

be shallow, as the currant and gooseberry are both surface feeders. When the plants are young cultivation in the middle of the rows may be fairly deep, but as the roots extend across the rows, and take up practically all of the land, the cultivation will have to be shallower else the roots will likely suffer considerable injury. If this fall plowing is found to be doing any considerable damage it should be discontinued, and the land worked up with the aid of harrow tooth or spring tooth cultivator. If the land is properly disked, plowing may be omitted.

The land should be worked down with a cultivator or disc as early as possible in the spring whether plowed the previous fall or not. As a rule spring plowing will be necessary if fall plowing is not done. Later cultivations should be given, especially after heavy rainfalls, to keep the top soil in a fine, loose condition so as to conserve the moisture and keep the land cool. About a week after the crop has been harvested all cultivation should cease in order to allow the young wood to ripen up thoroughly before winter sets in.

Plenty of moisture and a cool soil are especially important in gooseberry culture so that its cultivation should, if anything, be more thorough than that of the currant. Both moisture and a cool soil are important factors in controlling gooseberry mildew.

#### FERTILIZERS.

Currants and gooseberries are gross feeders and must have their food readily available and close at hand, as the roots do not spread far or deeply. Thorough cultivation should therefore be supplemented with liberal applications of fertilizers. Barnyard manure is best with perhaps potash and phosphoric acid applied extra in some form. Mannring need not be heavy, of course, until the plantation has come well into bearing, when annual applications should be made. There is little danger of over-fertilizing the currant or gooseberry plantation; in fact, as usually grown the fertilizer end of the industry is one of the most neglected. Cultivation and manring must be thorough if good results are to be obtained from these fruits. They will thrive fairly well under neglect, but there are no fruits that will respond more quickly or fully to proper treatment.

Apply well-rotted barnyard manure in the fall and supplement this with a dressing of potash and superphosphate early in spring, especially if the supply of manure has been deficient. Card states in his book of bush fruits that currants contain about 0.11 per cent. of phosphoric acid and 0.27 per cent. of potash, while stable manure contains only about one-third more potash than phosphoric acid, hence the need of additional potash. The Massachusetts State Experiment Station found that applications of potash fertilizers increased in every case quality and productiveness of currants.

#### PRUNING.

*Currants.*—Proper pruning of currants is essential to the production of good crops of high quality fruit. The fruiting habit of red currants and black currants differs somewhat, so that the pruning of one is slightly different from the other. Red currants bear their fruit on spurs from wood two or more years of age, while the black currant bears the most and best of its fruit on wood of the previous season's growth. Hence in pruning black currants we must look to the production of a plentiful supply of young wood, and in red and white currants, two and three year wood. Older wood produces inferior fruit.

The old plan of training the plants to a tree form is now seldom used. The plants are less productive, and if attacked by the currant borer, the whole plant is