

Strawberry Culture
in
Kansas.

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Outline of Thesis.

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Preparation of Soil.

Selection of plants.

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"b" Kinds of varieties that are most successful.

"c" Varieties that are the most successful on the different kinds of soil.

Taking up the plants.

Setting out the plants.

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As found on most farms.

As should ^{be} on the farms.

The advantage of a good strawberry bed on a farm.

The best location for strawberries is an East slope with soil of a strong loam with a cool well drained subsoil, but they will flourish on a great variety of soils. They should never be planted on dry sand, chalk, or dry gravel, but in some instances they will flourish on a gravel which has a mixture of clay.

The soil should be prepared as for other fruit, by extra deep cultivation. It is best to plow deep and subsoil with subsoiling plow. Then it should be thoroughly pulverized, leveled and rolled. The land should be perfectly clean and in good condition. It is best to put on a heavy coat of manure, which should be thoroughly mixed with soil before the plants are put out.

The time for setting out plants in Kansas is either in April, or September, but they may be put out any time during the summer months under favorable conditions. The month of April is the best, unless the plants are put out early enough in September to enable them to become established in the soil before winter, otherwise they are liable to be lifted out of the soil by the frost.

There are many methods for planting strawberries; some do well in hills, some

in wide matted rows, and others do best in narrow matted rows.

The different methods must be determined by the kind of soil, the place to be planted and scarcity of the land.

For a small garden lot they are mostly planted in hills, or narrow beds just wide enough to allow the berries to be picked clean, by picking from each side. For a farmer's garden I prefer the plants set in rows three feet and a half, or four feet apart, and the plants eighteen inches apart in the rows, because when planted in this style they can never be cultivated with a horse and five tooth cultivator and thus save a great amount of hoeing.

The manner of laying out the plot depends on the method of planting, if they are to be put in a small garden I would lay out the rows with a garden line and dig the holes for the plants with a hoe, or garden trowel. This is a very good method even for field work, only it is slow.

A disk potato furrower is an excellent tool for making the ditch, which can be used instead of making separate holes for each plant, but the furrows must be made only

as fast as the plants are put out. The distances apart the plants are to be, can be marked by a piece of iron fastened on the wheel of a wheelbarrow. The markers are fastened on the tires of the wheel just as far apart as the plants are desired to be in the row, by the use of this implement the distances are quickly marked.

We are now ready for the plants, but great care must be exercised in selecting the kinds of plants, in handling and setting them.

The plants that are to be set out should always be well rooted, from runners of strong two-year-old plants.

The varieties will depend on the market, locality, the kind of soil, and the fertilization.

Some varieties will stand much more cold weather than others, because the fruit stems are shorter and they are protected by the foliage; an example of this will be found in the crescent.

Great care must be exercised in selecting plants that will fertilize each other, because some varieties have perfect flowers and some have imperfect, the latter are called staminate, or pistillate according

To the missing parts.

It is at this point that a great many farmers make a mistake when selecting their plants, they often select plants that have imperfect flowers, and they will not produce fruit, if they are not placed where they can be fertilized by those of the other sex, or by perfect flowers.

If the imperfect plants are fertilized by perfect ones, every fourth row, should have perfect flowers. The reason why plants with perfect flowers are not grown altogether, is because the fruit is not so good in quality, as many of the imperfect varieties.

Where berries are raised to supply a large city market, only a few varieties of the hardiest and largest producers are raised, as for example, the Sterling, Downing, Cumberland, Crescent, and Wilson.

Large growers do not raise fancy varieties, because they grow berries to supply the mass of the people who are not able to pay high prices for fine berries.

If growers desire a good trade of the higher classes, or if they wish to put

something better on the market than the average it pays to put out those kinds, which produce the largest and handsomest berries even if they do not give such a heavy yield.

He should have a number of different varieties, because customers get tired of the same thing and they like a change.

The berries should be the largest and best. They should have a fine color as well as flavor, as for example the Gandy which is a large scarlet berry with bright green sepals around the fruit stem, the green contrasting so finely with the brilliant scarlet that it makes a beautiful colored picture, which pleases the eye of customers. But they get tired even of this. Then give them a change, take the Haverland. To some its fine apple flavor is very delightful. When they get tired of this a change as from sweet to tart will be found satisfactory.

Those varieties which are the most profitable are the Buback No. 5, Captain Jack, Gandy, Haverland, Shusters Gem, and Warfield No. 2.

The Bubach No. 5 has hardy plants gives a heavy yield of large showy berries which are firm but not of fine flavor. It has a long bearing season.

Leaptain Jack has a moderately vigorous plant. The fruit is produced in abundance, it is below the medium size, but noted for its firmness.

Gandy is noted for its strong and vigorous growth. It is late in ripening, and has large berries, but the season is very short.

Haverland is quite vigorous, injured but little by the rust, the berries are large, deep red color, moderately firm, of good flavor and fairly productive.

Shuster's Gem has vigorous plants, very large berries, of bright ^{red} color and good flavor, attractive in appearance and has a long season, but berries are too soft to ship.

Warfield No. 2. has remarkably vigorous plants, berries of good size, deep red color, flesh moderately firm, of rather sour and not especially fine flavor, but it is one of the most productive and the season is long.

In order to obtain good roots on the runners the soil between the rows and around the plants should be kept perfectly loose, so the roots will set for the young plants, that are sent from the runners ^{and} will quickly go into the soil, and form a large number of fibrous roots.

If the plants are to be shipped some distance they should be dug up with a garden fork, or a trowel so the fibrous roots will not be injured; before packing the dry leaves should be pulled off. The roots should be then thoroughly washed and tied in a fair sized bundle, around this should be wrapped sphagnum moss to prevent evaporation; on the out side of this a piece of manilla paper on which the address can be written. The tops should be left exposed and the plants always sent by mail or express.

If the plants are only to be removed from some neighbor's patch they may be dug up carefully and the plants put at once into a pail partly filled with water, or packed into a basket and the roots well protected with some moist material

as wet hay. I think when the plants are taken up in this way, or when they are shipped the roots should always be well puddled before the plants are set out.

The runner sets are sometimes allowed to root in pots, when this is done they can be removed in the pots to the place where they are to be planted, and then the pots removed and the plants put in the ground with the soil around them.

Another very good method is by the use of tin tubes, because the fine fibrous roots are not injured, and a portion of the native soil is left around them, the same as with the pots. The last two methods are both excellent, and can be used with success during any portion of the summer.

The roots should be spread as near as possible in their natural positions, and the moist mellow soil firmly pressed down around them, the crown must not be covered with soil, or placed so deep in the ground that it will be covered the first time it rains.

One reason why farmers hate to work in the garden is, because they do not plan

Their garden work as they do their field work. They seem to think that every thing in the garden should be cultivated with a hoe; but it would be much better, and ~~it~~ could be cultivated much quicker if he would plant every thing in rows wide enough apart to be cultivated with a five toothed cultivator, if this is done little hoeing is needed.

The cultivation should be shallow, about an inch, or an inch and a half deep and the cultivator can be run with in about six inches of the plants, the rest of the row must be hoed, but this should be done very shallow just deep enough to kill the weeds, and form a loose mulch of soil over the surface, this mulch will prevent evaporation from the under layer of soil which is around the roots, ~~from~~ ^{and consequently} drying out.

Strawberry plants should always be mulched in the winter, and there are many different materials which are very good for mulching, dry leaves are the best when they can be obtained, but in Kansas straw is used almost entirely. It is mostly put on the patch from three to five inches thick. It is mostly put on just as taken

from the stack, but the best way is to chop it into pieces about two inches long, this should be put on the plants only, and should be put on about one and a half inches deep, on top of this should be put a layer of long straw about two inches thick, and this should be put between the rows as well as the rows.

The mulching should be put on the bed as soon as the ground freezes in the fall, and left there in the spring till there is no danger of freezing.

If course straw only is used it should all be taken off as soon as all danger of freezing is past, but if cut straw was used ~~it~~ ^{and} it should be left on, the plants allowed to come up through it. This will form a good mulch and prevent the moisture from evaporating from the plant row and will also keep the soil from covering the fruit when it ripens.

The space between the rows should be well cultivated till the berries begin to ripen, and then the straw should be put back between the rows, this keeps the surface from drying out, and the berries which grow near the edge from getting

covered with dirt. After the fruit is picked the straw should again be taken off and the patch cultivated till about the first of September.

It is the practice of many growers to not take the straw off between the rows till after the berries are picked.

Large growers often ship their berries some distance and they must be picked before they are quite ripe, thus a part of the flavor is lost, and they are lacking in the freshness which berries have that are allowed to ripen on the vines. The berries are picked altogether large and small and tumbled into the boxes in a hurried and careless manner.

Even though the market is loaded with these kind of berries there will always be a good market for berries raised by careful growers.

This kind of a grower will raise only the best flavored, largest, and handomest berries, they are sorted as they are picked the best put in one box the small ones in another and the spoilt ones thrown away. He gives good measure places the berries in the boxes in an artistic manner which at once attracts the

attention of the purchasers. He always receives the highest prices for his fruit, and always finds a good sale, and his customers are of the higher classes.

We meet few farmers who will say it pays them to raise strawberries; their plea is that they must be cultivated just when other crops need it the worst. They say they can better afford to buy them than to bother with them, but where will you find a farmer that will pay the cash for just all the berries he wants for himself and family.

Farmers are most always in debt, and have interest money to pay, which continually keeps them back, and when the berries are ripe, the money is always very scarce and much needed for other things which he cannot get along without; he either does without the berries altogether, or only buys a few.

As a general thing what a farmer does not raise he does not have, but even if he does buy berries he cannot always have them just when he wants them, and when he does get them they are

never so fresh, as when just picked from the garden bed.

One of the excuses which a farmer has for not buying berries is that he has a patch of his own, but such a patch, it is grown up with weeds and grass, the varieties are nearly always inferior ones obtained from a neighbor, or they are imperfect varieties and are not provided with the other sex, or perfect varieties so they can be fertilized, but the greatest trouble is in the care they receive.

There are no farmers who could not afford to enrich a small patch of land, give it a thorough plowing and pulverize the ground to the desirable degree, obtain the best plants, and put them out in the best possible manner. If they are put in so they can be cultivated he will not miss the time he takes to cultivate them. If they are put on a well drained piece of land he can cultivate and hoe them after a rain, before the field will be dry enough to cultivate. If it does not rain often enough to allow the necessary cultivation after the rains; stop work in the field an hour early Saturday evenings and care for the berry patch,

It will be a change of work and will rest you and will also be profitable.

Most of our Kansas farmers have wind mills and large tanks and these persons can put their strawberry patch near by and irrigate it when the dry weather begins to injure them. This will take only a short time in the evening and the extra growth of berries will well pay for the trouble.

Farmers are not supposed to raise garden products for sale, still if the yield is large you can have an abundance for your family and dispose of the over supply for a paying price and this adds very materially to the income of the farm and especially to the supply of ready money.