The usage of some plant species as biopesticide

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The world population is increasing rapidly, while agricultural areas and food production are limited. Agricultural pests are the leading cause of crop loss in agriculture. Therefore, these harmful agents somehow must be controlled. Many methods have been developed to management agricultural pests. The most preferred method is chemical control in these management strategies. Hence, one of the major components of plant production is pesticides. Usage of intensive pesticide causes health and environmental problems all over the world. For this reason, less harmful control methods have been investigated against to conventional pesticides. One of these is the use natural compounds of plants as in the past. At present, some of these compounds have been commercialized together with development of modern chemical technology. But still many of them are used as they were in the past. The toxicity of these compounds is lower and the half-life period is shorter than conventional chemicals. Pesticide active compounds derived from plants generally affect only the target pest and closely related organisms, in contrast to broad spectrum. In this study, some plant species used as biopesticides have been compiled. Most known compounds used as biopesticide are phyretrins, rotenone, nicotine and azadirachtin derived from species of *Tanacetum, Derris, Nicotiana* and *Azadirachta* respectively. Many other plants are used for this purpose. These compounds derived from plants have lethal, anti-feeding, repellent, ovulation blocker, germination and growth inhibitory and similar properties against harmful insects, pathogens, nematodes, weeds and other pests. Interest in biopesticides is increasing day by day. Commercial chemical companies are making big investments in this field. The use of biopesticides is increasing not only in organic agriculture but also in conventional agriculture. In this context, Turkey has a great advantage with its rich plant diversity and research infrastructure.

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