ANTIFEEDANT ACTIVITY IN HERBACEOUS MEDITERRANEAN PLANTS

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Summary

The increasing dependence of agricultural practices on chemicals raises today a long series of worrying questions about their environmental compatibility. Also because of the more and more public involvement in environmental concerns, the individuation of active principles useful for pests control which are safe from the toxicological point of view has became an important goal of experimental activity. According to this research file, a new input has been given to the studies concerning plant-derived pesticides; besides of the directly-acting ("true") insecticides, a strong interest arises from the so-called "indirect" ones: pheromones, repellents, attractants, growth regulators, inhibitors of oviposition and *antifeedants*. An antifeedant (Munakata, 1975) is a chemical compound that prevents the insect from feeding, but does not kill it directly; generally the insect remains near the treated material and finally dies of starvation. The majority of antifeedants which are actually utilized has a synthetic origin (organic zinc compounds); the only natural product effectively used in agriculture, though on a reduced scale, is the oil extracted from the seeds of Neem *(Azadirachta indica* A. Juss; Meliaceae). Other active principles with an antifeedant action have been detected in many herbaceous plants, belonging to the most diverse botanical families: *Asteraceae*, *Solanaceae*, *Rutaceae* ecc. Many of them come from plants which are native to the Mediterranean areas, and further studies about them seem to be an important step towards the exploitation of Mediterranean spontaneous flora. This work makes a review of the state-of-the-art about the researches on the antifeedant activity of some plants native to, or cultivated in, the Mediterranean semi-arid environments.

Munakata, K., 1975. Insect antifeeding substances in plant leaves. Pure Appl. Chem., XLII, 57-66.