

SUMMARY

Effects of studied about potato production (*Solanum tuberosum*) in the parish of Julio Andrade, in the Province of Carchi.

This research was realized in Casa Fría, it is situated in the Province of Carchi, Cantón Tulcán, Parish of Julio Andrade, it is 3.000 m above sea level and has an annual average temperature of 12.2°C.

The established objectives for this test were:

Evaluate the results about potatoe farming related to the application of levels of lime in an acid soil in Carchi.

Establish the effect of different application times of lime in the potato production.

Study the agronomic behaviour of the potatoe farming related to the application lime.

Realize the economic analysis by means of the partial estimate of CIMMYT, (1988).

The work in field lasted 7 months, a block design was used to hazard, with 10 treatments (3x3+1) and 4 repetitions under a factorial arrangement AxB+1; where A was the levels of lime; B the time of application of lime +1 proof without lime.

The levels of agricultural lime were: N1= 2 Ton/ha, N2= 4 Ton/ha, N3= 6 Ton/ha.

The times for application were: E1= a month before the sowing, E2= during the sowing, E3= to the re cover, 21 day after the sowing.

The evaluated variables were

Percentage of emergency, number of harvested plants, height of plants after 45 days of the sowing, height of plants to the flowering, production in Ton/ha by categories and pH of the soil.

The results were subjected to the analysis of varying and to the test of Tukey to the 5% of significance.

The percentage of the emergency and the number of hawest potatoe plant were betwene 98% and 100%.

The best height of the plants after 45 days of the sowing was for the treatment, T1 (2 Ton/ha before the sowing) and T5 (4 Ton/ha during the sowing) with an average of 8.48 cm.

The best average for the height of plants to the flowering was for the treatment T4 (4 Tn/ha of lime before the sowing) with an average of 87.28 cm.

From the results gotten related to the total potatoe production, T3 (2 Tn/ha after the sowing) it showed a best production with an average of 39650 Kg/ha, the lowest production was gotten with T10 (witnees) with 33270 Kg /ha.

The Analysis of varying was realized for the height variable of plants after 45 days of the flowering, potatoe production by categories an total; it didn't find meaningful differences for the dose and time of applications of lime and its interaction.

According to the partial economic analysis by estimate of CIMMYT 1998. The treatment T3 (2 Ton/ha recommended after the sowing because this shows the best rate of marginal return.

According to the analysis chemistry of soil that was done for the pH, after the potatoe hawest an increase of 4.7 was gotten wtich was the witness to 5.34. with a level of 4 Ton/ha, with a level of 6 Ton/ha and with a level 2 Ton/ha to 5.13. This means that the pH is increased when the 3 levels of lime are applied to the potatoes sowing.