A COMPARISON OF LEGUME INTERCYCLE CROPS FOR PINEAPPLES

O. C. Magistad, N. King, and O. N. Allen

In spite of the fact that 80 to 120 tons per acre of green and partially dried pineapple plants are shredded and after some decomposition incorporated with the soil, it has been the custom in the pineapple industry to grow a grass or leguminous crop prior to replanting the field with pineapples a year or two later. This intercycle crop adds additional organic matter, prevents loss of nutrients by erosion and leaching, and, if a legume, adds some fixed nitrogen.

This paper presents information on the relative advantages of six leguminous plants when compared with each other, their yields, nitrogen contents, and agricultural operations.

PLAN OF EXPERIMENT

The experiment was installed at the Wahiawa sub-station of this Experiment Station under conditions of low summer rainfall. The six leguminous plants selected for this study were as follows: Cassia tora, Crotalaria anagyroides, C. juncea, C. spectabilis, Stizolobium utile, and Cajanus cajan.

For 3 years prior to the planting of these plants this area had been growing pineapple hybrids. The pineapple plants were shredded early in November, 1931, shortly after harvest, and subsequently incorporated with the soil. In this manner approximately 100 tons of green matter per acre were turned under. The field was plowed and harrowed on three occasions. By March 1932 all of the plant material had practically decomposed, leaving the soil in good condition for subsequent planting.

The experiment was installed as a Latin square experiment with 36 plats, 6 on a side. A diagram of the plat distribution together with

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2Chemist, Agriculturalist, and Cooperating Soil Bacteriologist, respectively.