

EFFECTS OF DROUGHT OR REMOVED OF VEGETATIVE GROWTH , STOPPING IRRIGATION AND CURING ON 2:- STORABILITY 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, the infected and mechanically damage tuber were discarded . The tuber seeds were planted using spacing of 4.5 *1.6 m. The field 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 11 days before harvest.
- 3- Haulm distractions by hands before 22 days and stopping irrigation 6 days before harvest.
- 4- Haulm killing by gramoxone and stopping irrigation 22 days before harvest.
- 5- Haulm killing by gramoxone before 22 days and stopping irrigation 11 days before harvest.
- 6- Haulm killing by gramoxone before 22 days and stopping irrigation 6 days before harvest.
- 7- Haulm killing by Basta before 17 days and stopping irrigation 6 days before harvest.
- 8-The plants left without distractions and stopping irrigation 6 days before harvest. In this experiments the qualitative characters of the tuber yield were studied . Two groups of 5 kg tubers were taken from each replicates and bagged in bags . The first group were kept in cold store at 4 ± 1 °c and 85 ± 5 % relative humidity with out curing.

The second groups were cured at 10-15 °c and relative humidity of 80-85 % for 15 days then transported parts to cool store for three months and the tubers were reconditionized at 31- 35 °c and relative humidity of 46-53 % for 10 days. The experiment included 16 treatments distributed in factorial experimental in three replicates using R.C.B.D. and the means of the treatments were compared using L.S.D. at level of significance of 5%.

The experiment results showed that :-

The haulm killing with gramixone , and stopping irrigation 22 days before harvest significantly increased the cork cell layer while the haulm killing with basta before 17 days and stopping irrigation ,6 days before harvest increased the percentage of cured tubers and decreased the percentage of sprouting and the percentage of weight loss.

All the haulm killing by hand treatments before 22 days and stopping irrigation before 22, 11 , 6 days from harvesting significantly reduced the percentage of microbial infection to zero level. Haulm killing with gramixone before 22 days and Stopping irrigation 11 days before harvest increased the percentage of protein , while haulm destruction by hand before 22 days and stopping irrigation 11days before harvest significantly increased the percentage of vitamin C . The curing of potato tubers significantly increased vitamin C content while the non cured tuber significantly showed a higher cork cell layer thickness and lowest percentage of sprouting and weight loss . No significant differences between the cured and non cured tubers in the percentage of cured tubers , microbial infection and protein content.

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