Lovett strawberry and the Hilborn blackcap raspberry. The Lovett is one of the tough, hardy varieties that never disappoint the grower; it has a perfect blossom and bears heavily; the fruit is firm, medium to large size, conical and of good color and quality. The Hilborn is a good all purpose berry, ripening a week or ten days after the earlier sorts; though not so large as the Gregg it yields double the amount of fruit and is much hardier; it continues in bearing a long time.

**ORCHARD CULTIVATION.**

F. H. Chappell, Oregon, Wis.

[Read at Winter Meeting.]

Much has been said about cultivation of orchards. Much depends on where we are located. What will do in some climates will not do in Wisconsin.

I have lived in Wisconsin thirty-four years and have tried many methods with fruit trees. Have grown some in the sod; this does not give moisture enough in our extreme droughts. Two years I mulched them with tobacco stalks; this caused the trees to grow too fast and some kinds blighted very badly.

Moisture is essential to the tree or it will die. We can supply moisture in two ways; one way is to mulch with fine sand four or five inches deep, the sand to extend as far out as the branches. It will receive the rain as it falls, will retain the moisture two months or longer and it is easily watered when needed.

Another way to furnish moisture is by frequent cultivation, at least once a week when it is dry; do not cultivate when the ground is wet. I had some apple trees in my nursery four to five feet high. I cultivated these trees very often, so the ground was as fine as ashes. The trees grew so fast that the new branches bent down and some of them
were much out of shape. I stopped working them to check the growth and ripen the wood. Four or five years ago, in a dry season, a nurseryman sent me fifty Moore’s Arctic Blue Plum trees unexpectedly and very late in the spring. I heeled them in a row and worked them very often; as they were on my way to a field where I had other nursery stock and crops to work, they were worked as often as twice a week. I did not lose a tree; all grew finely and did well.

Two years ago last spring I sold to a man living four or five miles southeast of New Glarus fourteen apple trees, telling him to work them once a week and make the soil fine. In the fall of 1899 he came to my place for some more trees. I asked him how many trees he lost of those I sold him and he said “Not one, every one is alive and doing well.” I then asked what he had done to them. He said he did just as I told him, then he took a fork and showed how he made the soil fine, as he was a Swede and could not talk very well. Another man that has bought trees of me for five or six years past told me he had lost but one tree.

Now a little about sun scald. July and August are the most trying months with the tree, as the sap commences to form into a grain of wood the last of June, a creamy substance in a stand-still condition. When there is a lack of moisture in the ground the hot sun cooks this creamy substance on the southwest side of the tree, as we have seen so often in Wisconsin. The borers will then deposit their eggs in the bark and when hatched will go through the bark to feed on this creamy substance and then through the tree to finish it. I do affirm that there never was a tree killed on the southwest side except for lack of moisture. Now try it and see for yourself. These are good reasons why we should cultivate orchards to retain the moisture. Cultivate lightly as late as the middle of August and later if very dry, making the soil fine to act as a mulch. Light cultivation will not start new growth.
Another great point is **when to prune and how.** Do this the first of July, then the sap is a creamy substance too thick to bleed much. It will crowd out a little where a limb is cut, but will help it to heal,—will heal much faster than at any other time of the year. If cut then the wood will not bleed to make it black-hearted. If you trim when the flow of sap is going up to feed the buds and to form the leaf it will bleed. If a tree is transplanted in Fall or Spring, trim it in the Spring. Do not trim in the Fall; the heavy freezing deadens the wood and cleaves the bark and makes the wound larger and as the wood is more dry it takes much longer to heal.

In trimming much care should be taken to cut out all inside limbs that will rub each other. Trim about a foot and a half up on the main limbs; as the tree enlarges trim higher to give more sunlight to the crotches, then they will not split with heavy loads of fruit. By cutting out all fruit spurs in the lower branches the fruit buds will form above and the fruit will be of better color and larger, also the weight of fruit will bend the limbs out and give more sunlight to the limbs above.

Do not manure young trees, it will blight them and cause them to make too late a growth for the winter. When a tree will not make a proper growth with good cultivation then it will do to fertilize it.

I would further say, when you transplant a tree do not cut back any limbs. The next bud below the cutting has to take its place to form a limb and there is a little dead wood which will never grow any smaller, the remaining buds below will make out a thicket and you will have a brushheap for a tree. As much as possible remove all suckers as soon as they appear.

Labor is worse than lost when it is spent in doing harm to somebody.