

**EFFECT OF ARGININE ACID AND CALCIUM NITRATE ON
STORABILITY OF TOMATO FRUITS
(LYCOPERSICON ESCULENTUM MILL.) C.V KANZE**

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ABSTRACT

The study carried out in the greenhouses of the nursery Directorate of Agriculture Diyala during 2012-2011 season. Tomato fruits c.v Kanze were used in the experiment, to study the effect of arginine acid and calcium nitrate on storability of tomato fruits, Seedlings were planted on 01.02.2011 in the greenhouse, the plants were sprayed with arginine acid at concentration of 0.2 g/liter and calcium nitrate at concentration of 20 g/liter for two times on 13.4.2011 and after two weeks on 27.4.2011 and left plants for comparison, gained fruits maturing bright red Light red stage and took the fruits of control (without spray) and conducted by transactions soaking in distilled water container on the concentrations of the same that was used process spray for a period of 5 minutes. Fruits were put in polyethylene packs and stored in the refrigerator at a temperature of 4 ± 1 C° for a period of one month, carried out the experience of a three replicates were used in Complete Randomized Design (CRD) and compared to the averages using L.S.D test at the level of probability of 0.05. Characteristics of the fruit were the studies beginning and every ten days to the end of the storage period. The results showed that plants sprayed with arginine acid resulted in maintaining the chemical characteristics during the period of storage, represented by total soluble solids and the percentage of total acidity and vitamin C as it was 6.24% 0.53% 15.66, mg/100 g juice and an increase 25.5%, 17.7 %, 13.5%, respectively, and reduce the respiration rate to 6.95 mg/kg/hr. A drop of 31.4%. The resulting spray the fruits of tomato with a solution of calcium nitrate to maintain a high level of total soluble solids reaching 6.4% and an increase 28.7% ,while led soak fruits to maintain a proportion of total acidity and vitamin C end storage 0.54% , 17.30 mg/100g juice and increase 20%, 25.5%, respectively, and reduce the rate of respiration to 4.99 mg/kg/hr. 50.7%. There was a decrease in total T.S.S , acidity , v. c and rate of respiration during storage period .

Key words : arginine acid , calcium nitrate , storage , Tomato .