

others; the only difference is, you know sandy soil needs more fertilizing than soil that has a heavy clay subsoil, and one of our most successful orchards is planted on a red clay soil, very red clay, just like the Superior red clay. Cherries will do well on clay if climatic conditions are favorable and given careful cultivation.

Mr. Buehler: Do you set out one or two year old trees.

Mr. Bingham: I think one can be successful using trees of either age. The two year old trees are larger; the one year takes a little more training than the two year old tree.

SMALL FRUITS.

RASPBERRIES, BLACKBERRIES, CURRANTS AND GOOSEBERRIES.

IRVING SMITH, Ashland, Wis.

The matter of cane and bush fruits for home use, should be given more attention than is usually given it. The amount of room required and labor given are very well repaid in the additional variety and quantity of fruit for the home table both summer and winter. Raspberries follow closely the strawberry, keeping up a continual supply of fresh table fruit. Gooseberries and currants come in turn during the raspberry season; and while they are not so much used in the fresh condition, a dish of well ripened white currants, sugared a half hour before eaten make a very nice evening fruit for any one who likes a mild acid fruit. As for gooseberries, I think they would be used much more in the various forms of cooked fruit if you would just forget that your grandmother used to make green gooseberry pie, and let them get ripe before picking. There is as much difference between green and ripe gooseberries as between green and ripe peaches. Blackberries follow in close succession with little or no break between them and the raspberry.

There are a number of good varieties to choose from, in Raspberries, which must of course be governed to a certain extent by local conditions. Cuthbert and Loudon are very fine red sueker varieties. The Cuthbert being the strongest grower with us, also

continues longer in season. Both are very fine. Columbian is the best of the purplish colored sorts and propagates from the tips of the canes like the black caps. If you have room for only one red variety let it be Columbian. Gregg is, in the writer's opinion, by far the best black cap. A row 100 ft. long of each variety named will give you an ample supply of fruit for any ordinary family, and also enough to give some to your friends.

Set the Loudon and Cuthbert about 3 ft. and the Columbian and Gregg about 5 ft. in the row, placing the rows 6 ft. apart. Bear in mind that no wild raspberries or blackberries ever grow in a swamp. So do not choose a drained swamp or you are likely to fail.

As soon as the fruit is off all the bearing canes should be cut out close to the ground; and the young ones thinned out leaving a few more than you expect to leave for the next crop, to allow for some being broken in covering. You should have four to six canes in each stool, and two to four canes per foot of row in sucker varieties for bearing. This point is governed by the size of growth.

Two methods of pruning the bearing canes are in common use. One is to nip the end of the cane when about two feet high, which causes a strong growth of the laterals and makes a low, branching bush. Then trim all the branches to fifteen to eighteen inches. This method applies more particularly to the Columbian and Gregg. The other is to allow the canes to grow naturally and then cut back to good strong well ripened wood on the Loudon and Cuthbert and on the other two cut at about the highest point of the cane. The writer prefers the latter method. It is less work and produces very good results. If you have time to spare of course one can push fruit growth by petting.

The only variety of gooseberry that is worth considering for the average home garden is the Downing. It is a heavy bearer of choice fruit about the size of cherries and becomes a yellowish green and is semi-transparent when ripe. Three or four bushes will produce enough for most families.

The Prince Albert currant now stands at the head in most sections. It is a vigorous grower, about four feet high and produces a heavy crop of large bright red currants hung on short well filled stems. As a jelly currant it is surpassed by none. Four or six bushes is enough.

The White Grape and White Dutch vie with each other for the

first place as a white currant. The White Grape is the largest fruit but the White Dutch is less sour and probably a little heavier bearer. Both are good to eat fresh or as a canned fruit, and both make beautiful jelly. Set four to six bushes.

Black currants. If you can find a variety that will fruit, set about half of one bush. If you fail to get any just get a few chinch bugs for flavor and you will not need the black currants. Set all the currants and gooseberries in a row seven feet from the raspberries. Set currants five to six feet apart and gooseberries three to four feet. Trim so each branch has free space to grow; they should not crowd or touch each other. When the bark changes color from a red green to black it is time to cut out that cane. Of course a few new ones must be left each year to replace the old ones. If you can, it is a good plan to go over the bushes after fruit is off and cut out the old black ones. It gives better chance for the younger ones to develop.

Watch for currant worms. They will appear first on the gooseberries. Poison with White Hellebore—one tablespoonful to two gallons water. Sprinkle with water can.

Blackberries are the last to ripen and the least planted. Probably because they are more or less uncertain in many localities. The writer's experience with blackberries has been a great deal like most others, not wholly satisfactory. Ancient Briton and Snyder are the most common and the methods of culture are similar to raspberries. If you get a good crop a row 100 ft. long will be enough. If they do not fruit you certainly have enough and to spare.

All through central and northern Wisconsin raspberries and blackberries need winter protection. Probably the surest way is to bend down the canes and cover with earth.

All these fruits need good cultivation. Keep the weeds out, and fertilize annually. If the patch should get badly overrun with grass it is better to set a new patch than to try to get the grass out.

Prof. Moore: I think the Pearl gooseberry discounts the Downing a great deal; a much heavier bearer and just as nice a berry.

Mr. Smith: The Downing will bear until they cannot stand up; then what more do you want?

Prof. Moore: We get larger returns from our Pearl bushes than the Downing.

Mr. Kellogg: That paper is a very good paper for the beginner. I got one promising idea from it, that of flavoring jams and jellies with the chinch bug.

YOUR FAMILY STRAWBERRY BED.

C. L. PEARSON, Baraboo.

Growing strawberries is such an easy task that I will not make it appear difficult by reading a long essay. A family strawberry bed is easily within the reach of every farmer or any person who owns or controls a few rods of tillable ground; their cultivation is a pleasure while you are anticipating the possibilities of an enormous yield of the luscious fruit strictly home grown and the fun really begins with the ripening of the berries.

Having available ground the next question is in regard to plants; order of a reliable plant grower and you will be likely to get varieties which will pollenize and bear fruit.

I have known farmers to order plants of nursery agents at \$2.50 a hundred and when fruiting time came round there were no berries. The cause of failure being the improper mating of varieties. Good plants can be bought at \$1.00 a hundred or less and two hundred plants will supply a large family with berries besides some big ones to brag about and give to your friends. A good list of varieties is Warfield, Beder Wood, Dunlap, Crescent, Sample and Aroma and there are others.

The ground should be prepared early in the spring as for other garden crops. About May, 1st is the best time for transplanting. A spade or garden trowel can be used in setting the plants which should be in rows about $3\frac{1}{2}$ ft. apart and 18 inches apart in the rows. The soil should be firmly pressed about the roots.

A family strawberry bed can be cultivated with a hoe and garden rake but if a horse and cultivator are available so much the better. If the plants send out too many runners cut off some of them and the result will be larger plants and better fruit.

About Nov. 1st cover the plants lightly with straw or some