

both in France and Spain: Verdal, Boutiniene, Blanquette, Carracuenta, Lucca; the three first-named specially for oil, although the fruits are often pickled. The last two are chiefly valued for pickling. Plants can be obtained in the Australian Colonies, and could be procured through any New Zealand nurseryman. In all probability the best results would be obtained by using the weaker-growing New Zealand species as stocks.

76. *The Chairman.*] Will you give us some information as to the culture of the vine?—It has been carried on in New Zealand, and successfully to a certain extent, for very many years. The chief difficulties with vine-cultivation in New Zealand now arise from the presence of minute fungi, which some seasons reduce the plants to such a condition that no fruit can be perfected.

77. That would be called a vegetable growth?—Yes; analogous to, but of a different kind from, the so-called fire-blight which attacks the pear.

78. What would be the best means of getting rid of the difficulty?—I have been experimentally using permanganate of potash as a wash.

79. Is Condy's fluid the same?—I believe it is the chief ingredient in Condy's fluid.

80. How is it applied?—As a wash, sprayed. Sulphur, if applied in the very early stages, is also of great value. It should be powdered on the young shoots, but is almost useless if the disease is allowed to get any standing.

81. You would fall back on the permanganate of potash?—Yes.

82. What is your opinion of the growth of the vine in New Zealand? Are all parts of New Zealand equally capable of growing the vine?—No. I am not so sanguine as to the growth of the vine for wine as some of my friends are. I think we have too much moisture in the atmosphere to admit of any large quantity of first-class wine, except in certain districts. I may remark that even so far north as Whangarei it has been found far more profitable to grow grapes under glass than to grow them in the open air. There are now in Whangarei numerous large glass houses for the growth of grapes for the Auckland market.

83. Is wine manufactured in that district at all?—Not that I am aware of. I have been told it was manufactured there some years back.

84. But if much larger areas were placed under vine-cultivation it would be necessary to manufacture wine to get rid of the product?—I do not know that. I think there is an immense market for preserved grapes. Grapes gathered as ripening and shipped to Europe would have a market. I advocated that some years ago before the Native Industries Committee. Wine could be manufactured in many districts, but whether it would be considered a first-class wine by critics I do not know.

85. With respect to the export of grapes, we should be glad of information on that point?—I cannot give particulars. There is a large trade done in the export of grapes from Southern Europe to the British Islands, and from Southern Europe to the colder countries of Europe.

86. *Mr. Mackenzie.*] Could we compete with Australia in that respect?—The Australians have the advantage, the climate is so much drier. We have so much moisture in the atmosphere when grapes ripen I am inclined to think the sugar does not appear to be properly elaborated. I may point out that grape-growing for wine is often very local—for instance, the Constantia vineyards in South Africa. There are two vineyards in which excellent wine is made, but plants taken from those vineyards to situations which appear very similar have always failed in giving good results.

87. *The Chairman.*] In exporting the grapes how do you recommend they should be packed?—Packed in sawdust—such sawdust as we should obtain from maire or wood of that kind.

88. Would it be necessary to keep the grapes in cool-chambers?—Yes.

89. But not in the freezing-chambers?—No; simply in a cool-chamber. We do not want freezing-chambers for any of the fruits.

90. What is the lowest temperature that would suit the grapes?—I can scarcely tell you off-hand.

91. If it went below 40° would it damage the grape?—I do not think it would be damaged by a temperature of 40°.

92. You think it would be suitably exported in a chamber generally used for butter and cheese?—Yes; I think the grape might even endure a little frost without injury.

93. What information can you give us with reference to phylloxera?—I do not think that insect is identical with the American insect of that name. That point is not exactly material. It is certainly a very serious pest; of that there can be no question.

94. Is there any comprehensive way of getting rid of the vines infected by pest?—The only effectual way would be to destroy them.

95. Has anything been done in Auckland?—Not that I am aware of. I visited Auckland when phylloxera was first reported, but found the vines had been destroyed. I did not see the insect. Very few insects had been saved, and these presented some points of difference from the American insect. It is certainly closely related.

96. Equally destructive?—Equally destructive, I should say, from its appearance.

97. Do you know the wine-growing district of Taranaki?—I do not know any district as a wine-growing district. I know wine has been made in Taranaki, Hawke's Bay, Auckland, and Wanganui.

98. Have you visited all those districts, and inspected the vines?—I have not visited the Wanganui or Hawke's Bay vineyards. The wine manufactured in Hawke's Bay is said to be particularly good.

99. You have not sampled the wines?—I have tasted wines made in New Zealand, but I should not consider them fair samples. I have been assured over and over again that the Canterbury District is an excellent district for wine-growing. I have never been able to see it. I know, at Oamaru, which would seem to be a particularly suitable locality for growing vines, you cannot get fruit to ripen unless the vine is attached to a wall.