



Analysis of Existing Policies and Programmes for Pest Management in Agriculture – Limitations and Opportunities

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Existing Schemes In Gol on Pest Management

■ Technology Mission on Cotton (Mini Mission II)

Components:

1. Farmers' Field School
 - Agro-Eco System Analysis by regular field visits
 - Growing healthy crop
 - Conserving natural enemies
 - Farmer becoming expert in decision making
2. Season long training of facilitators
3. Insecticide resistance management
4. Seed treatment with Pesticides including *Trichoderma*
5. Surveillance and monitoring of diseases and pests
6. Distribution of Pheromone traps / Light traps
7. Bio-agents / Bio-Pesticides
8. Human resource development

Gol Schemes..... contd

■ Control of Red Hairy Caterpillar (RHC)

Components:

- Deep summer ploughing
- Community Bonfires after 48 hrs after 1st showers
- Light traps
- Mechanical removal & destruction of eggs
- Growing trap crops
- Distribution of Milk weed (*Calotropis*) / Castor twigs
- Digging trenches around field and dusting chemicals
- Spraying insecticides
- Poison baiting with Rice bran + Jaggery + Quinalphos

Gol Schemes.....contd

■ **Integrated Scheme of Pulses, Oil Seeds and Maize (ISOPOM)**

Components:

Apart from the other regular components the following need special mention

-50 % pesticides

-Involvement of private sector including NGOs, farmers' organisations, Cooperative bodies, Public sector agencies in the following activities

- Seed production
- Supply of inputs
- Extension support
- Block demonstrations & Frontline demonstrations

-Innovative measures and additional components by the states to the extent of 10% allocation

Analysis of existing policies and schemes on pest management

Technical component

- Considered parameters for analysis are technology and production aspects rather than the farmers' livelihoods
 - Should the technology not be of SF, MF, Women and agriculture labour oriented in rainfed?
- Whether factors tried are in congruence with natural processes and natural cycles?
- Weeds - Is there no need for a paradigm shift as a concept?
 - Is weed not an uncultivated food / medicine/ fodder / mulch / biomass?
- Usage of pesticides runs contrary to conservation of natural enemies of crop pests and distorts agro-ecosystem

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Financial Component & Institutional component

- Present support is 'individual farmer based' (but could be 'CBO based') and accessing of subsidies by limited number of farmers repeating every year
- Whether the support should go to input subsidy or for capacity sharing for knowledge transfer?
 - Whether the subsidy can be recurring or one time for a self regenerating mode at community level? (Ex: pesticides @50% subsidy or neem plantation)
 - Whether partly it can go as revolving fund to the community? (Ex: neem pulveriser, spraying equipment, mini dal mills, implements etc. on custom hiring basis)
 - Rest of it can go in investing in community for sharing/internalizing knowledge transfer

WHAT HAPPENS ONCE THE SUBSIDY OR THE PROGRAMME IS WITHDRAWN?

Alternate Experience

- The experience of Andhra Pradesh (AP) with RHC in partnership with NGOs without chemicals involving communities in campaign mode for 3-5yrs made RHC disappear in about 40 villages in early 1990's without yield reduction
 - Dept. of Agriculture anchored supply of bonfire material, light traps; NGOs did social mobilisation and ensured community action
 - Dept. and NGOs did technical backstopping
 - Approach was proactive; educating on the life cycle of the pest, interrupting at pupal stage, adult stage, egg stage and early instars
 - Community adopting on massive scale
 - No need for chemicals

Another experience of Punukula village in Khammam dt.

- Two pesticide poisoning cases every week
- Pesticide cost going up- net farm incomes coming down
- Health hazards to farm women, labour
- Community revolted, imposed ban on entry of pesticides into the village
- NGO, farmers, SHGs and sarpanch adopting Non-Pesticidal Management (NPM)
- Capacity building of farmers on pest life cycles and intervention in early stages
- Use of traditional technical know how and botanicals
- Ecology getting restored; beneficial insects' count going up
- Reduced cost of cultivation and health expenditure
- Farmers brought back their mortgaged land and net incomes increased

Can the experiences be up scaled?

Challenges for Main stream

- Lack of knowledge on pest and disease life cycles and on beneficial organisms
- Need for CBOs' involvement
- Finding agencies for technical backstopping at farmer level
- Lack of bias towards small and marginal farmers and farm women
- Lack of employment opportunities for agriculture labour leading to migration
- Neutralising influence of market forces
- Erosion of traditional technical know-how
- Depletion of natural resource base and bio-diversity
- Prevalence of high energy intensive agriculture models
- Lack of shift from “subsidised input centric model” to “subsidised knowledge centric model”

Opportunities

- Strong technical manpower of DoA from mandal level and above
- Strong trained manpower below mandal level to farm gate level with SERP-NGO collaboration
- Strong CBO movement nurtured by SERP over past 15 years with PoP, Poor, SF/MF
- Present ongoing programme on SA
 - Practicing farmer as village facilitator
 - One cluster facilitator for a group of 5 villages
 - CRP from SHG/farming community
 - CBOs – MoU with NGOs
 - Community managing the programme-NPM sub committees
 - Community investing on knowledge sharing and NRM
 - Sasya Mitra groups, weekly, monthly and annual meetings (village immersion)

Opportunities

- Establishing community seed banks – tie up for supply of FS and subsidy
- Integrating with NREGP - Overlay with dairy and marketing – anchored by CBOs
- Taking forward NPM in rainfeds to Organic farming with group certification without yield reduction.
- **MoU of GoI with SERP for Rs.182 crores over 5 yrs on organic farming in rainfed areas in AP**

Convergence

- Capacity sharing
 - Agriculture Officers acting as master facilitators on NPM / Ecological farming for village, cluster and SHG resource persons
- Convergence/MoU with DoA and allied with SERP (NGOs/CBOs) at various levels upto village for encashing on opportunities mentioned earlier

- Research and Education
 - Exploring the science of indigenous knowledge base on pest management including seed treatment on research farms
 - Establishing and mainstreaming of role of soil life in fertility, pest and disease management for sustainable farming
 - Role of livestock excreta / products
 - Efficacy of preparations / fermentations like *panchagavya*, *amrutpani*, *brahmastram*, *gobanam* etc

Convergence

- Research on land productivity rather than crop productivity and operationalising on farmer lands
- Introduction of course curriculum in primary, secondary and higher levels of education on ecological farming
- To act as knowledge-sharing centres for farmers and extension personnel by starting model ecological farms in their research stations and KVKs
- Bias towards energy conserving rainfed crops. Shifting focus to Energy credits.
 - Research studies to understand and enable marginal farming families to derive income-security and nutrition security round the year [Sholapur Experience]