

Phytochemical Pesticides

Many phytochemical pesticides exhibiting broad spectrum of activity against pests and diseases have long been considered as attractive alternative to synthetic chemical pesticides as they are biodegradable, target specific, and pose no or less hazard to the environment or to human health. Although a large number of studies suggest that plant-based materials do affect arthropod pests, vectors, and other pathogens, yet only a handful of botanicals are currently used in agriculture, and there are few prospects for commercial development of new botanical products. Several factors appear to limit the success of botanicals, most notably regulatory barriers and the availability of competing products of microbial origin that are cost-effective and relatively safe compared with their predecessors. In the context of agricultural pest management, botanical pesticides are best suited for use in organic food production and can play a much greater role in the production and post-harvest protection of food and food products in developing countries. There is thus a need to organize natural sources, develop quality control, adopt standardization strategies, and modify regulatory mechanisms