## An investigation on utilizing pesticides in the Zanjan province and their effects on the environment

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Utilizing chemical pesticides is considered one of the methods of controlling pest and incorrect use of these chemical materials can have destructive effects on the environment. Total number of used pesticides in Zanjan and in the years 75, 80, 85, 87, 88, 89 and 90 equals to 30778/5(Litter/kilogram). The results of the study shows that 160 ton of this pesticide called delta metrin was used in the year 1390 and 180 ton was used in 217000 hectare and in the year 1391 and the later was used against wheat growth. In Tarom region, Malatiyon and seven pesticides were used for controlling grasshoppers in 1390 and in 4000 hectare, and also it was used in 5000 hectare in 1391. the stability of delta metrin pest was 10 to 15 days, and it will be analyzed during 1 to 2 weeks in the soil because of microorganism activity, and its effect (D T 50) on the soils is less that 23 days. Malatiyon pest disappears quickly. Seven pests (karbayl) are used for bees and poisonous paratyod. Inclusive pest management (IPM) method is an approach that is a mixture of different methods for controlling pest and it is also used for the prevention of environmental side effects have been proposed in this survey.

Key Words: Pest, Zanjan province, Environment, Inclusive pest management