

Role of botanical pesticides in controlling pests and enhancing crop's quality

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Protecting crops from pests is one of the most important global problems. To control pests, synthetic pesticides are over and continuously used and has resulted in problems of water, air, soil ecosystem pollution, insect resistance, animals, destroys pollinators insects and beneficial enemies, occurs food chemical residues and endangers farm operator's health. The negative effects of synthetic pesticides led to a resurgence of interest in botanical insecticides which are efficacious in managing different crop pests, inexpensive, easily biodegraded, have varied modes of action (repellents, feeding deterrents, antifeedants, toxicants, growth retardants). Their sources are easily available and have low toxicity to non-target organisms (pollinators insects, beneficial natural enemies), difficult for the pests to develop pesticide resistance, and provide residue-free food and safe environment. Also, several works at National Organic Agriculture Center from Saudi Arabia, demonstrate that the botanical pesticides have nutrient effects on the crops and can increase the nutritional value and quality of agricultural products. Therefore, as the demand of people on best quality of green food especially organic food becomes increasingly intense, we recommend the use of botanical pesticides as an integrated pest management program which can reduce the use of synthetic pesticide.

Keywords: Pest, Synthetic pesticides, Botanical pesticides, Crop quality, Residue, Environment.