

phylloxera in soils very favourable to the propagation of that insect, and in consequence it was gradually abandoned in favour of stocks having more resistance, especially the Solonis x Riparia, 1616 (Couderc), which is more resistant to phylloxera and accommodates itself, like the Solonis, to wet and brackish conditions.

According to Viala and Pechoutre, the principal ampelographic characteristics of the Solonis are as follows: Vigorous spreading habit, trunk thick; rods long, smooth, cylindrical, with tufts of whitish hair near the nodes, purple in the herbaceous state and light brownish-grey

when lignified; leaves medium size, entire, two series of acute teeth, a few longer ones indicating the terminals of the lobes; those of inferior lobes converging towards the axis of the leaf, which forms a gutter with the lower extremity curved downwards; petiolar sinus shallow and very open; smooth on both faces, stiff whitish hairs along the veins on the under face, and a few shaggy flakes of fluff on the petiole and the upper face of the leaf, which is greyish-blue, the lower face being somewhat paler.

A number of the hybrids bred from the American vines described in this and pre-

ceding issues have been in use for some years in New Zealand, and others, containing some of the same blood, are being tried out for adaptation, affinity, and resistance.

A complete collection of the stocks selected from the early types in the past and those under observation at the present time exists in the vineyard of the Horticultural Station, Te Kauwhata. These will be described in later issues of the *Journal*.

—J. C. Woodfin, *Vine and Wine Instructor, Te Kauwhata.*

Cool Storage Notes.

Handling and Precooling Export Pears.

WHEN harvesting this season's crop it is well to keep in mind that the maturity of fruit when picked plays a most important part in its post-cool storage quality and appearance.

At the beginning of the 1939 season no better suggestion could be put forward than that methods for the handling and precooling of export pears be adopted which will definitely prove beneficial by ensuring their arrival on overseas markets in a uniformly sound condition. The method recommended is as follows:—

- (1) All pears should be placed in cool storage within twenty-four hours of picking and held at a temperature of 30° to 32° F.
- (2) Pears should not be packed for longer than fourteen days prior to loading on the overseas vessel.

The present system of handling pears is not satisfactory, as it is very difficult to obtain uniformity of condition in a case of packed pears. The Fruit Inspector is unable to detect a slight tendency toward maturity in the pears at the point of inspection, as, when fruit is delayed after picking for grading and packing, some of

the fruits, by virtue of their position on the tree, &c., are more fully matured than others. It is this fruit that is responsible for much of the deterioration mentioned in reports from overseas markets.

The method recommended is designed to lengthen the pear-export season by improving the conditions of handling and precooling export pears prior to loading the overseas vessel. This improved condition will enable the London Manager of the New Zealand Fruit-export Control Board to avoid selling on glutted markets by being able to hold the pears in cool storage overseas, and also to allow for further distribution to more distant European markets.

Placing pears in cool storage in orchard boxes immediately after picking and before packing will check maturity, provided the fruit has been harvested in a firm, green, yet matured state. Holding the pears in orchard boxes in cool storage until ten to fourteen days prior to loading the overseas vessel will enable faults in the fruits to develop before packing, and will therefore tend to lengthen the pear-export season, as any bruised or faulty fruit is rejected and only fruit that has been cool stored under good storage conditions and is in the same firm condition as when harvested will be packed for export.

The supervision of cool-storage conditions is also necessary to ensure that the systems of cooling and stacking the cases in cool storage and the temperature control are up to the required standard.

Cool-storage facilities are required in many districts to enable pears to be pre-cooled. In these districts delays in pears

reaching cool storage should not be longer than thirty-six hours after picking. It would be beneficial for the pear producers to organize in each area with a view to adopting improved methods which would fit in with the cool-storage facilities available for the immediate cool storage of all pears intended for export.

All export pears handled and packed on the lines mentioned should be labelled "Precooled Pears."

Apples, such as Cox's Orange, when picked, should be packed as soon as possible and placed in cool storage to check the further maturing of the fruit.

When picking pears or apples into orchard boxes for precooling for export or for long holding, newspaper should be used to line the boxes, as it has a tendency to check marking and bruising.

Granny Smith apples for long holding should be picked into orchard boxes and held in the orchard for from two to three weeks in a cool, dry position, the stack being well opened up for ventilation. The date of picking should be about the 16th to 20th April, although the date will vary with local seasonal conditions.

No fruit should be held out of cool storage after being packed, as deterioration develops from blemishes and other causes more quickly when it is held in the packed case without being cooled.

When stacking fruit in cool-storage chambers allow adequate space for air-circulation, as good ventilation is one of the most important features in obtaining satisfactory results with fruit in cool storage.

—A. Powell, *Cool Storage Officer, Wellington.*

ORCHARD NOTES.

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them at the back of the stock. The cutting-down of the stock to the bud is not done until the end of the winter, and it is not then advisable to do it early enough to force the buds into growth at a time when frosts are sufficiently intense to damage the tender shoots.

—N. J. Adamson, *District Supervisor, Nelson.*