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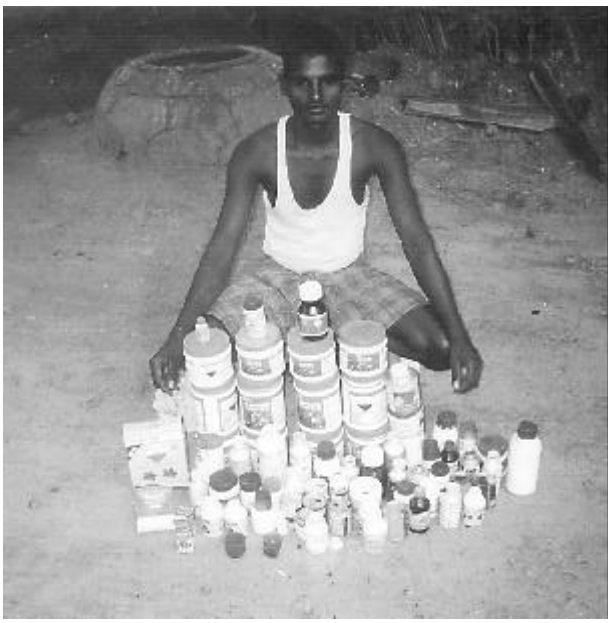
YOUNG CHEMICAL FARMER TURNS TO ORGANIC FARMING

Mr. Damodaran, a 20 year old farmer belongs to the Edaiyur village in the Tirukazhukundram block of Kancheepuram District. For the last 5 years he has been involved in intensive chemical agriculture. In July 2002 he attended a two-day training workshop organised by Centre for Indian Knowledge Systems. He has 1.5 acres of land. He cultivated bitter gourd in 45 cents, brinjal in 10 cents and ADT-43 paddy variety in 3 cents (during May – August 2002). Let us hear his experiences in the cultivation of the above mentioned crops.

"I did not know anything about organic farming before I came in contact with CIKS. For pest control I have been using several pesticides. I have also been using chemical growth promoters and fungicides to a large extent. Whenever I observe pests or disease in my crop I immediately contact the pesticide dealer and explain the symptom to them. I use whatever chemical is recommended by them. This season before I attended the training I spent nearly Rs.5,303/- for pesticides, fungicides and growth promoters. I can say that I have used almost all the chemicals available in the market. When I spray certain pesticides (Eg. Lannate – Menthomyl 40% S.P. Insecticide) I experience burning of eyes and headache. I suffer from this throughout the day and then it becomes alright.

Mr. Damodaran spraying plant extract in the brinjal field

When pesticides are sprayed on the field the insects die and fall on the ground. My house is very near the field. The hens which I rear eat the dead worms and get poisoned. I have lost nearly 10 hens in this manner. In the beginning I did not understand the reason for the death of the hens. But later I realised that the reason for the death of the hens are the chemicals used in my field.



Mr. Damodaran displaying the chemical pesticides he used for a season

Experience in bitter gourd cultivation

I had cultivated bitter gourd in 45 cents. I had planted them in 240 pits. I had used chemical fertilisers and pesticides extensively. During the fruiting period for increase of yield, I used Doubbes – crop yield enhancer. I got a yield of 65 kilos per week. After sometime it became obvious that I had to constantly spray the crop yield enhancer to get this yield regularly. It was during the end of the season that I had attended the training offered by CIKS and I decided to use asafoetida.

I took 1 kg of cow dung and mixed it with 5 litres of water. To this I added 100 gms of powdered asafoetida and let it soak for a day. The next day morning I took 1 litre of this extract and diluted it with 15 litres of water and sprayed for the crop. After spraying this, I powdered 1 kg of asafoetida and divided it equally for the 240 pits. I placed asafoetida at a depth of 1.5 inches near the root region and irrigated the crop. 8 days after this treatment, I got an average yield of 180 kgs. of bitter gourd per week.

Snake gourd

I have 2 snake gourd plants. They have not been fruiting for 6 months. I treated these two plants with asafoetida in the above manner. Now I get a yield of 5 – 8 kgs of snake gourd once in 5 days.

Brinjal

I have planted brinjal in 10 cents. There was a severe attack of aphids. I soaked 200 gms of tobacco in 1 litre of boiling water for a day. The next day I filtered this and added 9 litres of water to 1 litre of tobacco extract. I sprayed this for brinjal and I have been able to control aphids very effectively.

Paddy

In 3 cents I have cultivated a paddy variety ADT-43. In this crop there was severe attack of leaf folder. I took 250 gms of neem seed kernel, pounded it and soaked it in 1 litre of water. The next day I filtered this and to 1 litre of the filtrate I added 9 litres of water and sprayed on the crop. By this method, I was able to control the leaf folders very effectively".

After his success with the natural pest control techniques and natural growth promoter, Mr. Damodaran has now started preparing compost for use in his field.

Note : It is to be noted that whenever any plant extract was sprayed on the crop, soap solution (Khadi soap) at the rate of 10 ml per litre was also mixed and sprayed. This is very essential since soap acts as an emulsifier and helps the extract to stick well to the crop.

- S. Arumugasamy, S. Thambidurai

LIST OF PESTICIDES BANNED FOR USE IN INDIA

Aldrin, Benzene Hexachloride (BHC), Calcium Cyanide, Chlordane, Copper Acetacarsenite, Dibromochloro-propanal (DBCP), Endrin, Ethyl Mercury Chloride, Ethyl Parathion, Heptachlor, Menazon, Nicotine Sulphate*, Nitrofen, Paraquate Dimethyl Sulphate, Pentachloro nitrobenzene (PCNB), Pentachlorophenol (PCP), Phenyl Mercury Acetate (PMA), Sodium Methane Arsonate (MSMA),Tetradifon, Toxaphene, Methomyl 24% L Formulation, Methomyl 12.5% L Formulation (w.e.f. 26.3.2002), Phosphomidon 85% SL Formulation (w.e.f. 26.3.2002)

* This pesticide is manufactured in India for export purposes only.

Source : Statistical Information on Plant Protection, April 2001, Directorate of Plant Protection, Quarantine and Storage, Faridabad

PLANTS IN PEST CONTROL

Calotropis *(Calotropis gigantea)*

Family : Asclepiadaceae

Regional Names

English : Gigantic swallow wort, Mudar; Hindi: Madar; Bengali : Akanda; Malayalam : Erukku; Marati : Ruvi, Akda, Akra; Sanskrit : Arkah; Tamil : Erukku; Telugu : Mandaramu, Ekke; Kannada : Ekkemale; Gujarathi : Akado.

Distribution : Throughout India in dry waste places.

Botanical description : A large hardy much-branched milky shrub, very pale in colour, the branches, leaves and inflorescence covered with loose soft white wool; flowers beautiful lilac, rosy or purple tinted in umbellate lateral cymes; fruits fleshy and green.

Plant parts used : Leaves

Mode of action : Insecticidal, antitermites, antinematodal

Target organisms : Caterpillars, termites, aphids, *Meloidogyne spp.*

Preparation & Application **:** 8 – 10 kg of plant material is soaked in water for at least 24 hours, then filtered. This liquid is poured on termite-infested soil. To test the effectiveness, farmers place pieces of wood into the soil at various points in the field. If the wood remains pest-free for one week then the treatment is judged effective.

For the control of caterpillars, farmers collect the latex and dilute it with water at a rate of 1:15. This spray effectively controls the pest within three days.

Finger euphorbia *(Euphorbia tirucalli)*

Family : Euphorbiaceae

Regional Names

English : Milk-hedge, Indian Tree - spurge; Hindi : Barki - thohar; Bengali : Lankasij; Malayalam : Tirukalli; Marati : Kada nivali; Sanskrit : Dugdhika, Trikantaka; Tamil : Kombu-kalli, Tirugu-kalli; Telugu : Kada jamudi; Kannada : Mondukalli; Gujarathi : Thora danadalio.

Distribution : This plant is a native of America but has become acclimatised and grows freely in all parts of India. It is naturalised in India, especially in the drier parts of Bengal and South India, and largely grown in hedges. It is grown for sheltering young mango plants from direct sunlight.

Botanical description : An unarmed shrub or a small tree, with erect branches and smooth, cylindrical, polished, whorled branchlets, bearing small linear, oblong, caducous leaves. Trunk covered with rough, greenish brown bark having a cracked appearance. The plant yields a milky latex.

Plant parts used : Branch

Target organisms : Aphids, termites, cutworms, leaf blight

Preparation & Application **:** Take a mature branch of the plant and pound it finely. This paste is dipped into a 10 litre container filled with water and allowed to extract for some time. The solution is filtered and ready to be sprayed for control of aphids, termites, leaf blight.

For control of cutworms 10 drops of oozing sap from a cut branch are collected, added to 1 litre of water and ready to use.

- Source : Natural Crop Protection in the Tropics by Gabriele Stoll

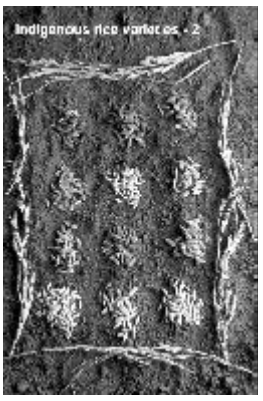
In God's Own Country - ***directed by Rajani Mani and Nina Subramani - Produced by Elephant Corridor, English, 28 mins, 2002.***

This documentary profiles Kasaragod district of Kerala and its struggle against the killer insecticide-endosulfan. It also narrates the story of another endosulfan-stricken village in Karnataka. It makes a stark commentary with villagers telling their own stories about the impact of endosulfan on the people, bees and animals.

How to Order ?
Please contact - elephantcorridor@hotmail.com

Indigenous Rice Varieties - 2 ***by M. Jayashankar, S. Arumugasamy,H. Saraswathy and K. Vijayalakshmi, Centre for Indian Knowledge Systems, Chennai, 2002, pp.100***

This book provides detailed information on 47 indigenous rice varieties. For each variety the



cultivation details, agronomical features, characteristics of the earhead and the grains, and yield of grain and straw are given. It also provides information on certain special features of the variety such as pest resistance, drought tolerance, medicinal properties, etc. All the information provided in this book is based upon our experiences during the cultivation of these varieties under field conditions - this adds to the value of the book.

Price : Rs. 60/- (English) Rs. 40/- (Tamil)

Available from : CIKS, 30, Gandhi Mandapam Road, Kotturpuram, Chennai-85

How to Order?

To obtain copies, please send a Money Order or Demand Draft favouring "Centre for Indian Knowledge Systems" payable at Chennai. Cheques are NOT acceptable. We also do not send books by VPP. (Please add Rs.10/- towards postal charges).

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