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Panel Brief
- Harmonisation of non-tariff measures
  - 396/2005/EC, Japan MHLW 2006
- Risk assessment vs. precautionary approach
  - Reg. 91/414/EEC → EC 1107/2009
- Raising awareness (of regulations)
- Capacity building in cocoa producing countries
- Recommendations (5)
Overall objectives

- Sharing information on pesticide science
- Linking:

  - Field practice (training needs)
  - Policies & residue requirements of consumers
  - R&D needs

- Emphasising safety issues … … for producers as well as consumers

Complicated and interdisciplinary, so…

- Specific advice requested from ICCO member countries
- Free to download on www.icco.org/SPS
- Responsible pesticide use and its role in:
  - Good Agricultural Practices
  - Good Warehouse Practices
Pesticide lists: Appendix 3 (1st Edition had 2 categories)

A. ‘Strategic list’ for key pests: EU / Japanese / US import tolerances & evidence of efficacy
B. Compounds to be used with great CAUTION (limited time remaining, etc)
C. Lists of experimental and other potentially useful control agents
D. Pesticides that MUST NOT BE USED for cocoa

Regular updates on:
http://www.dropdata.org/cocoa/cocoa_SPS_blog.htm

Project components of

- Create awareness on Sanitary and Phyto-Sanitary (SPS) standards website; regional, national workshops, etc.
- Enhance the capacity of relevant stakeholders to apply the responsible pesticide use component of GAP & GWP: for better access to markets.
- Enhance institutional capacity in-country to monitor and enforce adherence to SPS standards in cocoa
- Strengthen regional collaboration & capacity: combat counterfeit products, labels, protocols for efficacy, etc.
Published lists of pesticides for cocoa, compliant with market requirements

Major field pests of cocoa

**Pests and Diseases** | **Potential Losses**
--- | ---
Black Pod | 550 000 (tonnes*)
Mirids (capsids) | 250 000
Cocoa Pod Borer | 300 000
*Moniliophthora* spp., VSD | 370 000
Swollen Shoot Virus | 50 000

* cocoa industry estimates
**Major field pests of cocoa**

<table>
<thead>
<tr>
<th>Pests and Diseases</th>
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* … spraying with pesticides remains a principal control option

**Storage insects or residues?**

- Possibly an important source of high residues?
- Phasing-out of methyl bromide → heavy reliance on phostoxin:
  - resistance issues?
Pesticides are risky, controversial, but apparently necessary in cocoa:

**Recent trends (Global) for insecticides**
- Near total elimination of most toxic AIs (I)
  - … 😊 - but implication for IRM: 😊
  - A positive consequence of MRL regulation
- Rise esp. in pyrethroid & neonicotinoid insecticides
- Promotion of insecticide mixtures, formulated for OECD reg. standards (e.g. Pyrethroid – neo-nicotinoid mixtures by 2 CropLife companies)
- Ag-chem industry has now developed 28 modes of action (MoA) for insect control … with an increasing interest in ‘biorationals’ …

Example: mirid control
- … only 4 major MoA have been widely used – starting with BHC in 1950s
  - fumigant action compensated for poor application
- Currently pyrethroids & neonicotinoids predominate
- How best to screen for new compounds?
- How best to apply (especially contact) insecticides?
Assay issues: moving-on from techniques for organochlorines / pyrethroids
Registration authorities please note!

Variable cone nozzles - locking-in bad practice?

19th century technology!
Cone nozzles being used to treat cocoa pods for black pod disease and insect pests

‘jet’ mode:
- very popular
- very inefficient!

Summary

Perverse consequences of ignoring pesticide issues
- Continuing use by large proportion of farmers
- Lack of skills; inappropriate application equipment
- Research vacuum: little impartial pesticide science done on cocoa since early 1990s …

Pesticide product lists:
- Fewer, less toxic compounds: improved safety; but products getting more expensive
- farmers may only use 1-2 MoA against individual pests
- Can efficacy of existing control practices be maintained?
- Need for rigorous protocols for evaluating new AIs

Development and enforcement of SPS standards:
see www.icco.org/SPS & www.dropdata.org