EFFECT ARGININE ACID AND CALCIUM NITRATE ON PHYSICAl AND CHEMICAL CHARACTERIZES AND TOMATO FRUITS STORAGE ABILITY .

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ABSTRACT

The field experiment was carried out in plastic houses at the nursery, Agriculture Directorate Diyala governorate during the growing season at 2011-2012 using the hybrid tomato "Kanze" . The tomato seedlings were planted on 1.2.2012 and sprayed with arginine acid at a concentration of 0.2 g.L-1 and calcium nitrate at a concentration of 20 g.L-1 at two stages, the first was 70 days after planting and the second was two weeks after the first application while the seedlings in the control treatment were sprayed with distilled water. The experiment was laid using Complete Randomized Design (C.R.D) with three replicates, the averages were compared using the least significant differences test at 0.05 level. Study of physical and chemical characterize began at fruits storage and then every days to storage end . Results indicated that arginine spray treatment significantly decreased weight loss percentage 31.9% , Maintain fruits pressure and increased beta-carotene percentage recording 16.5% , 47.6% Respectively, and decrease respiration at 31.4% as compared with control treatment. Fruits duping in calcium nitrate decreased weight loss to 6.83% at percentage of 39.5% and high pressure to 4.009 kg/cm2 increase at 16.5% percentage compared with control treatment . Chemical characterize, the fruits maintained a high beta carotene 10.097 mlg.100g-1 and increased vitamin C to 25.5 % . 15 All the treatments significant maintained the fruits acidity , low

respiration percentage 50.7% compared with control treatment, while control treatment maintained a high lycopene pigment at 14.406 mlg.100g-1 . The storage time significant increased weight loss lycopene pigment, and decrease fruits pressure, beta-carotene, acidity, vitamin C and a high respiration then followed by a decrease to end the storage .