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## Impact of neem and pongamia oil formulation and plant extracts for the management of berry borers of organic coffee plants as part of coffee integrated pest management

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Three consecutive years' experiments were conducted at the organic coffee fields of Loyola Estate, Sirumalai near Dindigul District of Tamil Nadu, South India during 2013, 14 and 15 to evaluate bioefficiency of plant oils and leaf, garlic extracts against berry borers in the chosen organic coffee field. Among these plant oils tested, spot application of neem and pongamia seed oils along with emulsifier was found to be very effective in the initial stage causing 90 to 94% reduction in borer population over control after three rounds of spraying in the final year. The overall borer population was found to be 90 percent reduced in the coffee plants sprayed with mixture of neem with pongamia oil 3% and 2% of garlic extract even at the later stage of borer attack. This was followed by strict regulation of shade as per integrated pest management techniques. The percentage of damaged green fruits in the first year were 36% followed by 22% in the second year and 14% in the third year in treated plants against control 100%. Further, the mean grade index recorded at the time of harvest was also very low which was statistically different from chemically treated plants. The other plant oil formulation viz., Pongamia and Iluppai were less effective and the leaf extract. Ipomea, Jatropha, Neem, Acorus and Chilli were not effective.

### Biography

Anthony Samy M has been involved in Coffee Production both organic and conventional for the last 7 years in the Western Ghats of Palni hills. At present, he is a Doctoral course student in the Department of Botany, Saraswathi Narayanan College (Autonomous) Perungudi, Madurai, Tamil Nadu, India. Recently, he won second prize in an international conference. He has served as a Manager in two Coffee Estates and modernized the estates. His interest and commitment to ecology and plant science began in 1990. Earlier, he also has served as a Principal and Correspondent of St. Joseph's Industrial School an ISO9000-2000 certified Institution, Ooty for five years. As a Philanthropist and Quality Manager, he has qualified in MBA Personnel Management and diploma in Magnetic Therapy and Acupressure Therapy.

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