In a very small garden a surface drainage can be obtained by raising the beds, but really good drainage must be under ground. Tile is of course to be preferred at a depth of about three feet, with a good fall and outlet, and the drains 20 to 30 feet apart. Where tile is not to be had, stones or brick may be placed at the bottom of the ditch, and covered with straw or inverted sods to prevent the loose earth from sifting in.

PREPARATION OF THE SOIL

Whether the garden is made in new ground or in a previously cultivated soil, it should be well manured, and plowed in the fall, and the rough clods, left without harrowing, to the kindly action of the winter's frosts. These disintegrate and aerate the soil, making it ready for planting much earlier in the spring, by which time the manure is well decomposed and assimilated in the soil. As early as the ground can be worked in the spring, it should be again plowed or spaded and rolled and harrowed until fine. A small garden can be brought into best condition with spade and rake. If fall preparation has been neglected, thorough ploughing and harrowing must be given in spring as early as possible and only well-rotted manure can now

be added. The soil must be thoroughly prepared before planting, or the garden will suffer the entire season. The time for working the soil in the spring can be ascertained by squeezing a handful; if it is sticky and forms a ball it is too wet, if it breaks hard, too dry, it should crumble easily and leave very little dirt on the hands.

FERTILIZERS

It is impossible to give general directions for fertilizing that will meet the needs of all soils—consideration must be given to the composition of the soil to be enriched, the crop to be grown upon it and the time in which the fertilizer must be effective. Plants require from the soil potash, nitrogen and phosphoric acid in proportions varying with the kind of crop; the object of applying fertilizer is to make up a deficiency of any or all of these in the soil and in available form. Chemical fertilizers are generally composed of some base, such as ground bone, which decomposes slowly and is of lasting benefit to the soil to which are added the three plant food essentials in such form as to be easily dissolved and absorbed by the young rootlets. For this reason, the commercial fertilizers can be applied much nearer the time they are needed by the plant than other manures. Bellair, a French authority, says for deep-rooted plants, fertilizers should be put on in the spring before breaking the ground; for shallow-rooted plants after breaking. There is almost no soil that is not benefited by the addition of humus, that is well decayed animal or vegetable matter, generally applied in the form of barn yard manure.

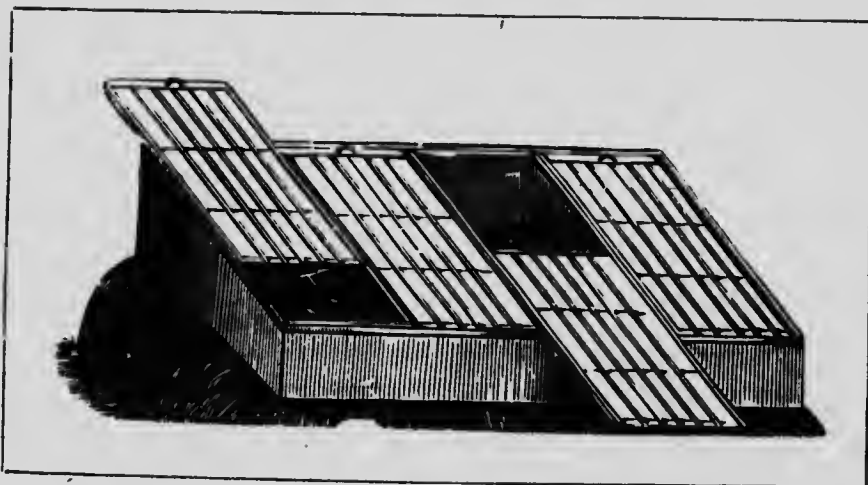
It lightens heavy soils, binds light and sandy ones, and furnishes plant food ready for absorption by the young rootlets. If applied in the fall, fresh manure may be used and the advantage of the liquid portions secured, but for spring application it should be well decayed. A compost of leaves, garden and kitchen refuse and strawy manure, to which may be added sods, air slaked lime, coal or wood ashes, when well mixed and rotted, make an excellent manure. Such a heap may be prepared in the autumn, using the kitchen garbage which has accumulated in some convenient place, the soil with which it may be covered from time to time, adding the other ingredients and mixing well; the following spring, work it over and sow on it some nitrogen producing plant, such as clover, to cover and help decompose it; the next fall it may be plowed into the garden. A nitrogen impoverished soil may be fed with nitrogen by growing clover or cow peas and plowing under. Wood ashes supply potash in good proportion and like lime, sweeten the soil and are of special value to both clay and sandy soils, loosening the one and making a leachy soil more retentive of moisture. Such natural manures nourish the garden more slowly but more constantly than the artificial fertilizers, to which we must resort to supply deficiencies in these, as well as some of the elements in more readily soluble form. A high grade fertilizer for use in the vegetable garden will contain about 98 pounds nitrogen, 120 pounds each of potash and phosphoric acid to the ton, and 1,000 pounds to the acre is never too much. This is about $2\frac{1}{2}$

pounds per 100 square feet and twice the amount is frequently used by market gardeners. Nitrogen may often be added to advantage early in the season, as it stimulates growth and is valuable for lettuce, asparagus, etc. Potash, on the contrary, tends to harden off plants and bring about an early fruiting. For most gardens, a fall dressing of good manure, plowing or spading and raked in, will be found the most satisfactory treatment.

THE SEED BEDS

The needs of a seedling are similar to those of a baby—protection, fresh air, assimilable food. The soil of the seed bed should be a light loam, preferably, mixed with sand, thoroughly worked and made fine to retain the moisture and give the slender rootlets a chance to penetrate it. Heavily manured soil here is as out of place as is rich food in a child's diet; when the seedling is well started and hardened it may be transplanted into more stimulating soil. Sow the seeds in rows and cover to four times their diameter, as a rule; the very fine seeds need hardly any cover—merely a firm pressing down of the soil. This firming of the soil in sowing and planting is the most important point in supplying the seedling with moisture; the pressure upon the surface compacts the earth and establishes capillary attraction from the moisture stores below; this tends, however, to dry the soil out very rapidly, and must be checked as soon as possible by raking or loosening the surface layer. Large seeds, such as beans, peas, etc., should be firmed in by a roller, or by tramping heel to toe the length of the row, after which the surface should be raked lightly, but thoroughly. With fine seeds pressing with a small board is sufficient, and the loosening must be delayed until the plants are started.

Of all the requisites in a well managed garden, none is so much needed as a hot-bed. If it is desired to raise a fair supply of early plants for the kitchen garden, such as Cabbages, Cauliflowers, Tomatoes, Peppers, Cucumbers, Melons, Herbs, etc., so as to have them ready for planting out earlier in the season, a hot-bed is indispensable. All the choicest varieties of flowers should, if possible, be sown in a hot-bed or under glass, early in the spring, so as to enjoy the longer their flowering season. The professional gardener already knows the full value of the hot-bed; as he also knows perfectly well how to construct and manage it; consequently he takes care early in the spring to erect as great a number of hot-beds as he possibly can. The following directions are, therefore, merely addressed to the amateur and inexperienced gardener, to whom we would desire to convey that the hot-bed is recommended in order to obviate the danger of our changeable spring climate, the unexpected spring frosts or droughts. It is easily managed, and may be got up at such a slight expense that it will soon repay all who would secure an abundance of kitchen and flowering plants early in the season. Besides the many advantages already stated, the observing mind will find a good deal of interesting pastime in the operation connected with its management.



Situation of the Bed.—This should be in a warm position fully exposed to the sun, facing the east or south, and sheltered by a fence or hedge on the west and north. The soil should, if possible, be light and dry, as in this case the bed can be sunk a foot or more in the ground ; but if damp or cold it should be built upon the surface.

Making the Bed.—Manure fresh from the stable is best. This should be thrown over and thoroughly shaken up with the fork, making it into a conical heap. In this state it should be allowed to remain four or five days, at the end of which time it should be turned over, shaking it up as before. At the end of another three or four days it will be ready to make into the bed. Lay out the ground six inches larger than the frame, and put down a stake at each corner. The frame may be of any size, but the most convenient is nine feet by six, which will take three lights, three feet by six, the ordinary size, which can always be had ready-made. Proceed to build up the bed to the height of two feet and a half to three feet, making it rather firm and watering if the manure is dry. When the bed is finished, put on the lights and let it stand to settle and exhaust the violent heat. In a day or two add three or four inches of light sandy loam, spreading it evenly over the bed. If the seeds are to be sown in the soil of the bed, two or three more inches should be added, but if in pots, no addition will be necessary.

The pots, when ready, and sown with the various seeds, should be put into the frame and shaded during the day, regulating the temperature by tilting the lights at the back, both night and day, and covering at night with mats. Plunge the pots into the soil, and with proper care the seeds will soon be above the earth. A thermometer placed in the bed will be the safest guide to the inexperienced. It should not rise over eighty-five degrees in the day, nor sink below sixty degrees at night. As the heat declines lin-

ings of fresh manure should be applied around the outside of the bed, but ordinarily for seeds this is not necessary.

The length or number of the frames is immaterial; but they should be nine or twelve inches deep at the front, and fifteen to eighteen inches at the back. This will give a good slope to carry off the rain. Cold frames are simply the hot-bed frames set upon a warm spot of ground, covering at night to keep in the warmth accumulated during the day.

COLD FRAMES

The cold frame is used more extensively for wintering over plants than as a seed bed. It differs from the hot-bed only in that it is placed on the top of the ground and depends upon the sun for heat. Seeds sown in cold frames gain a considerable advantage in time over those sown in the open ground, and early lettuce or radishes may be grown to maturity in them to good advantage. The necessity for ventilation is the same in the hot-bed. The principal use of the cold frame is for wintering over plants sown in the fall such as Cabbage, Cauliflower, Lettuce, Pansies, Hollyhocks, and other biennials and perennials, securing hardy plants and an early start in the spring. Extra coverings of straw or burlap mats or boards must be given in extremely cold weather, and careful ventilation when milder. Plants wintered over in this manner are hardier than spring seedlings.

SEEDS AND PLANTS

While there are many ways in which good seed may be destroyed, there is no way to get a satisfactory crop from poor seed. By good seed we mean well ripened seed from strong, carefully selected plants, true to variety, and grown in the soil and locality most favorable to early maturity and perfect development. This is best secured by sending to a reliable seedsman and sending your order early; at planting time there is a great inflow of orders, and some varieties may be sold out or some necessary delay may retard your planting, therefore earliness in ordering is an important matter. To aid in estimating the quantity, we append tables showing how much seed is required to plant 100 feet of row.

LAYING OUT THE GARDEN

It is a great advantage to have a definite plan made of the garden before beginning to plant. Wherever practicable, plan the garden in long rows so that it may be cultivated by the plow or wheel tools; two or three kinds of vegetables may be planted in one row. The permanent beds, asparagus, rhubarb, horseradish, mint, tarragon, etc., should be placed together, so that the rest of the garden may be in one block for fall and spring plowing.

SOWING THE SEED

For convenience in cultivation, it is much better to sow in rows, allowing an extra space for walks every fourth row, for marking the rows various means have been devised; a roller, which will



Garden Reel and
Line

serve at the same time as a marker, consists of a smooth hardwood log with heavy rope secured firmly about it at distance corresponding to the intervals desired between the rows, or a garden line, stretched tightly from end to end of the row, will be found a great convenience, for unless the rows are perfectly straight cultivation is very difficult and the appearance of the garden leaves much to be desired. The soil should be moist when the seed is put in, and care must be taken that it does not bake above the seed. Most seeds should be sown more thickly than they can be grown to perfection and thinned to proper

distances in the rows, the thinning should be done when the second pair of leaves appear, and care must be taken not to loosen the roots of the remaining plants. Some seeds which are slow of germination, such as parsley, beet, carrot and parsnips may be soaked in water for a day before sowing, and will probably come up a number of days earlier.

TRANSPLANTING

The time for transplanting is generally when the second pair of leaves are well grown; choose a cloudy day, have the soil in best condition, press it firmly about the roots, and should the sun come out shade the seedling with shingles, large leaves or paper screens. If the leaves of the young plants are clipped off about half-way back from the point, the evaporation from them will be lessened that much and the roots will have an opportunity to establish connection with the soil and secure ample moisture before the full demand from the leaves is renewed.

WATERING

We have laid great stress in the foregoing pages upon the retention of the natural moisture in the soil by cultivation; it is the most important principle of successful gardening; the mulch of light fine soil upon the surface and about the plants prevents evaporation and gives the roots the benefit of all the moisture there is. But there are seasons of continued drouth when it becomes necessary to water the garden, which must be done very thoroughly, so that the moisture may reach the deepest rootlets, which are always the most active. Surface sprinkling is ineffective always, if the plants are well watered, and if the earth is allowed to bake and form a crust afterwards it is positively harmful. The best time for watering is

generally thought to be at evening, but Bellair says: "In the spring in the middle of the day, because the morning and evening are too cool; in the summer, at evening because the days are so hot that a great part of the water given during the days would be evaporated immediately; in the autumn, in the morning, because nights are cold." But the great point about watering is to do it thoroughly, then as soon as the soil can be worked, loosen the surface to prevent evaporation.

WEEDS

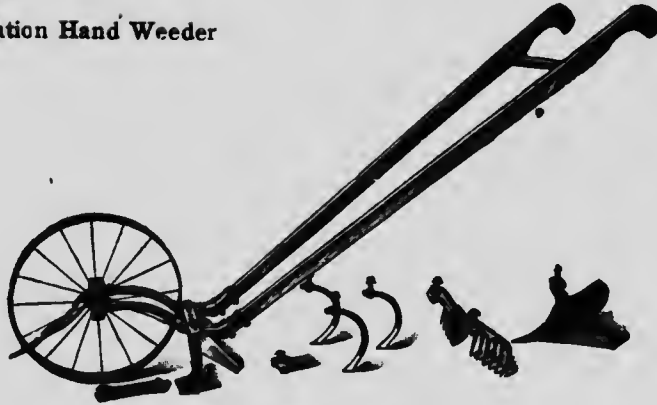
Very troublesome in many small gardens are some of the tough-rooted grasses, but deep and thorough tillage may be depended upon to get rid of them. With the common weeds we must depend mostly on the hand and



Combination Hand Weeder



Hazeltine Hand Weeder



Wheel Hoe

wheel hoes, hand weeding being only necessary in the rows; we find that a conscientious weeding in June, by which time most weed seeds are well started, will leave the garden clean most of the summer. A weedless garden requires very little more work than a poorly kept one, and the results in quantity and quality are vastly different. There are many tools made to lighten the labor of weeding. The scuffle hoe is a useful thing in walks and between the rows, as it cuts off the weeds just below the surface of the soil; the Iron Age plow, and the hand wheel hoes are very effective tools and save much time and labor in a larger garden.

ASPARAGUS

The idea that asparagus is hard to grow is not well founded—it should have very rich soil with good drainage and cultivation; but it is hardy and prolific, has a long season, and bears well for a goodly number of years. In



early spring sow the seed, after soaking it 24 hours in warm water, in drills about one foot apart and one inch deep. The soil should be very rich and well worked. When about three inches high, thin the plants to three or four inches apart in the rows, and cultivate often and thoroughly through the summer. The following spring, select the best of the roots and place in the permanent bed, which should, for the sake of earliness, have a sunny and sheltered situation. Whether one raises the green asparagus common in our gardens, or the white blanching variety usually offered in the markets, is a matter of planting at this time. For the green asparagus, which many prefer, set the young crowns 3 to 4 inches below the surface, and in cut-

ting, choose the shoots when 3 to 4 inches long, and cut about one inch below the surface. The white asparagus, on the contrary, is planted in furrows 7 foot deep, filled in with 2 to 3 inches of fine rotted manure and the same amount of soil; then set the plants so that the crowns are 6 to 7 inches below the surface level, cover with several inches of soil and compost, allowing the furrows to fill gradually in the course of cultivation. Asparagus grown in this manner is cut as soon as the tips appear above ground and is white the entire length; the lower ends are apt to be tough and require peeling, but many people prefer it both for appearance and flavor. A year may be saved by buying the plants (one year old are greatly to be preferred) and setting them at least two feet apart in the row, and the rows not closer than four feet; see that the roots are well and evenly spread out in planting and that they are not exposed to the air longer than is absolutely necessary, as they deteriorate rapidly. A liberal dressing of manure in the fall, good cultivation, and a spring dressing of truck manure (1,500 lbs. to the acre) and nitrate of soda (200 lbs. to the acre) will be sure to give good results.

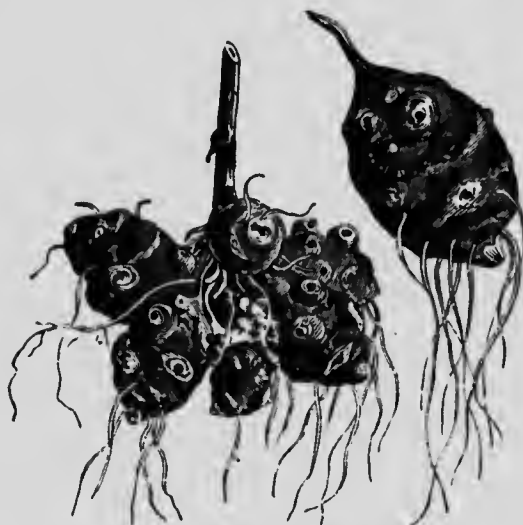
Asparagus should not be cut until three years old, and not freely till the fourth year. Do not cut after July 1st, but cultivate and let the roots

regain their strength. In the fall when the foliage is yellow, cut and burn it before the berries fall. The Asparagus beetle has given a good deal of trouble in some neighborhoods; a sprinkling of lime dust, or slug shot mixed with old flour, scattered on the shoots when the dew is on, will probably rid the bed of them. After the cutting season is past, a sprinkling of a solution of one tablespoonful of paris green to four gallons of water is advised.

GLOBE OR FRENCH ARTICHOKE

This is a veritable delicacy, and is rare even in our best markets. The base of the flower and fleshy part of the outer leaves surrounding it are the portions to be eaten, boiled and dipped in a batter sauce. The flower head must be cut before it begins to expand, and every blossom must be cut else the plant ceases to bear. It is a half hardy perennial but will survive our climate with protection. It is propagated from seeds or suckers, which are sent out freely. Sow the seed in April or May in drills one inch deep and one foot apart; transplant when large enough in rows three to four feet apart and two feet in the row; they will bear the following summer. From early sowing in the hot-bed they may be had the first season. They require very rich soil and good culture.

JERUSALEM ARTICHOKE



Jerusalem Artichokes

The Jerusalem Artichoke (*Helianthus tuberosus*) is a yellow-flowered perennial plant which reaches a height of 8 to 10 feet and closely resembles the wild sunflower. It is grown almost exclusively for the underground tubers which it produces. These tubers are as a rule pear-shaped and somewhat flattened, resembling potatoes to some extent, but not so smooth. The tubers were formerly used to a considerable extent as a vegetable, especially before potatoes were so extensively grown, but they

are now grown in this country principally for stock food, particularly for hogs.

The plant will grow on almost any well drained soil. It will thrive and

produce abundantly on light sandy or gravelly soils too poor for many other crops. The main requirements seems to be a dry soil. If the soil is wet the tubers will rot. It is drought resistant and, as a rule, remarkably free from fungus diseases and insect pests, although there are a number of diseases which have been known to attack it, and in some cases to do serious injury. The plant is propagated, like the potatoes, by means of tubers (the plant generally fails to produce seed) which can be had at Simmers' Seed Stores. The plant requires more space than the potato. Some obtain best results by planting in hills 3 feet apart each way. It is considered best to plant whole tubers (two or three in each hill, if small), but cuttings with two eyes may be used. Planting should be done as early in spring as the ground will permit. It may be done in the fall or even in winter, if conditions allow. The Jerusalem Artichoke is not so sensitive to frost as the potatoes, and may be planted much earlier than the latter and should be planted a little shallower.

The cultivation may be the same as that given potatoes, although an occasional stirring of the surface soil is all that is absolutely required, and frequently good crops are obtained with little or no cultivation. Pinching off the tops to prevent flowering tends to increase the yield of tubers. The crop matures in about five months. The tubers may be harvested by plowing them out and picking them up just as potatoes are usually harvested, or, if grown simply for hog feed, they may be left in the ground and the hogs allowed to root them out. Any tubers remaining over winter under the soil will, as a rule, grow the next spring; by this means the soil may be kept stocked, but it is usually advisable to replant each spring (or at least every two years), in order that the plants may be kept in rows and thus more easily cultivated.

The tubers may be left in the ground over winter without fear of injury, provided the soil is well drained, or they may be preserved in a root cellar or stored in pits in the field. When allowed to freeze out of the ground they spoil very rapidly, and when exposed to the air they turn black. When stored in a cellar they should be lightly covered with earth to shut out light and air to prevent drying.

The yield is usually greater than that of potatoes. A yield of over 600 bushels per acre was obtained on upland soil, and a yield of 500 bushels on similar soil has been reported. Yields of 1,000 bushels have frequently been reported. Artichoke tubers resemble potatoes in composition as well as in appearance, but differ from them in containing little or no starch, the latter being replaced principally by a substance similar to starch, known as inulin.

The Jerusalem Artichoke tubers have about the same value and are superior to turnips and mangel-wurzels for feeding purposes. They are richer in protein, but poorer in carbohydrates—starch, sugar and similar substances—than sweet potatoes. Some trouble is occasionally experienced

in inducing hogs to eat the tubers raw, but they soon acquire a taste for them and thrive on them. A Western farmer states that one acre of artichoke will keep 20 to 30 hogs from June to October in fine condition. They have been found an excellent substitute for a large part of the corn generally used in fattening hogs, both as regards growth and health.

The stalks and leaves of the plants are coarse and apparently unpalatable, but they have been fed successfully to cattle, especially when cut before they have become hard. They compare very favorably in chemical composition with green corn fodder. The leaves can be made into a silage which contains about as much nutritive material as corn silage.

The tubers make about the same draft upon the fertility of the soil as potatoes, while the tops take up as much total plant food from the soil as corn fodder. The tubers are eaten boiled or steamed until soft and served with cream sauce; in form of pickles; made into soup (cream of artichoke), and in other forms. As stated above, the plant is easily propagated. It is also difficult to eradicate, and may become troublesome, as a weed, if neglected. Pasturing hogs and other stock on the artichoke field is an effective means of eradication, as is plowing under in the spring, when the plants are about 1 foot high, and following with a hoed crop. As a side crop, which will furnish a large amount of stock food, with little care and cultivation, on soils too poor for many other crops, the Jerusalem Artichoke certainly deserves the serious consideration of farmers, especially those raising hogs to any great extent.

BEANS

This succulent vegetable accommodates itself to any soil and is only particular about the climate; it must be remembered, however, that no plant can do its best in an improverished soil, and as beans are great consumers of potash, this element can usually be applied with good results in combination with truck manure. As all beans are rather tender, it is best not to sow until corn planting time, or when the apple trees are in blossom.

BUSH OR STRING BEANS

These are much earlier than the Lima and Pole Beans and must be the main crop. Sow when the weather is settled in rows 15 inches



apart, and so as to depend upon plants standing about 4 inches apart. The writer has had best results from successive planting at an interval of about three weeks; firm the soil well over the seed and rake the surface lightly. The only cultivation needed is to keep the surface soil loose and the rows free from weeds. It will be found that as a rule the round poddled beans have the most crisp and tender flesh and are more nearly stringless than the flat-poddled varieties, as well as more free from rust.

POLE AND LIMA BEANS

These are all more tender than the bush beans, and must not be planted until the weather is settled and the ground warm. Set the poles first, about 3 to 4 feet apart and in each hill plant 6 to 8 beans, thinning when well started to the 4 strongest. Limas should be planted a little later than running beans, in the most favorable location possible, as they are very late in maturing, they may be sown in hills, or in rows and allowed to run on chicken wire or strings and thinned to 8 or 10 inches apart. The Bush Lima is more easily grown than the tall, and is earlier and more economical of space, but many consider the tall Lima the best flavored of all beans.

BEAN RUST

Is a fungus growth to which most beans are liable, and is difficult to remedy. One authority recommends a weekly application of Bordeaux mixture up to blooming time.



Early Dark Red Flat Egyptian Beet

BEET

The soil for beets, like all root crops, should be light, rich, fine and deeply cultivated. Sow in rows 12 to 18 inches apart and about one inch deep;

thin early to about three inches apart, and in gathering the early beets, pull alternate roots so as to leave about six inches room for the mature roots. For the home garden, a succession planted about three weeks apart will keep the table well supplied with young beets throughout the season.

MANGEL

Sow in April and May in thoroughly ploughed, well manured soil, in drills two inches deep and about 18 inches apart. Thin out to 12 inches, and keep the weeds down by frequent hoeing and cultivating. Four to six pounds are required per acre.

SUGAR BEETS

Sugar Beets are not as heavy yielders as the foregoing, but are of superior quality, containing a larger amount of saccharine matter. Thousands of acres are planted with Sugar Beets in Europe for the manufacture of sugar. They are excellent for feeding cows, improving wonderfully the quantity and the quality of the milk. Cultivation same as mangel.

BROCCOLI

This plant resembles Cauliflower, but is hardier and of less delicate flavor. Sow early in May and transplant late in June or early in July to a rich mellow bed. Cultivate as late cabbage. One ounce will produce 2,000 plants.



Brussels Sprouts

BRUSSELS SPROUTS

Although not in general use in this country, this is a most delicious vegetable. The seeds should be sown in March or April in the hot-bed, or in the open ground when the weather permits. When the plants are three inches high they should be transplanted and cultivated the same as cabbages or cauliflowers. The early ones will be ready for the table in September; the later ones, for winter use, should be harvested before cold weather, and stored the same as cabbages or cauliflowers. The small heads which grow along the stem are the edible parts of this vegetable, and when boiled like a cabbage, or stewed with cream like cauliflower, are very tender and delicious. The leaves should be broken off as they fall to give the little cabbages room to grow.

CABBAGE

The requirements for a good crop are rich soil, deep plowing, high manuring, good seed, and thorough culture. No other crops so imperatively demands the best seed as a prime necessity—nothing less will give satisfactory results. With good seed, if the soil be well manured and dressed with Sure



Simmers' Perfection Drumhead Savoy Cabbage
(Best for general crop)

Growth Fertilizer, 1,000 to 1,500 lbs., per acre, and well cultivated, cabbages can hardly fail of success. For early summer use, sow early in the hot-bed, an early small and a second early variety, harden the plants off as thoroughly as possible and transplant into the open ground in rows about 3 feet apart and 18 inches apart in the rows. A dusting of plaster or air-slacked lime, or a handful of ashes thrown upon the plants as they appear above the ground will help prevent the attack of the cabbage fly. For second early, sow in April and transplant in May. Do not fail to grow a few Savoy cabbages for fall use, the flavor is very delicate and the heads of good size and tender; boiled and stuffed and dressed with cream sauce, it is a favorite dish with French cooks. For late crops, sow in May and transplant in July, setting the plant in rows three feet apart and two feet apart in the rows.



When the young plants begin to look thrifty they are pretty sure to be attacked by

Simmers' Perfection Drumhead Savoy Cabbage

the cabbage or green worm, which must be destroyed. Slug shot dusted on thickly when the dew is on, is effective; alum water, one tablespoon or alum to the gallon, is recommended, sprinkled on with a whiskbroom, of saltpetre, one ounce to three gallons of water, applied in same manner. After the heads begin to form, a top dressing of nitrate of soda (200 lbs. to the acre), and thorough hoeing will do wonders.

To store cabbage for winter, pull them on a dry morning, turn them head downwards for several hours to drain, and store in cellar, or in trenches in well-drained ground, covering with soil, and protecting all with corn-stalks or straw. Should the fungus disease called Club Root appear, dress the ground in the fall with about 60 lbs. of air-slacked lime to the acre, and do not use the patch for cabbage for two or three years.

CARROTS

A light sandy loam, well tilled and manured the previous year, best suits the Carrot. For early crop sow as early as the ground can be worked, in drills 4 inches apart, and thin to five inches in the rows. The very short scarlet or Golden Ball, owing to its extreme earliness, is used for hot-bed culture.

Late sorts, the long and half-long varieties (main crop), sow from middle of May until first of July in drills 12 to 14 inches apart. Thin out to 6 and 7 inches in the row. Keep the hoe at work. One ounce of seed sows 150 feet of row.



Chanteney Half Long Scarlet Carrot

Carrot seed germinates slowly, so firm the soil well over the seed and do not be discouraged with a little delay.

CARDOON

The Cardoon resembles the Artichoke, though it is larger in size, while its flowers are smaller. It is cultivated for its blanched leaf stalks and the midrib of its leaves, which are used in salads and soups. Sow early in Spring, one and one-half inches deep, in rows two feet apart, and thin to about 12 inches in the row. Earth up, like celery, when of proper height.

CAULIFLOWER

Cauliflower ought to receive a similar treatment to Cabbage, except that it requires an extra rich soil, an occasional application of liquid manure and frequent watering, especially when heading.

Early sorts in this latitude are mostly sown in February or March in hot-beds, transplanted once before setting in open ground, and finally transplanted before the middle of April in rich deeply-worked soil, two feet by 15 inches apart. Late sorts are sown and cultivated like late cabbage. When heading tie the top leaves together to protect from exposure to the sun. A half ounce of seed sows 100 yards of row and gives about 2,000 plants.



Simmers' Gilt-Edge Cauliflower

CELERY

Sow the seed late in March or early in April on fine well-worked soil. Cover lightly, or, better still, roll or press it in. Shade the young plants for a week or ten days, and do not let the soil dry out. Cut them once or twice before setting out, to make them stocky. When from four to six inches high transplant into broad, shallow trenches, or to level ground, setting dwarf sorts into rows three feet apart, and tall sorts four feet apart, six inches apart in the rows. Set out every two or three weeks for a succession. The soil chosen should be light, highly manured, partially shaded and moist or near water, as the plants must be freely watered in dry weather. Earthing up checks growth, and should not begin until the plants are quite



Paris Golden Yellow Celery



Simmers' Special Dwarf White Winter Celery

well grown; then earth up gradually, keeping the leaf stalks close together so that the soil may not fall into the centre of the plant, but never earth up in wet weather nor when dew is on the plants. The plants intended for winter and spring use need not be bleached until laid up. For winter storage dig in well drained soil a trench one foot wide and as deep as the height of the celery. To this remove the stalks with roots attached. Set them upright closely packed, but not crowded. Cover with boards to protect from rain, and later with straw or leaves to protect from severe cold. One ounce of seed produces 3,000 plants. A clever method of tile blanching has been devised which is a saving of time, labor and space, with only the first cost of the tile as an offset. At the time of earthing up cover each plant in alternate rows with a section of three-inch tile, drawing up enough earth to firm it. The stalks will come out clear, white, crisp and tender, without dirt or rust. These rows can be two feet apart, and then afford enough earth to bank up the alternate rows, or it can be stored for winter use.

CELERIAC, OR TURNIP-ROOTED CELERY

Sow early in spring. Transplant in May into rich, mellow soil in rows 18 inches apart and six inches in the row. Water in dry weather. Little or no earthing is required. The turnip-shaped roots, for which this is grown, are ready in October, and are used in soups and a salad. One ounce will sow 50 feet of row.

CHERVIL

Sow in a deep, mellow, rich seed-bed, in drills nine to twelve inches apart and cover two inches deep with fine soil. Cultivate like parsley. The leaves are used for soups and salads. One ounce of seed will sow 100 feet of drill.

CHICORY

Its dried roots are used as a substitute for, or as an ingredient of coffee. Sow in good rich soil half an inch deep and cultivate like carrots. In fall cut the roots in pieces about an inch in length, string and dry like apples. The dried roots are roasted and ground like coffee, or the roots may be blanched for a salad. One ounce sows 100 feet of drill.

**Stowell's Evergreen Corn****SWEET CORN**

The soil best suited for Corn for an early crop is a well enriched sandy loam. The planting should never be done until the weather is settled and warm, as heat is indispensable to the healthy growth of corn. The first planting should be made about middle of May, and successive plantings continued every two weeks, until first week in July, which date is the latest which corn can be planted to ensure a crop of green ears. Plant in hills three or four feet apart, according to size of variety or strength of soil, or in drills three feet apart, and eight inches apart in the drill. Cultivate often and thoroughly. One quart of seed plants 100 yards of row.

CORN SALAD

Sow in spring in drills one foot apart. Keep clean from weeds. It will mature in six or eight weeks. For early spring use, sow in September, thickly in drills one-quarter inch deep. Tread the ground if dry weather. Protect with litter when cold weather comes, and winter over like spinach. One ounce will sow thirty-five feet of row.

CRESS OR PEPPER GRASS

Sow thickly in early Spring in drills one foot apart, and follow every two weeks with a new sowing, as it quickly runs to seed. Water Cress should be sown along the margin of ditches, ponds, or, better still, of slow running streams. It requires no care except to free it at first from weeds. One ounce sows 100 feet drill.



CUCUMBER**Simmers' Improved Extra White Spine Cucumber**

For early use sow in hot-houses on small sods over-turned, or in small pots plunged in earth. As soon as danger from frost is over, transplant, with sod, so as not to disturb the plants, into hills in the open ground. For general crop sow from about the first to the middle of May in rich, mellow, warm soil. Put a shovelful of well-rotted manure each hill and cover it to two inches with fine earth. On this sow the seed, about eight or ten seeds to a hill; cover one half-inch with earth and press down. A liberal quantity of seed should be sown in each hill, say twenty to forty seeds, that there may be enough plants to survive the depredation of the striped cucumber bug or the borers. The young plants should be dusted every few mornings with ashes, plaster, or Slug Shot, to destroy these pests, and as soon as the plants are sufficiently large to take care of themselves, they should be thinned out to three or four plants in a hill. If the picking is carefully attended to, and all the fruit picked off as soon as large enough, the vines will continue to grow and bear all summer, especially if they are in a rather shady situation. If the fruit is allowed to ripen, the vines will dry up and die. For pickles plant from June to middle of July. One ounce of the seed is sufficient to plant about fifty hills.

FORCING OR FRAME CUCUMBERS

These varieties are coming more and more into use, and are especially grateful to the palate in winter. Sow from October to December in pots in rich soil, give a little bottom heat and set near the glass; they require plenty of air and water. The Pistillate flowers must be fertilized with Pollen from the Staminate ones.

**Rollisons' Telegraph Cucumber**



Long Purple Egg Plant

or three inches high transplant or thin out to one foot each way. When full grown blanch the inner leaves by gathering and tying up the outer ones at the top; but tie up only when the leaves are dry and blanch in succession, as it keeps only a short time after blanching. For winter use take up with earth and plant closely in frames or a dry cellar. One ounce of seed sows 150 feet of drill.

GARLIC

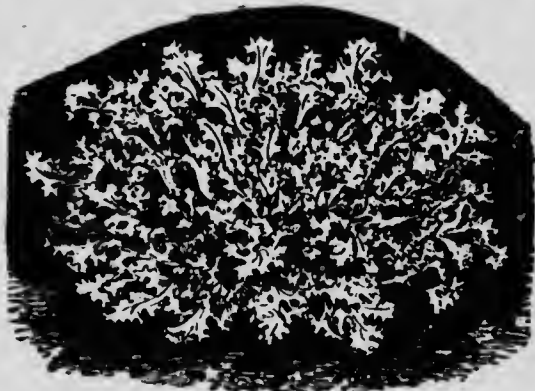
Garlic sets should be planted early in Spring in a light, rich soil in rows one foot apart, and from three to five inches apart in the rows. Cultivate like onions. In August the tops will die off and the crop is ready to gather. Garlic is used for flavoring soups, stews, sausage, etc.

EGG PLANT

Sow the seed in a hot-bed in March or April. When about three inches high pot the plants and plunge in earth; transplant to open ground in May or June, according to the warmth of the season. Uniform heat is essential to this plant, and it rarely recovers from the least chill in its early growth. Set out, according to richness of soil, two or three feet apart each way. One ounce of seed makes 2,000 plants.

ENDIVE

For early use sow about the middle of April, but for the main crop in June or July, in shallow drills. When two



Curled Endive



Garlic

**Horse Radish****HORSE RADISH**

This pungent root is a great favorite as a relish in the early Spring and is a very pleasant appetizer, at a season when we have been without fresh vegetables for several months. It is raised from pieces of root three or four inches in length, from a quarter to a half-inch in diameter; these slips are made from the tails or rootlets cut off in trimming the root for grating. Keep the slips in moist earth in a cool cellar until Spring. The roots may then be planted in a trench six inches apart. This plant does not seed.

KALE OR BORECOLE

The Kales are excellent as greens for Winter and Spring use. The crown or centre of the head cut off so as to include the leaves is the eatable part. They are more hardier than cab-

bage and are improved by frost, but the time and manner of sowing, and the culture indential with cabbage. One ounce produces 2,000 plants or 100 yards of row.

KOLH RABI

This vegetable, seemingly an intermediate between cabbage and turnip, has value both as a

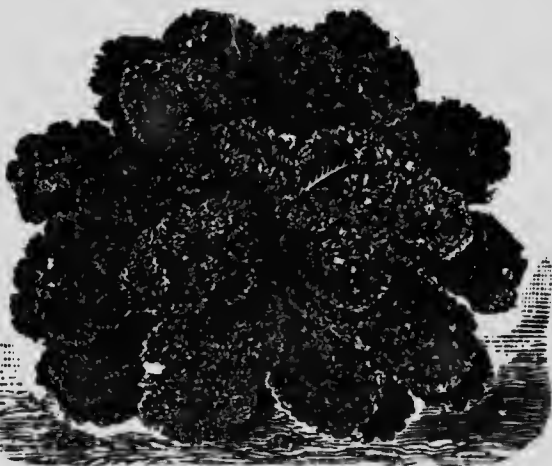
**Kohl Rabi****Dwarf Green Curled Kale**

table delicacy and feeding stock. The edible part is the enlarged stem just above the surface of the ground, which is in prime condition when only half-grown. The full-grown bulb is tough and stringy. For early use sow in hot-bed, transplant and cultivate like early cabbage. For Winter use sow the middle of June 18 inches apart, transplanting, or as difficult, thinning out to eight inches in row. One ounce of seed produces 2,000



Large Musselburgh Leek

tenderness and flavor. Sow in a hot-bed in early spring, and as soon as the ground can be well worked transplant in good, rich ground to rows eighteen inches apart, and eight to ten inches in the rows. For a later supply plant every two weeks from the middle of April until July, choosing varieties

LEEK

This hardy vegetable is allied to the onion, but has a more delicate flavor. It attains a suitable size for use the first year, but never seeds until the second year. The whole plant has use, and the larger its size the better, therefore no bed for leeks can be made too rich. Plant the seed in April, in drills one foot apart and one inch deep. When six to eight inches high, remove the plants to deep, rich soil, setting them in rows 12 to 15 inches apart in the rows. Place as deep as possible, and during growth draw the earth to them to blanch the stems. One ounce will produce about 2,000 plants. |

LETTUCE

Lettuce, the most used of all the salads, is easy of culture, being free from all diseases and insects. It requires rich, moist soil, clean cultivation and plenty of water. This will give the quick growth on which depends its appearance,



Paris Cos Lettuce



Hanson Cabbage Lettuce

according to their heat resistance, and their tendency to remain in condition without seeding. If sown to be cut young, sow thickly in drills or broadcast; but if

fine, strong heads are desired, sow in drills one-fourth inch deep, 15 inches apart and thin, rather than transplant, to 12 inches apart in the rows. One ounce of seed produces 3,000 plants.

**Montreal Musk Mellon**

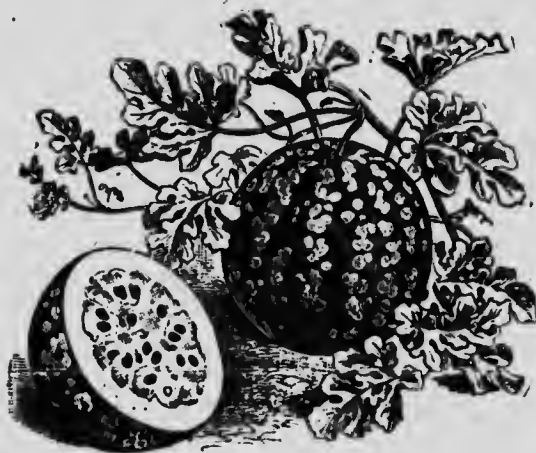
and ripen earlier. Do not plant near pumpkins and squashes, as they hybridize. One ounce of seed plants 75 hills.

WATER MELON

These are also supposed to require special conditions, but they can be raised under the same circumstances as musk melons. What they most need is a liberal feeding of well-rotted manure. If this latter can be obtained a good sized hole should be dug and filled in even to half a barrel a hill. If this kind of

MUSK MELON

These universal favorites are too often neglected, owing to the idea that they must have sandy soil, and require special skill to grow them. If a variety suited to your soil is planted and given fair attention, melons may be had in abundance. If the garden has a southern slope that will be the best place for melons, but they will do almost as well on the level. Plant the seed when the ground is dry and warm. Plant from six to twelve seeds in hills six feet apart each way, and when danger from bugs is past thin to three vigorous plants in a hill. If manure is mixed in the hills at time of planting see to it that it is old and well-rotted. When the shoots are a foot long pinch off the tips to make them branching and to strengthen the vine. Thin out the fruit if it is excessive. The remaining melons will thereby increase in size

**Water Melon****Citron for Preserving**

hill be made, the larger varieties may be grown with success. Unless conditions are favorable, however, the smaller varieties are recommended, they being equally fine in quality. Plant in hills eight to ten feet apart each way, and cultivate like the musk melon. To secure the largest fruit have but one or two melons to a vine. One ounce of seed will plant about 60 hills.

CITRON

Grown for preserving purposes only, and being a species of water melon, requires the same cultivation.

MUSHROOM SPAWN

In preparation for a Mushroom bed procure fresh horse manure free from litter or straw, and old pasture soil. Mix thoroughly in proportion of three parts horse manure to one part loam. Turn daily until the extreme heat is out of it. Then, in some sheltered place, if possible, make out of this compost a bed four feet wide, eight inches deep and as long as desired,



Edible Mushrooms

pressed solidly. Leave this until the heat subsides to 90 degrees, then plant pieces of spawn the size of a walnut in holes two or three inches deep, six inches apart each way; cover with the compost, and in the course of a week or ten days the spawn will be diffused through the whole bed. Now cover with two inches of fresh soil, and over this spread three or four inches of hay, straw or litter. If the surface becomes dry, wet with lukewarm water. Keep an even temperature of 50° to 60°. One brick will plant two by six feet.

Virgin Mushroom

Spawn (French)— This virgin spawn is characterized by its great vigor of growth and being raised from spores

of the best and healthiest Mushrooms, it does not contain any of the bacterial or other organisms which may be prevalent in spawn that has not been manufactured and sterilized by this new process. It therefore is not so liable to be attacked by diseases, a consideration which alone possesses a high degree of interest and does away with one of the great drawbacks in Mushroom growing. It is sold in the form of compressed and sterilized manure slabs or tablets, thoroughly pervaded by the spawn and which are 1½ inches thick and 2¼ x 3¼ inches in surface.

For more detailed instructions how to grow Mushrooms, we recommend "Simms' Mushroom Culture," a sixteen page pamphlet, revised to date; price by mail, 10 cents.

Mushrooms, How to Grow Them.—By William Falconer. The most complete book ever published on the cultivation of mushrooms. The writer is a practical man who has devoted many years to experiments with mushrooms. Per copy, \$1.00.

MARTYNIA

This is cultivated for its seed pods, which when half grown are tender and much esteemed for pickling. Sow the seed in May or June in open ground three feet apart each way. Thin to one plant in a hill. One ounce plants about 200 hills.

MUSTARD

A desirable spring salad. Can be sown as soon as the ground is free from frost, and successive sowings should be made every two or three weeks. It grows rapidly and must be cut when young. Sow in shallow drills one foot apart, and when three inches high thin out five or six inches apart.

One ounce of seed sows about 75 feet of drill.



Tall or Running Nasturtium

If in hills thin out to three plants; if in drills, to ten inches apart in the drills. Seed thickly and cover one inch deep. The young, green seed-pods are used in soups or like asparagus. The seeds are sometimes used as a substitute for coffee. One ounce of seed sows twenty-five feet of row.

NASTURTIIUM

A very ornamental climber, much cultivated for the green seed pods which make very delicate pickles. The leaves are also used for salad. Plant in May, in drills one inch deep, and give them support to climb upon. One ounce of seed sows about twenty feet of drill.

OKRA OR GUMBO

Sow in May, in hills or drills three feet apart.



Dwarf Nasturtium

ONIONS

The Old Way.—Any land that will raise a good crop of corn, except stiff clay or gravelly soil, is suitable for onions. We prefer a sandy loam, with a light mixture of clay, as it is much easier to work, and produces good crops. Land that has been worked for two years previously in hoed crops, and heavily manured for these crops, and kept carefully free from weeds, would be in a most desirable condition to begin with. In black muck marsh lands, large crops of fine onions are grown, but the land **MUST BE WELL DRAINED**. The onions from the first crop on this class of soil are apt to be soft and rather inclined to run to "Scallions" or "Stiff-necks."



White Portugal Onion



Yellow Flat Danvers Onion

However, we have seen very fine, well-shaped bulbs grown the first season. Use well-rotted manure freely—fifty loads to the acre will not be too much. Spread the manure evenly on the land, and plow it under late in the fall, or very early in the spring. As early in the spring as the ground can be worked without injury, give it a thorough harrowing and raking. A quantity of fine ground bone or early vegetable manure worked into the soil at this time is very beneficial to the crop. Also another dressing of fertilizer just before they form bottoms, and if a quantity of wood ashes is added it will do no harm. In order to save time and labor, use great pains in marking off the rows to have them perfectly straight and of uniform width, less than a foot apart.

Sow the seed just as soon as the ground can be worked in good shape, using a Model Seed Drill or an Iron Age Seed Drill if possible to be had; and it is almost useless to undertake even a small patch without a drill and hand cultivator, the work being so much easier, and good machines can now be had very cheap. Sow seeds at the rate of four or five pounds to the acre. Before you begin to sow, try the drill on a board or floor, until you get the drop just right. Seed should be covered from one-half inch to one inch deep, depending somewhat on the condition of the soil and weather at the time of sowing. Onions should be thinned out when about the size of a rye straw, disturbing the remaining ones as little as possible. As they

grow on top of the ground they may be left quite thick, even if they do crowd each other. Bear in mind that you must keep the weeds down from the start, and that it is impossible to grow good onions on poor land and in a careless manner.

As soon as the onions are up so they can be seen the length of the row, give them the first hoeing, just skimming the ground between the roots. NEVER HOE DEEP AND ALWAYS HOE THE SOIL FROM THE ROW, never to the plants. In a few days give them a second hoeing, this time up close to the plants, after which weeding must be commenced. This must be carefully and thoroughly done; remove every weed that can be seen in the row. In about ten days they will require another hoeing and weeding similar to the last, and two weeks later give them still another hoeing, and, if necessary, another weeding. When tops die and fall, the crop should be pulled, throwing about four rows together to dry. In about a week, turn or stir them, and when the tops have become perfectly dry, cut them off one inch from the bulb. In a few days more they are ready for storing. White varieties are apt to discolor and should be taken in as soon as pulled. Store in some cool, well-ventilated place—cellars are usually too warm and damp—some outbuilding or up-stairs room is much preferable. They will stand a great amount of cold weather without injury. Never handle when frozen, but endeavor to keep them about the freezing point without freezing.

The New Way.—Consists in transplanting onions instead of sowing the seed where it is to grow. This practice is not common among gardeners although they are aware that onions may be successfully transplanted, but the many decided advantages to be gained seem to have been overlooked. The many gains are (1) securing a perfect stand of plants, (2) saving of labor at a most critical time, (3) advance in time and maturity, ripening at least four weeks earlier, thus making it possible to use the land for other crops, (4) increasing the crop from 50 to 100 per cent., according to variety, (5) improvement in appearance and market value—their large and uniform size and early ripening bring quick sales at good prices, (6) takes less seed, (7) a surer crop, because they have a longer time to grow before hot, dry weather sets in.

The seed is sown in the green-house, hot-bed or cold frame, about six weeks before the ground outside is expected to be fit for the plants, say February 15th to March 1st in this latitude, in flat or shallow boxes, or in the soil of the beds, in rows three inches apart. Sow evenly, cover carefully one inch deep, after which firm the soil well with a piece of board. One and a half to two ounces of seed will sow 3 x 6 feet, and give 6,000 to 8,000 plants. As soon as the ground is dry enough to work well outside, it should be prepared in the manner described, and the plants transplanted from two to three inches apart, in rows 12 to 14 inches apart, firming the soil well around the roots, taking care to set plants not too deep, but about the same depth as they were. Cultivate as in the ordinary way, but you will have very little hand weeding to do, and then it will not be ABSOLUTELY NECESSARY to get down on your hands and knees as it was in THE OLD WAY. If onions are wanted for bunching green, they may be set closer than two inches.

This plan may not be advisable for those who grow on a large scale, especially so where soil, climate and seasons are well adapted to the growth of the onion, but it can be readily seen that it has decided advantages for the general market gardener, because he already has the necessary hot-beds, etc., and can use the early bunch onions as well as the early ripe ones, and the ground after the crop is off to good advantage.

The foreign varieties—Mammoth Pompeii, Prize Taker, Giant Rocca, Mammoth Silver King, Simmers' Adanac Prize Winner, etc., give a larger gain in size than the ordinary sorts—Danvers, Wethersfield, etc., grown by this method. Our Prize Taker (American) gives excellent results in size and quality. But it should be remembered that the foreign sorts are not as good keepers over winter, and should be used early. Handsome onions can easily be grown to measure 3 to 4 inches in diameter, and they sell readily at fancy prices; and for bunching onions, the early foreign varieties, like White Barletta and Silverskin, may be had nearly as soon as from sets or button onions, from which bunching onions are usually grown. By this method these two varieties ripen up very early, and grow double the size they do in the ordinary way and sell at good prices long before any other onion is in the market.

BEWARE OF CHEAP SEED.—It costs but one or two dollars more per acre to use the very best seed: With the one you are SURE OF GOOD RESULTS, with other you are just as sure of partial, if not ENTIRE failure.

For descriptions of various reliable varieties see SIMMERS' SEED CATALOGUE.

ONION SETS



Onion Sets

Sets furnish large onions early, as well as the first green onions for table use. Plant the sets as early in Spring as possible, in shallow drills, one foot apart and four inches between sets. Cover slightly. They can be used in a green state in June, and are ripened off by July or August. To grow sets, sow the seed early in Spring very thickly in beds or drills. When the tops are down, gather the

little bulbs, dry and store. Shallots, Potato Onions and White Multipliers are grown only from bulbs, and should be planted in April, May or June. Select large bulbs and set them six inches apart, their crowns just below the surface.

PARSLEY

Parsley is used for seasoning soups, meats, etc., for salads and garnishing, and as an ornamental border in the flower garden. It thrives best in rich mellow soil. Since the seed germinates very slowly, the plants sometimes not appearing for three or four weeks, sow as early as possible, and soak the seed a few hours in luke warm water before sowing. Sow thickly in rows one foot apart; and cover one half inch deep. Thin out to six inches apart in the rows, or, better still, transplant and cut back. The finest and most perfect leaves come from frequent transplanting and cutting back. Once ounce of seed sows about 140 feet of drill.



Hollow Crowned Parsnip

are two or three inches high thin out to six inches in the rows. Cultivate often until the leaves cover the ground. These roots are improved by frost, and the bulk of the crop should be left in the ground over winter. Such as are not wanted for immediate use store in a dry cellar with a covering of sand. One ounce of seed contains about 6,000 seeds and will sow 150 feet of drill.

PARSNIP

The Parsnip has value not alone as a table vegetable but it is also one of the best roots for stock feeding. Its shallow bed or dressing of fresh manure will make short forked roots of inferior quality. Sow early in spring in drills fifteen inches apart and one-half inch deep. When the plants



Peas

PEAS

Peas succeed best in light, dry, loamy soil. Early and dwarf sorts require richer soil than the late varieties. If manure is used let it be old and well rotted, or there will be a rank growth of vines with few pods. Sow the early, smooth, round sorts as early in spring as the ground can be worked. Seeds of wrinkled varieties are more liable to rot if ground is cold, and should be planted later. Sow all the varieties quite early and depend for succession upon the different times of ripening of the various sorts, or from the first sowing, sow every two weeks until June for a succession. After that there is danger of mildew. Discontinue then until August, when a planting of an extra early or early sort will often produce a good crop. Sow the seed in single drills, three feet apart for dwarf sorts, and four for late sorts, or in double drills six or eight inches apart, one inch apart in the drill, and not less than four inches deep, or for late sorts four to six inches deep, since deep planting prevent mildew and prolongs the season

Cultivate well and draw the earth twice to the vines during growth. Stake the tall varieties when they begin to vine. Pick the pods as soon as fit, and allow none to ripen on the vines, as they then will cease bearing. One quart of the small seeded sorts will sow 175 feet of drill. One quart of the large seeded sorts will sow 120 feet of drill. Support must be furnished for tall growing varieties, but when grown as a market crop peas are never staked.



Peppers

PEPPER

Peppers are highly valued for their pungent flavor, and are used in flavoring soups, meats, etc.; also used for pickles and mangoes. Sow in a hot-bed in April and transplant to open ground in warm settled weather, to rows two feet apart, and 18 inches in the rows, or when all danger of frost is passed, sow at once in open ground, and thin to same distance as above. Any rich fertilizer or bird manure, if applied and stirred into the soil when the plants are six inches high, will be of great benefit. Hoe frequently. One ounce will produce 2,000 plants.

POTATOES

The Potato thrives best in a sandy loam, but can be grown in almost any soil, provided only that it has proper drainage, as a heavy, wet soil is positively harmful to it. This is one of the crops that most require rotation and a soil that has been well fertilized for some other crop the season before will give specially good results.

Plow deeply and harrow well. If fertilizers must be given in the spring, open the furrows for planting and manure with our Sure Growth Fertilizer or Early Vegetable Manure, 500 to 1,000 lbs. per acre. Cut the potatoes a few days before planting and sow the pieces twelve or fifteen inches apart, in rows three feet apart. In the field they may be gone over with a light harrow just before the Potatoes come up, to destroy the young weeds, and afterward cultivate often and deep as long as possible without destroying the plants. Plant in the latter half of April, so as to harvest in August.

In the home garden a very early sowing of an extra early Potato, cut in rather large pieces to insure an early start, with a dressing of a quick acting fertilizer to stimulate growth, will give an early crop of new potatoes; for general crop, plant a larger kind chosen for table qualities.

When the first bugs appear get rid of them before they can lay their eggs, picking by hand or dusting with a mixture of Paris Green and plaster or Slug Shot; or mix one tablespoonful of Paris Green to a gallon of water and sprinkle on the plants, keeping it well stirred.

When the foliage dries down and the tubers seem to be matured, with a good firm skin, is the time to dig, allow them to air thoroughly before storing.

THE A B C POTATO CULTURE

B. W. B. Terry.—How to grow them in the largest quantities and in the finest qualities with the least expenditure of time and labor; carefully considering all the latest improvements in this branch of agriculture up to the present date. Treats on manure, soil, planting, selection, and care of seed, cultivating and hoeing, digging, storing, varieties, etc. Price 50c.



Mammoth Cheese Pumpkin

PUMPKIN

Pumpkins are easily grown and are profitable for stock feeding. At time of corn planting scatter a few seeds in every fourth or fifth hill, or for a large crop sow in May, in good warm soil in hills eight to ten feet apart each way, four plants to a hill. Avoid planting near other vines as they hybridize. One ounce will plant 15 hills; one pound 200 or 300 hills.

RADISH

Radishes thrive best in a light, rich, mellow soil, and to bring out their mild qualities they must make a quick and tender growth; heavy or clay soils not only delay their growth, but produce a much inferior crop in appearance and flavor. Sow for very early use in hot-beds during the winter and early spring, or later on in sheltered borders, in well-manured, deeply dug, and finely raked soil; if not well stimulated into a rapid growth, they become fibrous and tough; sow in drills 10 inches apart, and thin to two inches



Scarlet Olive Radish

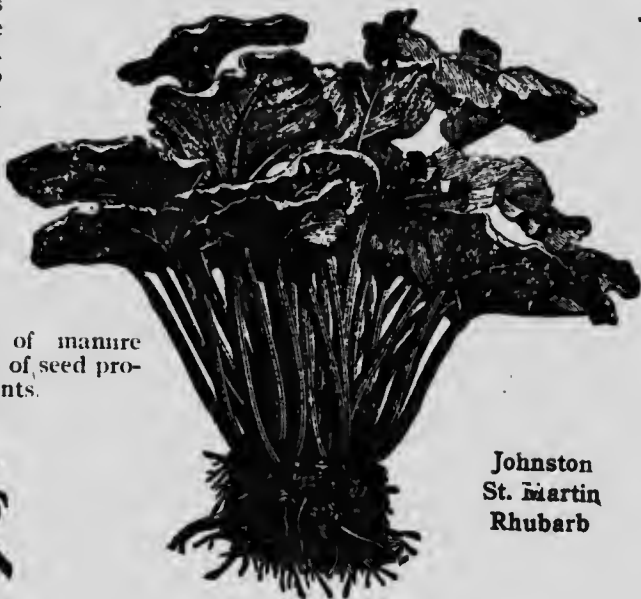


[Scarlet White Tip Turnip Radish

in the rows. Sow at intervals of two or three weeks until September for a succession. As soon as the first leaves appear, sprinkle with soot, wood ashes, or air slacked lime, or Slug Shot, to save them from the little black cabbage and turnip fly. The winter varieties should be sown in July and August; like the turnip, they make the best growth in Autumn, and must be taken up before severe frost, and stored away in a cool cellar in sand, or a pit, where they will keep tender and crisp all winter; before using put in cold water, which adds to their freshness.

RHUBARB (Pie Plant)

Sow in April in drills one inch deep and one foot apart; when plants are three to four inches high, thin out to 10 inches apart and cultivate well during the season; in the fall or following spring transplant into hills about three feet apart each way. The soil must be very deep and heavily manured. Give a top dressing of manure every fall. One ounce of seed produces about 1,000 plants.



Johnston
St. Martin
Rhubarb



Mammoth Sandwich
Island Salsify

SALSIFY (Vegetable Oyster)

Sow early in spring in drills 15 inches apart and one to two inches deep; thin to six inches apart. Soil should be very deep and mellow, in order that the long root may grow straight down. Store same as carrots for winter use, or they can be left in the ground until spring. One ounce of seed will sow about 50 feet of drill.

SCORZONERA, OR BLACK SALSIFY

Treatment same as for Salsify, which it closely resembles, except that the skin is black. Soak in cold water a few hours before cooking, to remove the bitter taste. One ounce of seed will sow 75 feet of drill.

SEA KALE

Sea Kale is only used after blanching. The midrib is the part used. Plants started in the hotbed in the spring are fit for blanching one year earlier than seed sown in the open ground. If in the open air, sow the seed three feet apart in the row.

SPINACH

Select very rich well-drained soil, spade deeply and sow in drills one foot apart and one inch deep, for spring and summer use, make the first sowing early in April, and continue at intervals of two or three weeks until the middle of July. Sow in August or September for winter or early spring use, and protect with a covering of straw during severe weather. One ounce will sow 100 feet of drill. Ten to twelve pounds are required for an acre.

SQUASH

A class of vegetables embracing more marked distinctions in sorts, fitted for more varied uses, and to be found during the extremes of the season in a better state of perfection than, perhaps, any other product of our gardens. Being of tropical origin, their growth is all consummated during summer; yet the fruit of the "winter varieties" may be kept, with a little care, until May. They are all of luxuriant and vigorous growth, and although they will



English Vegetable Marrow

grow readily on almost any soil, yet there is hardly anything cultivated that will so well repay generous treatment. Like all plants of this class, it is useless to sow until the weather has become settled and warm. Light soils are best suited to their growth, and it is best to prepare hills for the seeds in the ordinary manner, by incorporating two or three shovelfuls of well-rotted manure with the soil for each hill. For the bush varieties, the hills should be from three to four feet each way and for the running sorts from six to eight feet. Eight or ten seeds should be sown in each hill, thinning out after they have

attained their rough leaves, leaving three or four of the strongest plants. Three ounces will sow 100 yards. Four to five pounds are required per acre.

SWISS CHARD

This is a beet that produces leaf growth only, and is used as greens. Sow early in good soil, in drills sixteen inches apart, and thin to six inches in the row. Give good cultivation and cut as much as you please. It grows well above the ground, bears smooth tender leaves that are easily prepared and of excellent flavor. The Swiss give it high cultivation to develop a large midrib which is cooked separately and served with cream sauce. To cook as greens the leaves are stripped from the midrib. It is greatly relished by poultry.



Golden Hubbard Squash

SUNFLOWER

The Mammoth Russian is the variety most satisfactory to plant for seed, which is much used for feeding poultry. Sow in drills five feet apart and ten to twelve inches apart in the row, and cultivate the same as corn.

TOMATO

For early plants sow in hot-beds early in March, in drills five inches apart and $\frac{1}{2}$ inch deep; when the plants are about two inches high, transplant into another hot-bed four inches apart, each way: plant out in the open ground early in May, or as soon as danger from frost is over, four feet



apart each way in hills, which should have a shovelful of well-rotted manure mixed with the soil. water freely at time of transplanting; when the first fruit is set, pinch off the ends of the branches to obtain early fruit. Sufficient plants for a small garden can be grown in a shallow box or a large flower-pot, by placing it in a sunny window in a warm room or kitchen. For

late use, sow in a sheltered border in May, and set out the plants in July; the green fruit can be picked off before frost and be ripened under glass. By training the Tomato vines on trellises or tying to stakes, they will increase in productiveness; the fruit will ripen better and be of finer quality.

TURNIP

For early use sow the small sorts as soon as the ground can be worked in the spring in drills 14 inches apart; the field varieties 30 inches. As the seed is very fine, it should be covered but slightly, excepting in very dry weather. Of the early varieties thin the plants to six inches and the Swedes to one foot. For fall and winter use, the early kinds should be sown from the middle of July to the middle of August, and the Swedes from the middle of June to the middle of July.



Red Top, Strap-Leaved Turnip



AROMATIC HERBS

Aromatic or Sweet Herbs are worthy of more attention than they generally receive. If cooks used them more freely, doctors would have less occasion for prescribing them. The soil of the herb bed should be mellow and warm, but not over-rich. Deep,

fertile soil produces an increase in size and foliage at the expense of fragrance, strength and flavor. The seeds should be sown as early in spring as the ground can be prepared.

Condensed Table for Use in Planting Various Vegetable Seeds in Order to Secure a Succession of Crops

Vegetables in the Kitchen Garden	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Key to Numbers used in Table
Asparagus.....			5	*									*Sow seed in open ground without transplanting. Thin out plants.
Beans, Bush.....				*	2	2	2						
" Pole & Lima.....					*	*							
Beets.....			4	4	*	*	*	*					(1) Sow in seed bed in the garden and transplant to permanent place.
Borecole, Kale.....					1	1	1						
Broccoli.....		4	4	1	1	1			7	7			
Brussels Sprouts....						1	1						
Cabbage.....		4	4	1	1	1			7	7			
Carrot.....			5	*	*	*							(2) Make two sowings in open ground during the month.
Cauliflower.....		4	4	1	1	1							
Celeriac.....		4	4	1	1	1							
Celery.....		4	4	1	1	1							
Corn, Field.....				*	*	*							(3) Make three sowings in open ground during the month.
" Sweet.....					2	2	2						
" Pop.....					*	*	*						
" Salad.....			5	*	*	*							
Cress.....					*	*							(4) Start in greenhouse or hot-bed and plant out so soon as the ground is in good shape.
Cucumber.....			4	*	*	*							
Endive.....				1	1	1	1						
Kohl Rabi.....			4	1	1	1	1						
Leek.....		4	4	1	1	1							
Lettuce.....		4	4	1	2	2	2	*	9	9			(5) Sow in open ground as soon as it can be worked.
Melon.....				4	*	*	9						
Okra.....			4	4	2	2	2						
Onion.....		4	4	1	1								(7) Sow in cold frame, keep plants there over winter with a little protection; plant out in spring as soon as the ground can be worked.
Parsnip.....			5	*	*	*							
Parsley.....			4	*	*	*	*						
Peas.....			5	2	2	2	2						
Pepper.....		4	4	4	1								
Potatoes.....				*	*	*							
Pumpkins.....				4	*	*							
Radish.....				3	3	3			9	9			(8) To be sown in ground and protected with litter over winter.
Rutabaga.....					*	*							
Salsify.....			5	*	*	*							
Spinach.....			5	*	*	*			2	8			
Squash.....			4	4	*	*							
Tomato.....			4	1	1	1							(9) Plant in frame. When cold weather sets in cover with sash and straw mats.
Turnips.....					*	*	*						

On the Culture of Flowers from Seeds



SO much depends on careful sowing and planting in the cultivation of flowers that we do not think it amiss to add a few suggestions on this important subject, in the hope that they may smooth some difficulties out of the way of the novice in floriculture.

First, the Soil in which the seed is sown, should be rich and nourishing, but not too heavy, a light, rich loam, well mixed with sand and leaf-mould, and, better still with some powdered charcoal is preferable; press the soil down rather firmly, so that it will not sink when watered and disturb the young plants. Scatter the seeds on the surface, cover with sifted earth, and do not allow it to dry. **An absolute essential of successful flower growing** is not to bury the seed too deep. The very best of seed cannot grow when choked with soil. Amateurs fail here oftener than at any other point,

and their seeds and seedmen are unjustly blamed for the failure. The depth of planting depends on the size of seed. Large seed, such as Sweet Peas and Morning Glory may be covered from $\frac{3}{4}$ to $1\frac{1}{2}$ inches; such as Zinnia, Mignonette and Candytuft, from $\frac{1}{4}$ to $\frac{1}{2}$ inch. In the case of very small seeds, such as Petunia, Lobelia, etc., the covering of soil should be very thin, barely hiding the seeds and pressing down with a small board or the palm of the hand, and as seeds so small are liable to be carried down into the soil unless very carefully watered, it is even advisable to moisten the surface of the soil before sowing instead of afterward. Flat seeds, such as Zinnia and Cobæa are best put in edgewise, being sometimes liable to rot when sown flat. Sun and light must be excluded from the newly sown seed—cover with paper or a piece of moist flannel, held down by sticks or stones until the seed has germinated, and then admit gradually the air and light.



Mignonette Plant



Truffaut's Pæony-Flowered Double Aster

the second year; and **Perennials**, which live and bloom for a series of years. In the lists of varieties under these headings, we designate the hardy sorts by the letter **H.**; half-hardy sorts by **H.h.**; tender sorts by **T.**

ANNUALS

Annuals are usually sown in one of the three following methods: 1st, in Spring, in hot-beds, or in pots, set in the hot-beds; 2nd, in Spring, in the open ground, either in special seed beds or in their permanent places; 3rd, in Autumn.

1. For most annuals, the end of March or early April is sufficiently early to sow in hot-beds. Prepare the bed early in March, and when ready for sowing, press the soil down

As the plants grow strong, the sorts should be provided with neat stakes, and the climbers supplied with trellises or other support. After this, the main requisites of the plants are plenty of water during dry weather and entire freedom from weeds. By following the special instructions for the several classes, one can hardly fail of success. We have placed all the varieties under one of the following

heads: **Annuals**, plants which flower and produce their seed within the year in which they are sown; **Biennials**, plants which bloom and produce their seed



Simmers' "Perfection" Extra Large Flowering Fringed Petunia

rather firmly, form a nice even surface, water if dry and sow the seed on the top and cover lightly with fine sifted earth; very fine seeds do not need covering, only pressing well into the earth, with a small flat board or with the hand. One often saves considerable trouble by labelling each variety as sown. Cover the frames with matting at night and uncover on cloudy days, so that the young plants become gradually accustomed to the light. Raise the sash to give air as often as safe, after the seeds have started to grow, and shade from the sun with some light covering. As soon as the plants have several leaves, they must be either thinned out, throwing away the superfluous ones, or transplanting them to another part of the hot-bed where they are allowed to grow; keep the bed closed and shaded for two or three days, after which give plenty of air until strong enough to be again transplanted in the open ground.

2. For seed beds, choose a sheltered situation, sloping to the south, if possible; make the soil fine and smooth and cover with leaf-mould or other light soil. Plant as directed for hot-beds and cover with finely sifted earth, pressing down firmly. As beds in the open air dry out quickly, it is well to cover all with a thin layer of finely cut moss or long straw. The finer seeds may be sown in small circles, which can be covered at night until germination with an inverted pot. Open air sowings may be made from April to June, according to the weather.



The hardier annuals, and such as do not bear transplanting well, or those which are needed in large numbers, are usually sown where they are to remain, and the process is virtually the same as above. Some few plants, such as Poppies, Larkspurs, Bachelor's Buttons and Candytuft, may be sown in permanent places as early as the weather permits, and make much finer plants for their long season.

3. **Autumn Sowing.**—Most annuals ripen their seed towards the end of summer, and the seeds either lie dormant in the ground until spring or start in the fall, and remain inactive during the cold weather. As this is the course of nature, it is not to be wondered at that with Pansies, Larkspurs, Forget-me-nots, Collinsia, Gilia, Silene, Candytuft, and other hardy plants, autumn sowings produce finer colors and larger flowers the following season. Do not sow too early; nearly all sorts will need considerable protection in our climate—coarse litter and over all a bit of straw matting, by preference. Tenderer sorts should be transplanted into a cold frame and protected.

For the half-hardy and tender annuals, we recommend culture No. 1,

or, if sown late enough, No. 2; most of the hardy sorts may be grown by any of these methods.

The average cultivator can scarcely fail to be successful in growing any of the flowers hereafter listed if the general directions above given are carried out and some attention bestowed on the more detailed cultural instructions which are printed on every packet of seeds sent out by us. The best of seed if improperly sown will fail to grow, and again we remark do not bury the seeds too deep.

In the list of varieties we designate the hardy sorts by the letter *H.*; half-hardy sorts by *H.H.*; tender sorts by *T.*

LIST OF ANNUALS

Abronia, <i>H.</i>	Cornflower (centaurea Cyanus), <i>H.</i>	Nolana, <i>H.</i>
Ageratum, <i>H.</i>	Cuphea (Cigar plant), <i>H.H.</i>	Perilla, <i>H.H.</i>
Alonsoa, <i>H.</i>	Cyclanthera, <i>H.H.</i>	Petunia, <i>H.H.</i>
Alyssum, <i>H.</i>	Cypress Vine, <i>H.</i>	Phlox, <i>H.H.</i>
Amaranthus, <i>H.</i>	Datura, <i>H.</i>	Poppy, <i>H.</i>
Ammobium, <i>H.</i>	Dianthus, <i>H.</i>	Portulacca, <i>H.</i>
Anagallis, <i>H.H.</i>	Escholtzia, <i>H.</i>	Rhodanthe, <i>H.</i>
Antirrhinum, <i>H.</i>	Four o'Clock (Mirabilis) <i>H.</i> (Marvel of Peru.)	Salpiglossis, <i>H.H.</i>
Asperula, <i>H.</i>	Gaillardia, <i>H.</i>	Salvia, <i>H.</i>
Asters, <i>H.</i>	Gilia, <i>H.</i>	Sanvitalia, <i>H.</i>
Balloon Vine, <i>H.</i>	Godetia, <i>H.</i>	Saponaria, <i>H.</i>
Balsam, <i>H.</i>	Gomphrena, <i>H.</i>	Scabiosa, <i>H.</i>
Bartonia, <i>H.</i>	Gourds, <i>H.</i>	Schizanthus, <i>H.</i>
Bachelor's Button, <i>H.</i>	Helichrysum, <i>H.</i>	Sedum, <i>H.</i>
Begonia, <i>H.</i>	Ice Plant, <i>H.H.</i>	Sensitive Plant, <i>H.</i>
Brachycome, <i>H.H.</i>	Jacobæa, <i>H.</i>	Solanum, <i>H.</i>
Browalia, <i>H.H.</i>	Linaria, <i>H.</i>	Stocks, <i>H.H.</i>
Cacalia, <i>H.H.</i>	Linum, <i>H.</i>	Sunflower (Helianthus), <i>H.</i>
Calendrinia, <i>H.</i>	Lophospermum, <i>H.H.</i>	Sweet Peas, <i>H.</i>
Calendula, <i>H.</i>	Lupinus, <i>H.</i>	Sweet Sultan, <i>H.</i>
Calliposis, <i>H.</i>	Malva, <i>H.</i>	Virginia Stocks, <i>H.</i>
Callirhoe, <i>H.</i>	Marigold (Tagetes), <i>H.</i>	Xeranthemum, <i>H.H.</i>
Canary Bird Flower, <i>H.H.</i>	Mormordica (Balsam Apple), <i>H.H.</i>	Zinnia, <i>H.</i>
Candytuft, <i>H.</i>	Mignonette, <i>H.</i>	
Castor Oil Beans (Ricinus), <i>H.H.</i>	Nasturtium (Tropaeolum), <i>H.</i>	
Catchfly (Silene), <i>H.</i>	Nemophila, <i>H.</i>	
Chrysanthemum, <i>H.H.</i>	Nicotiana, <i>H.</i>	
Cockscomb, <i>H.H.</i>	Nigella, <i>H.</i>	
Collinsia, <i>H.</i>		
Convolvulus (Morning Glory), <i>H.</i>		



Pansy Plant



Sweet Pea

BIENNIALS AND PERENNIALS

Most hardy plants of this class should be sown in May or June, in good soil in a sheltered, semi-shaded situation, in the open air, and given good culture throughout the Summer. As winter approaches, care must be taken to give them sufficient protection, as they will be found somewhat less hardy than young fall-sown annuals. If potted and wintered in the cold frame or cellar and planted out in April or May following they give the best results.

List of Biennials and Perennials

Abobra, H.H.P.	Digitalis (Foxglove), H.P.	Mimulus, H.H.P.
Abutilon, T.P.	Dolichos, H.P.	Moonflower (Ipomea), H.H.P.
Acanthus, H.P.	Euphorbia, H.H.P.	Musa, H.H.P.
Aconitum, H.P.	Fervew, H.P.	Oxalis, H.H.P.
Ampelopsis, H.P.	Forget-me-not (Myosotis), H.P.	Pansy, H.P.
Anemone, H.P.	Freesia, H.H.P.	Pentstemon, H.H.P.
Aquilegia, (Columbine), H.P.	Fuschia, H.H.P.	Platycodon, H.P.
Aristolochia (Dutchman's Pipe), H.H.P.	Gentiana, H.P.	Polyanthus, H.P.
Auricula, H.P.	Geranium, H.H.P.	Poppies, H.P.
Bocconia, H.P.	Heliotrope, H.H.P.	Potentilla, H.P.
Campanula, H.P.	Hesperis (Sweet Rocket), H.P.	Primrose, H.H.P.
Canna, H.H.P.	Hollyhock, H.P.	Pyrethrum, H.P.
Carnation, H.H.P.	Honesty (Lunaria), H.P.	Rose, H.P.
Centaurea, H.H.P.	Hop, Japanese, H.P.	Rudbeckia, H.P.
Centrosema, H.P.	Lantana, H.H.P.	Salvia, H.H.P.
Clianthus, H.H.P.	Lemon Verbena, H.H.P.	Salvia, H.H.P.
Cobæa, H.H.P.	Lavatera, H.H.P.	Sweet William, H.H.P.
Coral Tree (Erythrina), H.H.P.	Linaria Cymb, H.P.	Thunbergia, H.H.P.
Cowslip, H.P.	Lobelia, H.H.P.	Verbena, H.H.P.
Dahlia, H.H.P.	Matricaria, H.H.P.	Vinca, H.H.P.
Daisy (Bellis), H.P.	Maurandia, H.H.P.	Viola, H.H.P.
Delphinium (Larkspur), H.P.	Mexican Primrose, (Oenothera), H.H.P.	Wallflower, H.H.P.

SEEDS OF GREEN-HOUSE PLANTS

These can be sown at any season of the year, but extra care should be given them, especially to such varieties as Begonias, Calceolaria, etc., as the seeds are very small and delicate. Sow the seeds in well-drained pans, choosing for soil a fine sandy leaf-mould, press it firmly, smooth the surface and sow the seed very evenly; cover with a light sprinkling of sand or not at all, lay a pane of glass over the pan, place it in a close frame and keep shaded. Most failures are due to mistakes in watering, which should be done very carefully, the seed pans should never be allowed to dry out, as one neglect will kill the seeds just starting, while on the other hand a slight excess of water will cause the seeds to rot. After the plants are up, remove the glass and prick into other pans with the same soil; great care should be taken not to pull the plants nor tear the roots in transplanting; lift with a trowel or stick and shift with good roots. Keep them shaded after transplanting until the



Cineraria Hybrida Grandiflora Maxima

young plants are well established in the new soil. As soon as the plants touch each other transplant again into small pots with similar soil, using the same precaution of shading at first. If troubled with green flies, fumigate occasionally with tobacco. Besides the above, most sorts have special likings in the way of soil, watering, etc., which must be consulted in growing them. Some of the most popular plants under this head are:

Begonias,
Calceolarias,
Cinerarias,

Cyclamen,
Gloxinias,
Impatiens Sultani.

Primulas,
Sinilax,
Torencias,

LAWN FERTILIZER

Lawn grass is a voracious feeder and will not thrive and hold its beautiful dark green color and velvety appearance unless it receives a sufficient supply of suitable food. Because so few appreciate this fact is the reason there are so many poor, rusty-looking lawns. Stable manure is unpleasant to handle, ill-looking and decidedly odorous, and is also full of waste material. It contains weed seeds, which are obnoxious, and it often takes years to eradicate the weeds, causing an unnecessary amount of labor. All these objections are obviated by the use of Simmer's Lawn Enricher, and if Simmers' TORONTO PARKS LAWN GRASS SEED is used there is no excuse for a bad lawn. If the lawn is in a fair condition it is only necessary to rake off the dead leaves and grass in the early Spring and scatter broadcast over its surface some of our "Lawn Enricher" with a little of our TORONTO PARKS LAWN GRASS SEED over the thin spots, and the work is done.

This fertilizer is non-odorous, dry, fine and easy to apply. Two or three applications during the season, just before a rain or watering; at the rate of one pound to each 100 square feet of grass keeps it in a flourishing condition and enables it to withstand the scorching sun. This fertilizer can also be used on all garden truck, flowers and house plants.

LOUDON'S RULES OF HORTICULTURE

1. Perform every operation in the proper season and in the best manner.
2. Complete every operation consecutively.
3. Never, if possible, perform one operation in such a manner as to render another necessary.
4. When called off from any operation, leave your work and tools in an orderly manner.
5. In leaving off work, make a temporary finish, and clean your tools and carry them to the tool-house.

6. Never do that in the garden or hothouses, which can be equally well done in the reserve ground or in the back sheds.

7. Never pass a weed or an insect without pulling it up or taking it off, unless time forbid.

8. In gathering a crop, take away the useless as well as the useful parts.

9. Let no plant ripen seeds, unless they are wanted for some purpose, useful or ornamental, and remove all parts which are in a state of decay.

A FEW RULES FOR THE SUCCESSFUL CULTIVATION OF SWEET PEAS

The plants should not be raised for two successive seasons on the same ground.

Sweet Peas should not be planted on the same ground after culinary peas.

Excessive manuring, with stable manure in the row immediately before sowing the seed is not desirable.

Ground intended for Sweet Peas if not left in good condition after taking the last crop will be better for manuring the previous Fall rather than at the Spring seeding.

The use of artificial fertilizers, bone meal, nitrate of soda, etc., can be made in Spring at the time of planting or soon after.

Thin sowing, by which is meant planting, the seeds from four to six inches apart, is conducive to vigor and strength of the plants which come later into bloom, but continue much longer than the plants from thick seeding.

Frequent stirring of the soil with hoe or cultivator in dry weather, thus producing a dust mulch, is preferable to artificial watering, unless irrigating facilities afford opportunities for a regular and abundant supply of water.

Do not allow any flower to go to seed else the plants will stop blooming.

	Seed Required for		Distance for Plants		Ready for Use from Seed in About
	100 Feet Row	One Acre	In Rows	Rows Apart	
Artichoke	1 oz.	6 oz.	2 ft.	3 to 4 ft	8 mos.
Asparagus	2½ "	4 lbs.	1 to 2 ft.	"	3 to 4 years.
Beans, Bush . . .	1 qt.	1½ bus.	6 in.	2 ft.	45 to 65 dys.
" Pole	1 pt.	10 to 12 qts.	3 ft.	4 "	65 to 90 "
Beets, Table . . .	2 oz.	5 lbs.	4 in.	1 to 1½ ft	60 to 75 "
" Mangel . . .	1 oz.	5 "	8 "	2 to 2½ ft	150 "
Broccoli	½ "	2 oz.	2 ft.	2½ ft.	120 "
Brussels Sprout .	½ "	2 "	2 "	2 "	100 to 120 "
Cabbage, Early . .	½ "	6 "	18 in.	2½ "	" "
" Late	½ "	6 "	2½ ft.	3 "	125 to 180 "
Carrot	1 "	3 to 4 lbs.	4 in.	1½ to 2 ft.	75 to 120 "
Cauliflower . . .	½ "	½ lb.	2 ft.	2½ ft.	100 to 135 "
Celery	½ "	2 oz.	6 in.	3 to 4 ft.	125 to 150 "
Corn, Salad . . .	3 "	"	1 "	12-18 in	65 "
" Sweet	½ pt to 100 hills	8 qts.	3 ft.	4 ft.	65 to 100 "
Cress	½ oz.	2 to 3 lbs.	1 in.	1 "	30 "
Cucumber	1 "	2 lb.	4 ft.	4 "	60 to 85 "
Egg Plant	½ "	4 oz.	2½ ft.	3 "	150 to 160 "
Endive	1 "	4 lb.	1 ft.	1½ "	50 to 75 "
Kale	½ "	2 oz.	2 ft.	2½ "	100 to 120 "
Kohl Rabi	½ "	4 lb.	6 in.	1½ "	75 "
Leek	1 "	4 "	6 "	"	120 to 160 "
Lettuce	1 "	3 "	1 ft.	"	65 to 100 "
Melons	½ "	2 to 3 lbs.	4 ft.	5 ft.	115 to 140 "
" Water	1 "	4 lb.	8 "	8 "	120 to 140 "
Okra	2 "	10 "	1½ "	2 "	90 to 125 "
Onion	1 "	5 to 6 lbs.	3 in.	1 "	135 to 150 "
Parsley	½ "	3 to 5 "	4 "	1½ "	100 "
Parsnip	½ "	3 to 5 "	6 "	"	125 to 150 "
Peas	1 to 2 pts.	2 bus.	2 "	2 to 4 ft.	50 to 75 "
Pepper	½ oz.	½ lb.	2 ft.	2 ft.	140 to 150 "
Potato, Cut	"	7 to 10 bus.	1 ft.	2½ "	80 to 140 "
Pumpkin	1 pkt.	4 lb.	8 ft.	8 "	100 to 120 "
Radish	1 oz.	8 to 10 lbs.	2 to 4 in.	1½ "	20 to 50 "
Salsify	1 "	8 lbs.	6 in.	4 "	125 to 150 "
Spinach	1 "	10 "	4 "	15 in.	30 to 60 "
Squash, Bush . . .	"	4 "	3 ft.	4 ft.	60 to 75 "
" Late	"	4 "	7 "	8 "	100 to 125 "
Tomato	"	2 to 4 ozs.	4 "	4 "	" "
Turnip	½ oz.	2 lbs.	6 in.	1 "	60 to 75 "

If the ground lacks humus or vegetable matter, it may be economically supplied by plowing under growing crops.

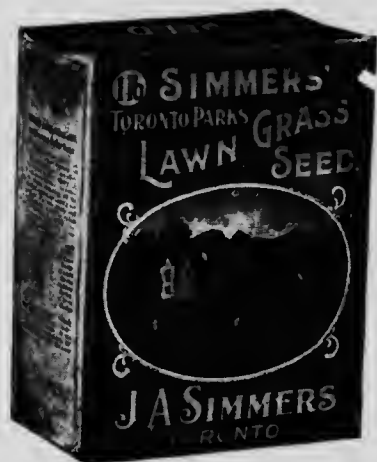
Pure Animal Fertilizers, unlike the chemical products, have a most beneficial effect upon the mechanical condition of the soil. They add humus and tend to make the ground loose and friable. They restore to the soil those elements which were taken from it, and in the purest state the smallest compass, the most available form, and free from weed seeds or other trouble breeders.

SIMMER'S TORONTO PARK LAWN GRASS SEED

A Beautiful Lawn, with its close velvety turf is a most essential feature in the adornment of all suburban homes, without it the finest flowering plants and bedding seem insignificant, while with it handsome grounds are assured, even with no other adornment. Second only to that prime requisite, Good Seed, is time of sowing, quantity to use, preparation of soil, careful watering, etc.

Our seed, which we know to be as pure as can be found, anywhere, is of the best varieties, best suited for even and permanent growth; it is carefully cleaned, and as free as it is possible to make them from weeds.

OUR TORONTO PARKS LAWN GRASS SEED. Prepared for use in the Toronto Parks, named by us and sold at our stores for many years with very general satisfaction. It will produce an even, dense growth of permanent sward as early in the season as it is possible to get it. This Mixture contains no annual grasses for making quick show to the detriment of a good lawn, but only those of lasting value and hardness, which when once established needs no reseedling for years.



SIMMERS' SHADY NOOK GRASS MIXTURE



Usually it is quite difficult to obtain a satisfactory growth of grass under trees and in shady places; for sowing in such places we recommend the use of this special mixture.

It will quickly produce an abundant and even growth of beautiful green grass. The grasses used in making this special mixture are only those that are well adapted for growing in shade. It has been successfully used on some large operations where a green sward was desired on land partially shaded by old trees.

NAMES OF VEGETABLES IN FRENCH AND GERMAN LANGUAGE

English	French	German	English	French	German
Artichoke	Artichaut	Artichoke	Leek	Poireau	Lauch or Porree
Asparagus	Asperge	Spargel	Lettuce	Laitue	Zwiebel
Bean, Broad	Fève de Marais	Grosse Bohne and Garten Bohne	Melon, Musk Watermelon	Melon	Gartensalat and Lattich
Bean, Kidney	Haricot	Türckische Bohne	Mint, Common	Melon d'Eau	Melone
Beet	Betterave	Rothé Ruebe	Mushroom	Menthe des Jardins	Wassermelone
Borecole	Chou Vert, or Non Pommé	Gruener Kohl			Muenze
Broccoli	Broccoli and Chaux Brocolis	Italienischer Kohl		Champignon Comestible	Essbare Blatter-schwamme
Brussels Sprouts	Chou de Bruxelles	Sprossen Kohl	Mustard	Moutards	Senf
Cabbage	Chou Pommé Cabus	Kopfkohl	Onion	Oignon	Zwiebel
Cardoon	Cardon	Kardon	Orach	Arroche	Meldekraut
Carrot	Carotte	Mohre or Gelbe Rube	Parsley	Persil	Petersilie
Caniflower	Chon-fluer	Blumen Kohl	Pea	Ponais	Pastinake
Celery	Celéri	Scleric	Pepper	Pois	Erbse
Chickory or Succory	Chicory Sauvage	Gemeine Cichorie	Potato	Piment	Spanischer Pfeffer
Cress, Garden	Cresson	Gemeine Garten Kresse	Pumpkin or Gourd	Pomme de Terre	Kartoffel
" Water	Cresson de Fontaine	Brunnen Kresse	Radish	Courge	Kuerbis
" Winter	Cresson de terre	Winter Kresse	Rape	Radis and Rave	Rettig and Radies
Cucumber	Concombre	Gurke	Rhubarb	Navette	Raps
Egg-Plant	Melongene, Aubergine	Tollapfel	Sage	Rhubarbe	Rhabarber
Endive	Chicore des Jardines, Endive	Eierpflanze	Salsify	Sauge	Salbey
Garlic	Ail	Endivie	Savoy (Cabbage)	Salsifs	Haferwuzel and Bocksbart
Horse-Radish	Grand Ralfort	Knoblauch Meerrettig	Sea-Kale	Chou de Milan or Pomme fraise	Wirsing or Hertz-kohl
Kohl-Rabi or Turnip Cabbage	Chou Rave	Kohl-rabi	Spinach	Chour Marin and Crambe	Meerkohl
			Thyme	Epinaud	Spinat
			Tomato	Thym	Thymian
			Turnip	Tomate	Liebesapfel
				Navet	Ruebe



FALL BULBS

FOR WINTER AND SPRING BLOOMING

No garden should be without a bed of bulbs. Beginning so early in the season, weeks and weeks before the blooming period of the earliest annuals—their brilliant and beautiful flowers are enjoyed more than those of the summer. By their use it is an easy matter to so extend the season of flowers that it appears with the disappearance of snow, or before and lasts until the coming of cold and bitter fall weather.

Bulbous Flowering Plants produces remarkably beautiful flowers, unsurpassed in variety by any other plants in the floral kingdom, and, besides, many of them are delightfully fragrant. There is a peculiar charm in growing bulbous plants; they comprise such an endless variety in habit, form, size, color, and are adaptable for so many purposes; many of them flower equally well under either garden or house culture. Among other merits of bulbs is the certainty and perfection with which they bloom and their ease of culture.

We secure from Europe bulbs and plants the most carefully assorted. Such bulbs and plants must be the best; those which under proper treatment will produce perfect flowers. This quality recommends itself to the amateur, success the more certain.

Write for a copy of Bulb Catalogue published about September 1st.

We carry a full line of Poultry Supplies and Fixtures, Incubators and Brooders.

TO PREDICT FROST

When in fall or spring the sunshine is very hot and the shade very cold and the shadows very deep, look out for the frost, because the air is dry and radiation little checked.

TO PROTECT PLANTS FROM LIGHT FROSTS

Make a smudge in the garden or vineyard at night when the frost is expected. Rubbish or litter and tar make the best smudge. Syringe the plants thoroughly at nightfall. Vegetables liable to injury by slight frosts are Beans, Corn, Cucumber, Melons, Pepper, Pumpkin, Squash, Tomato. House plants will stand about ten degrees more cold if well wrapped in stout paper.

TO KEEP FLOWER POTS FREE FROM GREEN MOSS

Once a year when cleaned soak them in Ammoniacal Carbonate of Copper Solution. Take in the proportion of 1 oz. Carbonate of Copper and $\frac{1}{2}$ to 1 qt. Ammonia (enough to dissolve it). Keep corked. When using dilute with 9 gals. of water.

TO PREVENT SEDIMENT OR SCALE IN BOILERS

1. Use clean water containing little lime.
2. Blow it out often.
3. Put slippery-elm bark in the boiler tank or else use potato peelings, flax-seed, oak-bark, spent tan or coarse sawdust.
4. Put in, with the feed water or otherwise, $\frac{1}{2}$ to 1 pint in a week of good molasses (not a chemical syrup).

TREE SPRAYING

We carry the best ready-to-use remedies for San Jose scale and other orchard pests. Full directions for use printed on packages.

Crude Oil, for use as an insecticide, should have a specific gravity of 43° or over at a temperature of 60° Fahr. The best time to spray is just when the buds are beginning to open.

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