

A REVIEW STUDY ON NATURAL PESTICIDES & ITS USES IN PEST MANAGEMENT

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ABSTRACT

Natural pesticides are pesticides made by organisms usually for their own defense, or are derived from a natural source such as plant, animal, bacteria, and certain mineral, use to control pest naturally with less effect or no effect. Examples of these natural pesticides are Rotenone (Derris sp.), carboxin, fluroacetate, nicotine, neem (Azadiractaindica), microbial pesticide Bacillus thuringiensis, and pyrethrins. Natural pesticides usually target specific sites in the insect such as nervous system, resulting in knock-down, lack of coordination, paralysis and death. Nicotine inhibits and compete with neurotransmitter by binding to acetylcholine receptors at the nerve synapses and causing uncontrolled nerve discharge. This paper focuses on new types of bio pesticides, examine the specificity to harmful pests, and the selectivity to beneficial animals. Many of the modern pesticides used today, persist in soil for years and compound the store of toxins in the soil, air and water. Botanical pesticides are generally highly bio-degradable, and they become inactive within hours or a few days and can easily be broken down by stomach acids in mammals, so toxicity to humans and animals is very low to non-target organisms and are ecofriendly. Since they are also very effective, natural pesticides should be the first choice for pest management, which in turn reduces the bioavailability of metal and noxious effect in the environment.

KEYWORDS: *Bio pesticides, Natural Pesticides, Nicotine, Pest Management, Toxicity.*

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