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DETERMINATION OF OPTIMUM PLOT SIZE AND ADEQUATE NUMBER OF REPLICATIONS TO EVALUATE POTATO SEEDLING POPULATIONS

(Détermination de la dimension optimale des parcelles et du nombre des répétitions pour évaluer les populations de plantules de Pomme de Terre)

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SUMMARY

The optimum experimental plot size and the adequate number of replications are of foremost importance in agricultural research. Research in this area is still more important for evaluation of potato seedling populations since there is no available information. A uniformity trial was installed and analyzed as a split plot design utilizing an open pollinated progeny of the clone DTO-33. Experimental plot sizes of 1, 5, 15, 30, 90, and 180 units were considered. Each unit was formed by seedlings. The analysis showed that the optimum plot size was between 5 and 15 units or 20 and 60 seedlings. An intermediate number of 40 plants per plot was considered optimum. The adequate number of replication was determined as 4

RESUME

Il n'y a toujours pas d'information disponible en ce domaine. Un essai d'homogénéité en split-plot a été réalisé avec la descendance en pollinisation ouverte du clone DTO-33. L'analyse établit que la dimension optimale de la parcelle se situe entre 5 et 15 unités ou 20 à 60 plantules ; le nombre intermédiaire de 40 est retenu. Le nombre adéquat de répétition s'établit à 4.

INTRODUCTION

The determination of the optimum plot size and adequate number of replications are aspects of primary importance in agriculture research. Optimizing these factors reduce the magnitude of the experimental error increasing