

SUMMARY

This present work studies the physicochemical and micromorphological characteristics of eight soil profiles located in the Agua Garcia and La Esperanza regions.

Six of these have been developed in recent volcanic materials and the remaining two, in the oldest volcanic rocks.

Due to the difference in levels observed in the first case, we have been able to establish the actual climatic sequence.

In the permanently humid area, between 1.000 and 1.300 metres above sea level, the alteration of pyroclastic materials forms highly hydrated amorphous products (alophane) as well as aluminium hydroxides (gibbsite). In this way typical Dystrandepts are formed; their specific micromorphological characteristics being: rounded aggregates caused by rock decay, no clay translocation, and moder humus form.

The lower the level, the climate becomes less humid, warmer and subjected to bigger contrasts, thus helping in the halloysite formation as well as the decrease in alophane reduction. Under these conditions Andosols progressively pass onto brown soils and eutrophic brown soils. The latter have a tendency to fersitalitic type soil.

Those soils settled on the old volcanic formations are paleosols. Their genesis has taken place under heavier pluviometric conditions than the present ones.

The ferallitic type alterations take place between the 1000 and 1500 metres, in the more regularly humid