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The Relationship between the Altitudinal Limit of Cassava and Soil Temperature in Papua New Guinea

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ABSTRACT

Observations were made on the usual upper altitudinal limit of cassava (Manihot esculenta Crantz) at 31 locations in Papua New Guinea. The mean upper altitudinal limit was found to be 1770 m. The 9:00 a.m. soil temperature at 10-cm depth was recorded as 17.9°C at a location at 1770 m.

Experimental work done in Australia suggests that a mean soil temperature of 18°C is the useful lower limit for satisfactory establishment of cassava. It is suggested that the upper altitudinal limit of cassava in Papua New Guinea is related to soil temperature. An ecological approach in a tropical highland environment and an experimental approach in a subtropical environment have both identified a soil temperature of 18°C as one of the limiting factors in cassava establishment and growth.