Research into policy: Creating the enabling policy environment for biological control agents (BCA) in Kenya

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Horticultural industry Kenya

Worth $200 million from exports

Has 50,000 smallholder suppliers (50% of production), provides livelihood for 2.5 million people

Major issue is need to reduce pesticide residues to meet consumer expectations and comply Maximum residue limits (MRL) for pesticides on exports to EU
Diamond back moth (DBM)

- Worldwide crop pest in Americas, Australasia, Africa and Asia
- Cost to growers $1 billion per annum
- Rapidly develops pesticide resistance
- Major threat to viability of brassica crop production
Diamond Back Moth and pest management issues in Kenya

DBM resistance to chemicals increases production costs, reduces yield and leads to high pesticide residues on crops.

DBM threatened viability of smallholder producer sector for brassica and other crops.

Kenyan agriculture needed access to new integrated pest management (IPM) technology.
DFID CPP research 1996-2003

• Commissioned research to identify new approaches for pest management including DBM
• Research developed by teams from NRI, CABI, IACR, University of Reading and CSL with KARI
• Identified best bet for DBM was biological control based on an endemic granulovirus
• Other BCAs were also developed for other pests/diseases e.g. nematodes
Biological control agents: fungi, nematodes, predators, parasitoids, bacteria and viruses
Push/pull for uptake of BCA research

- Horticultural industry was keen to adopt BCA to meet MRL, improve environmental impact and reduce production costs
- Pressure from buyers to adopt low pesticide production
- Competition
- Local companies e.g. Dudutech keen to commercialise new BCA were identified
Constraints to adoption of BCA in Kenya

- Lack of national policy to facilitate the commercial marketing or promotion of BCA in Kenya
- No appropriate legislation covering sale of biological agents
- Lack of expertise in regulation and QC protocols for biological agents
Way forward to facilitate BCA use

• Need to develop and adopt enabling legislation
• Create legislative and policy framework that balances need to bring new products/technologies into use while protecting consumers and suppliers
• Also need to stimulate local production and distribution to smallholders
Initiative to resolve policy issues

Workshop in 2003 to develop policy and agree legislation

• Agree policy and institutional responsibilities
• Identify and co-opt appropriate expertise
• Form legislative network/platform
• Develop appropriate legislation and regulation
Registration of BCA issues

• What model of legislation? USA, EU, or other southern e.g. India
• What agents to include under legislation e.g. exemptions for predators and parasitoids
• Policy towards endemic and exotic agents
• Generic or product registration
• Cost of registration dossier
• Acceptability of public data (major issue in cost)
• Need for additional local data
Elements of success

1. Agenda was country led and driven by stakeholders
2. Effective local champions (Mary Wabule KARI, Louise Labuschaighne Dudutech & Paul Ngaruiya Pesticide Control Board)
3. Decision making involved research, industry, academic and government players
4. Outcome driven to develop enabling legislation
5. Included follow up after workshop
Elements of success (2)

1. Access to northern technical expertise in science and legislation

2. Drew on Southern lessons and models from Asia, West Africa and Cuba

3. Established network to translate aims into legislation (innovation platform) with explicit capacity building

4. Involved follow up mentoring to ensure delivery of legislation
Outcome

• Kenyan legislation was in place by Dec 2004
• New BCA products were registered and commercial sale started
• New companies have appeared to supply BCA
• South-south networks developed (Cuba-Kenya)
• Legislation model now to be adopted in other countries and seen as an African model