LOW-VOLUME SPRAYING OF BUTTERCUP AND PENNYROYAL,EMPLOYING HORMONE WEEDICIDES.

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300 to 400 acres of buttercup and pennyroyal were sprayed on the Hauraki plains last season, by contractors employing low-volume equipment and Weedone 57. From observations made of this work and from trials carried out, the following conclusions have been drawn:-

1. 1 lb. of 2,4-D per acre will give 100% kill of both pennyroyal and buttercup.
2. Although buttercup is a weed of the spring months and pennyroyal a weed of the summer months, both weeds can be eliminated by one application; i.e., by spraying to kill buttercup, the pennyroyal is also killed.
3. Pennyroyal become increasingly resistant as the flowering stage is approached.
4. White clover is less affected and recovery is quicker after spring treatment than after summer treatment.
5. In a trial carried out last season on pennroyal, comparing weedone and Frenokone at rates of $\frac{1}{2}$ lb., 1 lb. and 2 lb. of 2,4-D per acre, both the Weedone and Frenokone produced a 100% kill at the 1 lb. application. The $\frac{1}{2}$ lb. application did not produce a 100% kill. Weather conditions at the time of application and immediately following were ideal.
6. In a trial laid down this winter on buttercup, comparing Frenokone and Weedone at rates of 1 lb. of 2,4-D per acre, the ultimate result has been practically a 100% kill from both treatments. Until the very last stages, however, it appeared as if the Weedone would produce about a 90% kill and the Frenokone about a 75% kill only. Heavy rain was falling at the time of application and water was lying on the paddocks in places.
7. A very much more rapid kill is obtained when treatment is followed by warm sunny weather than when treatment is followed by wet sunless weather.
8. To obtain maximum benefit from treatment it is essential to spray as early as possible in the spring, i.e., before pastures become smothered by buttercup growth.
9. As would be expected, pastures close up better when treatment is carried out during the spring active-growing period than when carried out during the summer period.
10. In a trial employing dusts on buttercup, 1cwt. of 1% Frenokone dust broadcast by hand gave a 100% kill.
11. The cost for material to treat an acre with 1 lb. 2,4-D per acre, employing -- (a) Weedone Concentrate = £1. 0. 0., (b) Frenokone Concentrate = 12/6d.