

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:737
ANSWERED ON:31.07.2006
RESEARCH INSTITUTE .
Khairi Shri Chandrakant Bhaurao

Will the Minister of AGRICULTURE be pleased to state:

(a) whether Research institutes in Dehradun and Jabalpur have identified tree species producing biopesticides and developed biological controls against Babul defoliator; and

(b) if so, the details thereof and benefits likely to be accrued therefrom?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI KANTILAL BHURIA)

(a) Yes, Sir.

(b) The Tropical Forest Research Institute, Jabalpur of Indian Council of Forest Research & Education, Dehradun has screened 32 plant species for obtaining bio-pesticides.

Out of these species, leaf extracts of Aloe vera, leaf and seed extract of Annona Squamosa, and seed extract of Pongamia pinnata are found to be potentially very effective. Spray of these bio-pesticides controls the foliage consumption by insect larvae up to 90 per cent within 24 hours. Aloe vera contains a mixture of glucosides called aloin, which has antifeedant properties. Its 0.5% methanolic extract has proved highly effective antifeedant, better than already established neem seed extract. Annona squamosa leaf and seed have an alkaloid anonaine. Its 0.5% petroleum ether extract has proved equal to Aloe vera in its antifeedant property, and better than neem seed extract in its efficiency.

Pongamia pinnata contains karanjin which has insecticidal action. 0.4 to 0.5% petroleum ether extract of its seeds has been found to be highly effective in killing defoliating larvae.

The above bio-pesticides are better than commercially available neem based product in their performance. 0.5 per cent neem seed extract controls upto 60 per cent leaf area consumption only. Being more effective than neem against insect pests, these can be used in preference to health hazardous chemical pesticides and neem based commercially available bio-pesticides.

The Arid Forest Research Institute, Jodhpur of Indian Council of Forest Research & Education, Dehradun has found a parasite (Carcellia buitenzogensis) which controls babul defoliator.