

## **Insecticide Resistance Management in Insect**

Recep AY<sup>1</sup> Sibel YORULMAZ SALMAN<sup>1</sup> Mesut İŞÇİ<sup>2</sup> Yasemin YAMAN<sup>1</sup>

<sup>1</sup> S.D.Ü. Faculty of Agriculture, Department of Plant Protection, Isparta

<sup>2</sup> Fruit Research Station, Isparta

Control of pests that cause economic losses in agricultural products is one of the most preferred methods of chemical control. Currently, a lot of negative aspects of the chemical control have been revealed. These negative aspects might listed as following, the development of resistance to pests, side effects of natural enemies, effect on non-target organisms, residues on agricultural products, and environmental pollution, etc... One of the most important of these negative aspects is resistance development against pesticides in pests. Resistance was defined as following; to be able to survive of the populations exposed to the selection pressure, against to the same application dose of the same pesticides in field conditions or the genetic changes involved the population. After the development of resistance at pest control, resistance- break or -turn back is very hard or reverse transformation will take time. Therefore, prevent or delay the development of resistance is more important at the pest control, before resistance developed. The development and investigations about the biochemical and molecular basis of resistance, rapid methods of resistance would be very useful. At the resistance management, it is not sufficient to determine only the resistance presence to prevent or delay of resistance, appropriate strategies and the creation of methods is worth. Thus, to know the mechanisms of resistance in pests, application factors and mode of actions of pesticide would be useful. On this subject, the label direction of Plant Protection Products, in 2011, is an important step in the management of resistance in our country. Success in the management of resistance will be achieved with the participation of all stakeholders.

The resistance might be an important problem in the near future, because of the introduction of restrictions on some pesticide use or prohibition of their, in the process of European Union. In our country, in the process of the European Union, in particular, as a major problem in the pests control may be present in the near future. Therefore, this matter is useful in the development of strategies and methods of application.

**Key words:** Resistance, insecticide, acaricide, pest