

EVALUATION OF SOME TREATMENTS AFTER SPRING FROST DAMAGE ON INFLORESCENCE BUD FORMATION IN PISTACHIO ORCHARDS

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Abstract:

On the 3rd of April, 2008 the temperature dropped to -6°C in some pistachio plantation areas of Kerman province, especially in Sirjan and caused damage to flower buds and newly grown shoots. In order to decrease the side effects of damage, an experiment was carried out in 2008 after the frost damage occurrence in April. The experiment design was Split, Split plots arranged in randomized complete blocks, the main plot included irrigation treatments and nitrogen fertilizer application at 15 and 30 days after frost damage, and the second plot included pruning treatments at three levels; 1. no pruning 2. prune 30% of growth branches 3. prune 60% of growth branches; PBZ treatment at three levels; 1. control 2. PBZ at 4 ppm 3. PBZ at 8ppm. After treatments, flower inflorescence bud size was measured in each treatment. Results showed that irrigation after frost damage instigated new vegetative growth, however flower induction of the trees had no impression on future crops. Results indicated also the effect of irrigation and nitrogen fertilizer increased the percent of flower bud induction after frost damage of newly grown shoots. A combination of irrigation and nitrogen fertilizer and 30% pruning had maximum percent of flower inflorescence buds. The PBZ increased a little amount of flower formation in shoots. In conclusion it was revealed that the 30% pruning treatment instigated a high percent of formation of flower buds and caused increased flower induction in the trees for future crops.