

THE FARMER'S  
SMALL FRUIT PLANTATION

by

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### THE FARMER'S SMALL FRUIT PLANTATION.

In treating this subject, it is the object to speak not of commercial plantings, but of the plantings now made on hundreds of American farms, and which should be made on hundreds more, which are primarily for the owners private use and enjoyment.

For this reason it will be unnecessary, in fact would be inappropriate, to treat in detail of the history or botany of the plants to be considered. The average man who grows a strawberry on a farm today cares much more for the flavor and size of that berry and the conditions of soil and culture which will produce perfection in these lines than he does for the study of the exact leaf characteristics that will determine the botanical relation of one species to another. He is interested not in the past, in the history of the development, but in the present and the future development of the plant.

For this reason we will begin ~~not~~ with the soil and climatic conditions required for small fruit culture on a Kansas farm today. It may be well to state the general classes of plants of which we intend to speak. Besides the so-called bush fruits, which are composed of the Brambles - including Red and Black Raspberries, Blackberries and Dewberries, and the Groselles - including Gooseberries and Currents -, it is the intention to treat also of the strawberry and Grape.

This classification will then include all principal fruits with exception of tree fruits.

These will be treated in logical order but will nearly



simulate the succession of fruit throughout the season.

The strawberry then will come first. The strawberry is an American product, it is universally liked and adapts itself to a wider range of latitude and to greater extremes in environment than any other of the cultivated fruits. Strawberries require for best development, however, a rather sandy loam. A light warm quick soil even though lacking in plant food is better than a heavier and richer one. The addition of fertilizers will make such a light soil nearly perfect. A southern or eastern slope is best if the desire is to secure early berries.

The preparation of the soil for strawberries should properly begin at least one year before the plants are set. A cultivated crop should have been on the ground rather than sod, not only for the condition of the soil but also because the sod land is likely to be infested with white grubs and wire worms, which are especially destructive to strawberries. The soil of whatever nature, should be well and deeply plowed and the manure well turned under. It should be fined to form a good seed bed.

The fertilizer used, is for first choice barnyard manure well worked in. If this is not available, highly nitrogenous fertilizers such as nitrate of soda at one hundred pounds per acre may be used with good results.

The subject of fall or spring planting is a debatable one, but in Kansas the spring planting is usually most successful. If set in fall the plants require more careful handling when set and afterwards. One precaution which must always be taken in setting,



is that there be no soil on the crown of the plant. Hand setting with careful spreading of the roots may be practised in a small plantation with profit. Where a new bed is being set from an old one plants are taken up with a spade with quantity of soil and transferred to the new bed. Where no soil is left about the roots the success depends much on spreading roots and the firming of soil about them.

Two systems of planting are practiced; the hill and matted row planting. The matted row is perhaps the most satisfactory. In this system the plants are set fifteen inches apart in rows three and a half to four feet apart. This allows of a matted row eighteen inches wide with twenty four to thirty inches between the rows.

Strawberries require clean and shallow cultivation. A three inch mulch of loose soil is invaluable in preserving moisture and by this means the evil effects of droughts are counteracted. A mulch also acts as a conserver of moisture and a discourager of weed growth by smothering the young seedling.

The mulch also acts as protection from cold and in cold regions is valuable because it retards growth in early spring. Straw and strawy manure from the horse stable are most used in this section of the country. The purpose of the mulch will determine the time of its application. Where the object is to prevent the frequent thawing and freezing, as in this section, the mulch is applied after the ground freezes. It may be pulled back from the plants in early spring but left between the rows, or it may be entirely removed and thorough cultivation given, then the mulch replaced to protect the berries when they ripen.



The United States Government report of 1904 gives for this locality the following list of strawberries:

Bederwood,  
Bubach No. 5,  
Crescent,  
Cumberland,  
Downing,  
Goudy,  
Haverland,  
Michel's Early,  
Miner,  
Parker Earle,  
Sharpless,  
Warfield,  
Wilson,

The Kansas Station reports the following:

Bubach,  
Warfield,  
Crescent,  
Haverland,  
Bederwood,  
North,  
Parker Earle,  
Goudy,  
Senator Dunlap,  
Arana,  
Splendid,

and if everything else fails, plant Clyde.



The number of plants set depends so much on the number of berries to be used by the particular family in question that it is hard to determine. It is well to keep in mind in planting however that the average yield of each plant set is about one quart and that by planting a number of varieties the season may be extended to six weeks. These facts should be the basis of calculation.

### Raspberry.

There are several species of the raspberry in common cultivation. Of these, the one most likely to be used in the ordinary farm planting is the black cap raspberry which has been developed from the wild species. Judging from the location in which we find them wild it would seem that the raspberry would flourish best in a deep rich leaf mould and while in cultivation they will grow in almost any soil except a still clay or a soil in which water stands about the roots, the best development is found on deep well drained loam with clayey tendency. The berries grown on upland, while not usually as large as in damper valleys, have a better flavor. A cool northern exposure where the hot sun will do least damage is to be preferred though not necessary. To know what elements are lacking in a particular soil requires a careful study of that soil and the condition of the vegetation growing upon it. What to apply when this is determined is a simple matter. Barnyard manure is usually the cheapest and most available form in which nitrogen may be added although commercial fertilizers may be used. The potash and phosphate are best applied



in commercial fertilizers, as sulphate of potash and any phosphate containing sufficient soluble phosphoric acid. The humus may be added to the soil by means of the manure or by plowing under green crops before the fruit is planted.

Black raspberries are propagated almost entirely from tips. These are covered usually in August and plants transplanted the following spring. Young plantations produce better, more vigorous plants than older ones. As has been said, the plants are set in the early spring. A furrow is plowed and plants are set in the bottom, the furrow is then gradually filled as plants grow thus giving them a deep rooting. At time of setting the plant should be closely cut back so that new growth may be made. As any fruit which might be produced the first year would tend to rob the plant of its vigor, it is really no disadvantage to cut back until it will bear none.

There are two systems of setting, the row system in which the rows are six feet apart and plants three feet in the rows. This method produces the largest yields. The other system is that of hills five or six feet each way which is less trouble to cultivate and produces a finer quality of fruit.

A thorough cultivation is necessary with raspberries as with all other fruits. A cultivator of almost any style, so it leaves the ground in good condition, is the necessary implement.

The question of pruning is an important one and requires attention at several seasons of the year. The young canes should be kept clipped back at eighteen to twenty four inches so as to cause them to develop laterals and form a well shaped bush. From three to



five canes to a plant is plenty. As soon as the berries are off, the old canes should be cut out and burned, to remove danger of fungus diseases and to give the young shoots a chance to develop properly.

The best varieties of raspberries for home plantation are:

Kansas,

Cumberland,

Nemaha,

and where a long ripening season is desired, the everbearing sorts.

The number of plants set depends on conditions but the average production of one plant during a season of three or four weeks is about two and a half quarts and this should be kept in mind when determining the size of the plantation.

#### Red Raspberry.

While the red raspberry has been in cultivation much longer than the black cap, it is not nearly so common in our farm plantings today. This is probably because it is much less hardy as to sun, wind and cold. It requires the same soil and culture as the black cap except that it is propagated from suckers instead of tips. Of the varieties, the Thwack is perhaps most hardy and hence the best one to grow for home use. It is similar to the black cap in productivity when grown successfully.

#### Blackberries.

Blackberries require a soil rather thin than over rich. A



clay soil is best. Soils that have been heavily manured and hence contain much nitrogen are liable to produce an excess of cane growth which does not ripen well and has few fruit buds. Plants of the blackberry are set much as raspberries but a little farther apart for most sorts.

The preservation of moisture is the most important point in the culture, as the berries ripen in the most trying season in our climate. Mulching may be used on light soils but clean culture is usually best. Pruning is much the same as in the raspberry but it is even more important as blackberries usually make a stronger growth. Blackberries are usually propagated by suckers. These suckers are very troublesome and must be treated as weeds in a fruiting bed.

Blackberries are in common practice in the west divided into two classes: the early harvest group and the late stiff cane or Snyder group. The first is a low growing sort, with medium sized berry and is ten days to two weeks earlier than the Snyder group, which has high stiff cane and larger, juicier berries. The sorts which give the names to the groups are perhaps the most satisfactory of the types, that is the Early Harvest and the Snyder. The Kenoyer is a new early one which promises well and is of better quality than most of the Early Harvest class.

The number of blackberries planted should be based on the scale of two to five quarts per bush during a season of four or five weeks.

#### Dewberry.

Dewberries are a fruit not much grown generally but should



be found much more frequently in the home garden since it is only here that it can reach perfection. The dewberry differs from the blackberry in its method of propagation by tips and its drooping trailing habit of growth and for this reason requires different care.

May be grown on trellis or tied to stakes but most successful method is to grow over ridges of earth five or six feet apart.

The dewberry is a strong grower and requires careful clipping back to keep in bounds. Much the same pruning is required as in others of this genus.

#### Gooseberries.

Gooseberries are comparatively little grown, and though their desirable qualities are not as numerous as those of the other bush fruits, they deserve better recognition than they now have. Gooseberries like a deep, cool, moist, rich soil especially in our climate, for the summers are really too hot and dry for their best growth. A cool north slope or partial shade is advisable. The gooseberry is perfectly hardy as regards cold.

The gooseberry is a heavy feeder and requires plenty of manuring. A top dressing of cow manure in the fall, followed by an application of wood ashes in the spring is essential to best success. Gooseberries should usually be planted in the fall. Because of early dropping of leaves may be set as early as September. Rows six feet apart and plants four feet in the row so as to cultivate both ways is best. Plants are secured in various ways, by tips,



suckers and mound layers.

For home use the suckers which spring up about the plant may be used.

The culture should tend to keep the soil cool and moist. This may be done by thorough surface cultivation or by mulching. The pruning of the gooseberry, while not so particular a task as the pruning of many small fruits is yet very necessary. Left to itself the bush becomes a tangled thicket on which the fruit is small and difficult to pick. It is essential that thinning should take place. The most and best berries are borne on wood from one to three years old, and the pruning should be in accordance with this fact.

For home use the berries may be gathered either green or ripe. The varieties most used are Houghton and Downing, of which the latter is most productive. The western wild gooseberry is Gracile. The quantity of fruit is large, five to eight quarts to the bush during the season of three weeks for green ones and longer if ripe ones are used.

#### Currants.

Another fruit which is but little grown and appreciated in America, although one of the oldest of small fruits, is the currant. Like the gooseberry, it needs a cooler climate than we usually have in Kansas and requires some protection from sun and winds. Requires almost same condition of soil, manure, culture and pruning as the gooseberry. Usually ripened on the bushes for home use. Of the varieties, the Red Dutch is the hardiest in our climate with Ver-



sailles a close second. Of the white varieties the White Dutch and White Grape are good ones. The black currants have a peculiar flavor that most people do not like. Currants are quite productive - six or seven quarts per bush in a season of two weeks.

### Grapes.

Grapes are one of the most satisfactory fruits grown for home use. By planting several varieties, fresh fruit may be had for fully two months. Grapes may be grown in almost any soil and unless the soil is very thin require but little manuring of any kind. If the ground is kept free from weeds and well cultivated, the grape will stand the driest season with but little damage.

Grapes are usually set in rows eight feet apart and eight feet in row. The trimming, training and trellising are the important features of grape culture. Many styles of trellis have been invented and each has its hearty advocates and each of course has its advantages. What is known as the fan system is perhaps the simplest and cheapest for use in the home garden. It is a three wire system, the wires being placed on the posts at eighteen inches, three feet, and four feet six inches from the ground. The fruit is a little more difficult to cut on this form of trellis than some others but on the other hand it is less often injured by birds than any other. For varieties that require winter protection this is the best form because the young shoots are easily laid down. The fan trellis also has the vines best protected from sun and wind which is an important point in a



Kansas planting.

"The one general principle to be kept in mind in pruning for each and every system is that the fruit is borne on shoots which grow from the wood of the previous years growth. That is to say, the wood grown in 1905 bears the buds from which will spring the shoots that will bear the fruit and form the new wood in 1906. In pruning then the one object is to secure a well formed vine, carrying sufficient young wood to bear such a crop of fruit as the vines seem able to carry." Pruning is in this as in all other plants a matter which requires practical judgment. Care should be taken to keep the vine within the bounds of the trellis and the variety and the strength of the individual vine should be taken into consideration.

The fan system is what is known as a low renewal system, that is the plant is cut back quite low to the ground and four or five new shoots allowed to grow from there. These are then cut back to three or four feet during the fall or winter.

The varieties of grapes are so numerous that it would be hard to decide on any definite list. The following are some of the best for home use: Of the black ones

Concord,

Worden,

Moore's Early

Reds.

Drocutamber

Catawba.

Whites.

Elvira,

Pearl Faith,



Of the half hardy and tender sorts the Brilliant and Delaware of the Reds, and the Lady Washington and Drummond of the Whites are the best. The number set should be decided on the basis of ten pounds to the vine as an average with twenty five pounds as a maximum.

The fruits named above will furnish a succession of fruit almost throughout the season and with the addition of the tree fruits will make it possible to have fresh fruit for nearly twelve months of the year. It is hardly necessary to enlarge upon the advantage to the health and happiness of the farmer and his family that such a supply will contribute. And we can only say that if more people realized the pleasure to be derived from a perfectly grown, perfectly ripened fruit fresh gathered from the garden, more small fruit plantations would be set, if not for commercial purposes then for the pleasure to be derived from them.