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IMPROVING THE PRODUCTION OF CORN AND RICE WITH CONTROLLED AVAILABILITY FERTILIZERS (CAF) IN PINATUBO LAHAR

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ABSTRACT

A program on accelerated restoration of the fertility status and productivity of lahar affected agricultural areas is more practical and suitable since waiting for the natural regeneration of these parameters that are concomitant with differentiation of volcanic deposits to AC or ABC horizons would take a very long time.

The experiment was conducted to further evaluate the agronomic effectiveness of 100-day controlled availability N and K fertilizers on corn and rice. The experiment was conducted in shallow later tank plots measuring 6.3 M^2 for rice and 14 M^2 for corn at the Department of Soil Science, UPLB.

Grain yield of corn fertilized with 150CAF-150SP-100CAF produced significantly higher yield than the control and was slightly better than those receiving conventional fertilizers. The efficiencies of N fertilization were 10.4 and 8.4 kg grain/kg N, respectively for the CAF and conventional fertilizers. The efficiency of CAF was improved to 12.13 kg grain/kg N with complementary addition of 40 kg Mg/ha.

Corn plants which received 150CAF-150SP-100CAF were significantly taller at 27 and 49 DAP than those receiving equivalent amount of conventional fertilizers. These differences were further supported by the dry matter yields at the same growth stages indicating more effective release for nutrient supply and utilization of nutrients supplied by 100-day CAF.

Unfertilized rice and those receiving no iron fertilizer will not grow on pure shallow lahar beyond three weeks. Rice fertilized with 150CAF-150SP-200CAF also produced significantly higher yields than those applied with conventional fertilizers. Likewise, these yield increments were supported by the significant differences in dry matter yield.