# EFFECTS OF DROUGHT OR REMOVED OF VEGETATIVE GROWTH AND STOPPING IRRIGATION ON (1):- YIELD AND QUALTITATIVE CHARACTERSTICS OF POTATO TUBERS *Solanum tuberosum* L.

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## ABSTRACT

The study were conducted during spring season 2002 , Using potato tubers *Solanum tuberosum* L. Var. Desiree(class –A). The tubers were sprouted and infected and mechanically damage tuber were discarded. The tuber seeds were planted using spacing of 4.5 x1.6 m. The experiment included eight treatments as follows:

1- Haulm distractions by hands and stopping irrigation ,22 days before harvest.
2- Haulm distractions by hands before 22 days and stopping irrigation 11days before harvest.
3- Haulm distractions by hands before 22 days and stopping irrigation 6 days before harvest.
4- Haulm killing by gramoxsone and stopping irrigation 22 days before harvest.
5- Haulm killing by gramoxsone , 22 days and stopping irrigation 11 days before harvest.
6- Haulm killing by gramoxsone , 22 days and stopping irrigation 6 days before harvest.
7- Haulm killing by Basta , 17 days and stopping irrigation 6 days before harvest.
8-The plants left without distractions and stopping irrigation 6 days before harvest.

The treatments were distributed in three replicates according to randomized complete block design (R.C.B.D.) and comparing the means by L.S.D. test 5 % . The experimental results can be summarized follows :-

Defoliation with Basta significantly increased the average weight of marketable tubers and the average plant yield , the yield and the number of large size tuber and decreased the average weight and the number of small size tubers and the marketable yield and the total yield and reduced the weight and number of non marketable tubers and increased the coker layer .

The control treatment (with out hand or chemical defoliation ) significantly Increased the average number of tubers per plant and the

number of marketable tubers and total number of tubers and increased the percentage of the dry matter and the carbohydrate and starch and the specific gravity of the tubers and the vitamin C content in tubers . All defoliation treatments before 22 days from harvesting significantly decreased the percentage of weight of tubers showed peeling character to zero .

Hand defoliated plants before 22 days and preventing irrigation 11 days before harvesting significantly increased the percentage of weight of tubers with 35-55 mm protein and tuber firmness .

**Key words** : potato ( *Solanum tuberosum* L.) , Haulm desiccation , stop irrigation