

SEED NOTES.

Collection and Germination of Kauri (*Agathis australis*) Seed.

The fact that kauri cones must be quite mature and in that condition disintegrate under moderate pressure, some even under firm pressure of the hand, rules out collection following logging operations, for all the ripe cones would be shattered by the fall of the tree. Similarly, owing to poor viability of seed in green fallen cones, the collection of these is uneconomic. Trees must be climbed, therefore, and because the cones grow at the tips of the branches forming the wide-spreading crown, this is an arduous and distinctly hazardous undertaking, requiring the services of a professional tree-climber. Such a man, armed with a 200 foot rope, climbing boots with a spiked toe, and hand hooks, and with an assistant to pack the cones to a central spot, can collect from 150 to 200 pounds of cones per day. Between 9 and 10 cones weigh one pound, and the number of firm seeds per cone averages 70, ranging from 42 to 94.

Cones are spread out on $\frac{1}{2}$ inch mesh wire-netting trays and placed in the sun. All cones remaining unopened at the end of 5 days (slightly longer if moist air conditions are experienced) are discarded. From 60 to 70 pounds of cones, one pound of seed (with wings) is produced.

From the 1935 kauri seed-crop at Waipoua Forest the following results were obtained :—

Details.	Seed Lot No. 1 (Cones opened in 1 day)	Seed Lot No. 2 (Cones opened in 7 days)
Seeds per pound	22,400	27,648
Firm seeds per lb. (cutting test)	6,488	5,440
Actual germination per lb.	3,232	896
Percentage germination of firm seeds	50%	16.5%

For the 1936 seed-year 10 lbs. of seed, sown immediately after collection, gave a germination of 3,800 per pound.

Kauri seeds appears to lose its viability within a very short time, as reflected by the following results.

	Germination per lb. of seed.	Percentage Germination.
(a) Seed sown in autumn immediately after collection	3,400	52%
(b) Seed (of the same collection) sown in the spring, 6 months later, kept over winter in a sealed glass jar.	1,360	21%

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