ANNOUNCEMENT

Neem tree may yield safe, 'natural' insecticide

International Rice Research Institute, PO Box 933, Manila, Philippines

The insect-repellent qualities of oil extracted from the neem fruit, and of cake made from its residue, are being studied in a programme to develop biological pesticides that cause no ecological damage. IRRI is cooperating in neem research with scientists in the Philippines, West Germany, India, England, Israel, and the USA.

Neem oil and residue are comprised of a complex array of novel chemicals with diverse behavioural and physiological effects on insects. IRRI studies have shown that insects feed less, grow poorly, and lay fewer eggs on susceptible rice plants that have been sprayed with neem oil. Effects are similar with sucking insects such as the brown planthopper, and chewing insects such as the rice leaf-folder and the ear-cutting caterpillar.

A simple, inexpensive process has been developed at IRRI for extracting neem seed 'bitters' which have a strong biological activity against insect pests. Inadequate production and supply of neem seed, however, limits commercial extraction of neem seed bitters in the Philippines.

A US company has started commercial production of neem dust and spray insecticides for agricultural use. The products are undergoing toxicity tests required by the US Environmental Protection Agency for use in food crops.

IRRI publishes a quarterly Neem Newsletter.

International Rice Research Institute entomologists are studying insect-repellent qualities of neem tree products in a programme to develop biological pesticides that cause no ecological damage. Entomologist R. C. Saxena and two research workers examine a three-year-old neem tree planted on the IRRI research farm at Los Baños, Philippines. They have found that greenleafhopper development is disturbed when rice plants are sprayed or treated systematically with neem seed bitters (inset). On untreated control plants, leafhopper nymphs develop normally (right); on treated plants, nymphs are distorted (centre and right) and cannot reproduce.