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APPLICATION OF NUCLEAR TECHNIQUE FOR PRACTICAL CONTROLLING OF *Ectomyelois ceratoniae* zell (LEPIDOPTERA PYRALIDAE)

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Pomegranate is one of the important fruit products in our country and Iran is the first producer and exportation of this product in the world. *Ectomyelois ceratoniae* (Lepidoptera: Pyralidae) recognized as the most important factor for decreasing quality and quantity of this product. Due to biology of the pest, application of pesticide is not practical; consequently losses of this valuable product are too much. Application of Sterile insect technique (SIT) is a method that used for a few insects with the special condition. This research has been done for evaluation practical control of this pest with application of nuclear methods (SIT) on pomegranate. In this regard pest larval and pupa stages are collected from contaminated pomegranate in saveh, transfer to agricultural, medical & industrial research school and reared on the artificial diet at $28 \pm 2^\circ\text{C}$, $60 \pm 5\%$ RH, 14 hours light and 10 hours darkness conditions. Produced pupa (young and old) irradiated and rear with 0:0:1:1- 9:9:1:1 ratio on pomegranate fruits in the cages. The result shows that application of sterile doses (120 and 160 Gy) on different pupa ages (Young 1-2 days and old 3-4 days old) and releasing ratio 7: 7:1: 1- 9:9:1:1 compare to control treatment with releasing ratio 0: 0: 1: 1 according crossing formula (Irradiated male \times Irradiated female \times Natural male \times Natural female), control damage of *E. ceratoniae* on pomegranate practically.

Keywords: Sterile insect technique, Dose, Pupa, *Ectomyelois ceratoniae* Zeller, Releasing ratio, Pomegranate.
