Study of 1st and 3rd larval instars feeding preference of the diamondback moth, *Plutella xylostella* (L.) (Lep.: Plutellidae) on different varieties of cauliflower

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The diamondback moth, *Plutella xylostella* (L.) (Lep.: Plutellidae) is one of the most important pests of cruciferous plants throughout the world. In recent years, this insect has been a serious pest for cauliflower fields in Tehran province. Resistance of the pest to all main groups of insecticides has been recorded and it is ranked in the 20 most resistant pest species reported up to now. Among cauliflower pests, diamondback moth, *P. xylostella* caused much damage to plants and is of particular importance. Using other methods including resistant cultivars in the integrated management of diamondback moth is essential. Thus, feeding preference of 1st and 3rd larval instars of *P. xylostella* was studied on eight cultivars of cauliflower. All varieties of cauliflower were randomly and rotating placed inside a cage with dimensions of 40x40x50 cm and eight 3rd larval instar with a soft brush was placed in the middle of the circle. For 1st Larval feeding preference 50 larvae were placed inside the cage. After 24 hours, the numbers of settled larvae on each cultivar were counted. This experiment was carried out in completely randomized design in the growth chamber at 25±1°C, 65±5% RH and 14:10D h photoperiod. For statistical analysis of data resulting from ANOVA procedure of SAS software was used and means with Duncan's multiple range test (DMRT) were compared. Results showed that the number of 1st and 3rd instar larvae settled on the different varieties were significantly different. The Dogol cultivar had the highest average number of preferred feeding larvae of 1st and 3rd instars. On the other hand, the lowest average number of larvae of 1st and 3rd instars was observed on the Abre-sefid and Buris cultivars.