Climate.

The climate of North Auckland is quite unlike that of the Yangtse Valley in China, where *Aleurites Fordii* is a native, or of the south-eastern portion of the United States, where it has been fairly successfully established as a commercial crop. The most pronounced differences between the climate of North Auckland and that of either of the great tung-oil-producing areas are associated with temperature and winds.

Temperature.

Whereas the climate of North Auckland is equable, that of the successful tung-oil-producing areas is characterized by marked contrasts between extremely high average summer temperatures and very low winter temperatures.

Table I.—Mean Monthly Temperatures and Rainfall recorded at Auckland, New Zealand, at Gainesville and Tallahassee, Florida, United States of America, and at Chungking,* in Szechwau, and Changteh,* in Hunau (China).

Temperatures.

——	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Year.
Auckland	63·5	66·3	66·7	64·7	61·1	56·5	53·2	51·5	52·0	54·5	57·4	60·2	59·0
	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	Year.
Gainesville	79·3	80·4	80·8	79·0	72·3	62·5	58·2	57·8	58·4	63·7	69·3	75·0	69·7
Tallahassee	79·7	80·2	80·5	78·0	70·0	59·6	54·7	54·1	55·2	61·7	67·6	74·2	68·0
Chungking (6 years) ..	77·4	84·0	85·3	74·7	65·1	57·6	50·5	45·2	49·6	58·6	67·1	72·7	65·7
Changteh (2 years) ..	78·1	86·9	84·9	75·9	61·0	53·2	45·5	35·4	43·7	50·0	59·4	72·7	62·2

Rainfall in Inches.

——	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Year.
Auckland	3·18	2·97	3·57	3·27	3·88	5·15	5·44	5·58	4·61	4·05	4·06	3·59	49·42
	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	Year.
Gainesville	6·57	7·32	6·76	5·65	2·84	2·04	3·22	3·31	2·87	3·21	2·21	3·11	49·11
Tallahassee	6·39	7·38	6·72	5·18	2·96	2·55	4·49	3·95	4·57	4·39	3·32	3·82	55·72

* Compiled from data given in Memoir No. VII, National Research Institute of Meteorology, "A Brief Survey of the Climate of China," by Coching-Chu, 1936.

Both the Yangtse Valley and the Gulf States experience much wider monthly ranges of temperature than does North Auckland. Furthermore, the mean annual temperatures of Tallahassee and Gainesville, both centres of large tung plantings in Florida, are 9° F. and 9·7° F. respectively higher than that recorded for Auckland, which, according to the climatological information available, may be considered representative of North Auckland. The records for Chungking and Changteh, centres of the Yangtse tung industry, approximate more closely with Auckland, but even so the mean annual temperatures recorded for these stations are 6·7° and 3·2° higher. The greatest divergences are confined to the summer months, when the tung tree is maturing fruits.

Regarding the Chinese districts, Coching-Chu writes: "As a consequence of extreme cold in winter and excessive heat in summer, the mean annual temperature range—*i.e.*, the difference between the mean temperature of the hottest month and that of the coldest month—is inordinately large."

These wide differences between the monthly temperatures recorded for North Auckland and for the successful tung-oil-producing areas overseas lends weight to the view that all local plantings should be made from seed gathered from trees in New Zealand which have annually matured a heavy crop of high-quality fruit. The number of such trees is extremely limited and the quality unproven.

In addition to the possible influence of low summer temperatures upon the maturing of the fruit and of the equable winter conditions in delaying the leaf-fall, the possibility of frost damage to the trees during the blossoming season and the setting of the fruit must not be overlooked, especially since quite severe frosts have been recorded during the late spring as far north as Monganui.

Rainfall.

Tung trees are generally considered to have given the best results in sections where the annual rainfall has exceeded 40 in.

Within North Auckland, therefore, there are no planted areas which cannot be considered satisfactory from the standpoint of minimum rainfall. On the other hand, many of the trees which have been planted out on soils with impeded drainage have been seriously affected with a puffing-up and splitting of the bark followed by "die back." There are clear indications that the high annual precipitation which has occurred during the past three years has seriously reduced the vigour of large areas of the trees.