

## Summer Treatment of Orchards

ORCHARDISTS in the leading fruit sections are adopting clean cultivation and cover crops in late summer more commonly as the years go by. There are a few fruit growers who do not consider the benefits derived from such system sufficient to cause them to go to the extra labor and expense, and so prefer to leave the fruiting land in grass. The experiences of many of the most successful growers and the results of experiments at colleges and stations, however, have shown that in most cases, for successive crops of good fruit, it is advisable to practise clean cultivation.

most successful orchardists have been obtained by THE HORTICULTURIST.

"My orchard," wrote Mr. F. G. Stewart, of Homer, "is so very stony that I cannot cultivate it as I would wish. I keep it in sod, cut the crop, let it lie on the land and feed it one year with ashes, 50 to 60 bushels an acre, and the next year with tankage 400 to 500 lbs. an acre. Prior to 1905 I had eight successive crops. Last year I had but very few.

"If I could cultivate the orchard, I should put in a cover crop of mammoth clover. I intend to do this with my plum and cherry orchards as soon as the

growth is very vigorous at the expense of fruit buds, I have found it advisable to let the orchard remain in clover sod without cultivation for one or even two years. This treatment gives a very noticeable increase in blossom buds.

"Among the cover crops used generally throughout Ontario, the common red clover is found the most desirable for the St. Lawrence valley. Crimson clover is not hardy and will very seldom or never pass the winter alive. Soy beans, or Soja beans, and vetches are valuable in their fertilizing qualities, but are difficult to move among, and wet in the mornings for the pickers.

"The most serious losses from winter killing during the past four years have been in orchards under clean cultivation, and the fewest losses in orchards in sod. But, we must bear in mind the value of our orchards under the several treatments from a commercial standpoint, and it is up to us, as fruit growers, to bring our orchards into the highest state of fertility and productiveness, keeping in mind the importance of getting our wood growth thoroughly ripened before winter sets in."

### PRIZE-WINNING FRUIT ON SOD

That some orchardists produce excellent fruit without cultivating is shown by the record made by Mr. C. W. Challand, of Marbourg. Last fall, at Toronto, he had seven entries and carried away five first prizes. In 1904, three first prizes were awarded for three entries. Last fall his sales amounted to \$675, while scarcely another grower in the neighborhood had saleable fruit.

In a recent letter to THE HORTICULTURIST, Mr. Challand wrote: "The orchard has been in sod for 14 years, pastured by sheep and divided into parts in order to give fresh pasture. It is eaten off much more evenly than when the whole run is given at once. Last spring I plowed the orchard because so much manure had been added around the trees that the grass grew so long and so wiry that the sheep would not eat it. After about two years I shall seed it down again. During July, I intend sowing rye, and it will be plowed under next spring. The soil is clay loam.

"For the last eight years half the trees each year had a dressing of barnyard manure at the rate of about one load to four trees, according to size of trees, spread out nearly as far as the branches reach. The last two years no ashes have been used. During the four years previous about 1,200 bushels of ashes were used at the rate of one to two bushels per tree, according to size of tree, scattered around about as far out as the top reaches.

"In 1896 I purchased a sprayer and



The Work that Generally Results in Large Crops

View of a quarter mile row of Gravenstein and King apples in Hillcrest Orchards, Kentville, N.S., showing reversible extension disc harrow, sulky gang plow, and two low wagons with 100-gallon hogsheads used for spraying.

If cultivation is kept up until late in the season, tree growth continues, and the wood is not ripened when heavy frosts come. The result is that many trees are ruined. In recent years orchardists have adopted the planting of cover crops to overcome this feature. Many kinds can be used to advantage, but it has been learned that the locality and the climatic conditions regulate to a certain extent the cover crop that will give best results.

The general benefits are numerous. In most cases some of the leguminous crops, such as clovers or vetches, are used, because considerable nitrogen is incorporated with the soil. In any case, humus is added and the plant food rendered more available. Rains and snows are held until they have time to soak into the ground; and, in spring, the evaporation through the leaves causes the land to dry and be in fit condition for cultivation earlier than in orchards where no crop is grown.

The experiences of some of Ontario's

crop is picked. I have tried rape, but although it makes plenty of humus, I do not find it adds enough nitrogen. Clover does both."

"In the St. Lawrence valley, east of Kingston, wrote Mr. Harold Jones, of Maitland, "my experience has been a clean cultivation during the summer, with a cover crop sown as late as August 1 or 15, produces a late succulent growth of green wood, not sufficiently ripened to withstand our winter. Taking these conditions into consideration, I should advise that clean cultivation practised up to and not later than July 1, and then sowing thickly with red clover, say at the rate of 10 or 12 lbs. to the acre, gives our trees every chance for rapid and vigorous growth in the early summer, as well as rapidly developed fruit. Then a heavy seeding of clover has a tendency to check growth sufficiently to have the twigs well-ripened before winter sets in, besides giving us a clean sod for the fruit that falls.

"In heavy, strong soils, where wood