

**THE EFFECT OF TUBER SIZE AND SPACING ON GROWTH AND YIELD OF  
POTATO ( *Solanum tuberosum* L. )**

**S. A. AL-Hamdany  
Dept. Of Horticulture - College of Agric., Univ. of Diyala**

**ABSTRACT**

A study was conducted in private agriculture site in Akarkuf-Baghdad during autumn season 2001 on potato tubers CV.Desiree (class-B). Potato seeds were planted on Sep.20. on two richedes ( 4.5 X 1.6 m). The experiment included 6 treatments resulted from two tuber sizes small with diameter less than 35mm and medium one with diameter 35-55mm , beside three plant distances between tuber seed 10 , 15 and 20 cm . The treatment were distributed in Afactorial experiment with three replicates in Randomized Complete Block Design ( R.C.B.D ) . Means were compared according to L.S.D. test with 5% significant level . The results indicated that there no significant effects of tuber size on the percentage of germination , stem thickness , average weight of marketable tuber and number of small tuber / donium .Where as medium size tuber treatment increased significantly the number of principle air stem / plant , plant length , number of tuber / plant , plant yield , weight and number of large and medium tuber / donium , weight of small tuber / donium , weight and number of tubers for the marketable and total yields / donium .

As Far as the effect of plant distance , the results showed that there is no effect of it on the germination percentage , number of principle air stem / plant length , number of tuber / plant , average weight of marketable tuber , yield of plant and number of small tuber / donium .The treatment of large plant distance of 20cm increased the stem thickness if compared with 15cm distance . Whereas 10cm plant distance raise weight and number of both large and medium size

tuber / donium , weight of small tuber / donium , weight and number of tuber for each of marketable and total yields / donium if compared with planting using 20cm distance which reduce all the properties mentioned above except weight of small tuber / donium which gave less weight when planted on 15cm distance .

The interaction between volume of medium size tuber and less plant distance results in a high values of number of principle air stem / plant , plant length , weight and number of tuber for each of large and medium tuber / donium , weight of small tuber / donium and weight and number of tuber of both marketable and total yield / donium . The results indicated that the high germination percentage , stem thickness , number of tuber / plant , plant yield and number of small tuber / donium was resulted from the interaction between medium tuber and largest plant distance .