

SUMMARY

“RESPONSE OF FOUR VARIETIES OF PEAS (*PISUM SATIUUM L*) TO ORGANIC AND CHEMICAL FERTILIZATION AT THE FARM LA PRADERA”.

This research work was carried out at the farm “La Pradera” situated in Antonio Ante Canton in Chaltura parish. It was titled “Response of four varieties of peas (*Pisum satiuum l*) to organic and chemical fertilization at the farm La Pradera”.

To carry out this research work, four pea varieties were used: V1 Piguerosada, V2 Piguinegra, V3 Arvejón, V4 Enana Chilena with four kinds of fertilizations: F1 Witness; F2 chemical; F3 chemical and foliar; F4 organic: 16 treatments were obtained in which the best fertilization treatment for pea crops were evaluated. The varieties were characterized, the pea output was determined and an economic analysis of the best treatment was carried out.

Days of flowering. Variety 1 (V1 Piguerosado) and V2 Piguinegra were the latest ones with 82, 58, and 81, 42 days respectively, while the varieties V3 Arvejón and V4 Enana Chilena were varieties with fast flowering with 72 and 63, 75 days respectively. Chemical and organic fertilization didn't influence on this variable.

Number of pods a plant. The varieties V2 Piguinegra and V1 Piguerosada replied best physiologically with the numbers 11, 25 and 10, 58 pods per plant respectively. There were no effects referring to fertilization seen.

Number of grains per pod. The fertilization F3 chemical and foliar achieved the highest number of grains per pod: 4,5 while F1 Witness or none made that all the varieties presented a lower number of grains per pod (3,7).

Days until the harvest. The earliest variety was V4 Enana Chilena with 114,1 days until its harvest while the latest one with 138,6 days until its harvest was variety 3 Arvejón.

Weight of the seeds. The variety with the highest density in 1000 seeds was Variety V2 Piguinegra with 328,8 gr while V1 Piguerosada obtained the lowest density in 1000 seeds with 240,80 gr. Fertilization influences.

Output. The variety with the highest output was V2 Piguinegra with 2,524,00 kg/ha; and the one with the lowest output was V4 Enana Chilena with 1115,00 kg/ha. Fertilization 3 chemical and foliar showed the best output for this variable. Economically, treatment 7 (V2 Piguinegra and F3 chemical and foliar) was the best one, profitable with a relationship profit – cost P/C of \$1,66 while the treatment T13 (V3 Enana Chilena and F1 Witness) is the less profitable with a relationship of P/C of \$0,35 per ha. All the varieties showed different behaviours in the interaction varieties – fertilization.