Effects of planting density on the yield of potato varieties inautumn cultivation

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In order to determine the best planting density for potato varieties in autumn cultivation in Khozestan province, an experiment was conducted for one year (1998) at Behbahan Agriculture Research Station.

A Split plot in randomized complete block design with three replications was used. Planting density considered as the main factor, had three levels and variety as subfactor had six levels.

In this experiment Ajiba, Marfond, Timate, MN105, Concorde and Novita varieties were planted 15, 20 and 25cm (8.9, 6.7 and 5.3 plants/m^2) in early October.

Analysis of variance showed that in regards to yield, difference among significant, planting densities × varieties was highly variety interaction was not significant and planting density significant.

The maximum yield was produced in 8.9 plants/m^2. Differences among the planting density with 6.7 and 5.3 plants/m^2 was highly significant and significant respectively.

Increases of planting density from 5.3 to 8.9 plants/m^2 decreased tuber mean weight. The difference among main stem and number of tuber per plant was not significant in all planting densities.

Timate and Ajiba varieties produced maximum yield . Difference among these varieties with other varieties was highly significant. According to obtaind results, planting of Timate and 15cm (8.9 plants/m^2) with yield of Ajiba varieties in spacing of 75 recommended×20.19 and 17.29 tons/ha are respectively.