

Effect of potassium on the yield and quality of potato (*Solanum tuberosus* L.) in the four provinces of Iran.

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Potato is one of the most important agricultural products in all over the world. Its yield as well as the nutrient uptake from the soil is higher in comparison with other crops. since in Iran, consumption of N, P and K fertilizers is not balance; farmers use higher amounts of N and P fertilizers but no K-fertilizers. It was believed that in calcareous soil due to existance of clay minerals which is illite , K-fertilizers are not necessary even for the higher demanding Srops, such as Potato. So, for this reson the farmers have not been used K along with N and P fertilizers. This is the main reason for the depletion of K from most of our arable lands.

For copying with this problem and showing the positive effects of K-fertilizer on the yield and quality of potato, an experiment has been carried out in five diferent locations of Iran (Ardabli, Isfahan, Hamadan, Damavand-1 and damavand-2). In this experiment, four different levels of K (0-5-150-250 Kg/ha) with four replication were used in four provinces of Iran.

Soil samples were taken form all different farms before plantation, and were analyzed by the conventional methods . *Aula and Drage cultivars* were planted in the farms. The amounts of N and P fertilizers were equal in all different plots. At the end of harvesting period (September , 1993) the yield of each plot were weighted and for determining the tuber characteristics, they were taken to the laboratory.

Tuber's K content , protein , starch and number of potatoes were measured and counted respectively .The result were showed that K-fertilizer had a positive and