

Evaluation of economic importance of intercropping system in cold tolerant maize and beans

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With regarding population increament and the limitation of agricultural lands we must try in three different ways to increase food production. To increase the area that can be cultivated (2) to increase yield per hectare, and (3) to increase yield per time. To increase the cultivable lands, we must invest large amount of resources, while by using improved systems of agroecological. We can easily increase yield per hectare and per time. Today most of scientists are interested in multicroping systems and ecologists insist in order to maintain stability in agroecological systems. We must increase the diversity of crops. By using ecological methods we can improve water and fertilizer efficiency, pests and diseases control and can maximize the efficiency of the food production.

In order to evaluate the intercropping systems and to compare it with one cultured system in cold climate of Ardebil region experiments were conducted in 1995 in a RCB design including 3 treatments and replications at the research station of Azad Univ. in Ardebil crops included maize single cross-early maturing cultivar 108 and local cultivar of bean called Meshkin Shahr. Treatments were (1) Maize alone in its natural stand (2) Bean alone in its natural stand, and (3) maize in its natural stand with bean between the rows.

The Duncan's multiple test was used to compare the means. The result should that the intercropping treatments yielded significantly higher at 1% level confidence compared with the other two treatments. Therefore, it was concluded that the intercropping of these two crops (Maize and Bean) in cold climate of Ardebil is advisable.