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PLANTS AS SOURCE OF PESTICIDES

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ABSTRACT

Pesticides are used in crop protection since from the practice of agriculture. The synthetic insecticides are in use from last century, due to quick action, high efficiency, low cost, easy to use. These synthetic insecticides played an important role in modern agricultural techniques mainly to eradicate insect pests and helped to improve economic condition of farmers. In the course of time insects have developed resistant power against these insecticides, the longer use of these chemicals results into the biomagnifications, become toxic to the biological world, it is also hazardous to the human and other animal life. Due to the negative side effect of chemical pesticides there is a need of alternative sources. The plant based insecticides such as neem oil, nicotine, pyrethrum and many more are common in use to control insects and pests as they possess different metabolic action and chemical composition. Further investigations are going on to improve the extractive value, isolation of active compounds, their action on pests, and they should also cost effective and should easily available to the farmers.

KEY WORDS: Biopesticides, Insecticides, Azadirachtin, botanical pesticides

1. INTRODUCTION

Pests are one of the major problems in agriculture field, they not only destroy the plants but also food grains fresh or stored. Since from one decade there are number synthetic pesticides are invented to control the pests. These chemicals used due to their high efficiency, long lasting action, target specific, quick action, low cost, easy to use and easy availability in the market. Some insecticides have negative effects on the nervous, renal, respiratory and reproductive systems of men and women (1). This is because of basic similarities between mammalian and insect systems. The insecticides are designed to attack an insect's nervous system and capable of producing acute, chronic neurotoxic effects in animals (2). Besides these effects of synthetic insecticides, their excessive and improper use results into; pesticide resistance in pests, contamination of environment, reduction in biodiversity and nitrogen fixation, destruction of aquatic and bird life, and changes in the natural biological balances, by means of a reduction of beneficial and non-target organisms and insect, including predators as well as parasites of pests in addition to honeybees (1, 3). Due to this reason several steps have been taken to control the pests and to reduce the use of synthetic pesticides.