Rev. Fac. Agron. (LUZ). 2003, 20: 263

Influence of the seeding system on the germination of common bean seedlings during crop emergence

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Abstract

The formation of surface crust on the ground surface prevents the correct emergence of common bean seedlings. Surface crust causes plant breakage or damage during the emergence. This study evaluates different sowing techniques and different methods of pesticide applications in bean seeds in order to assess their influence on the number of broken plants. A -split-plot design with three replications was used. The main plot was bean type (Cinnamon and Lion kidney), the intermediate plot (subplot) was for the application of pesticide (none, before seeding, after seeding) and the third sub-subplot was the sowing technique (in hills, flat, flat with sawdust, and flat with vermiculite). Analysis of variance showed significant differences among sowing methods, with little significant difference between the sowing techniques with or without substrate. According to LSD test, the use of sawdust and vermiculite in planting reduced the number of broken plants.

Key words: *Phaseolus vulgaris*, pesticide, sowing technique, broken plants, vermiculite, sawdust.

Recibido el 3-9-2001 ● Aceptado el 6-2-2002

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