



**Current State of Specialty Crop Programs,
Initiatives & Challenges : Asian Region**

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General Information

1. Crop Production in Asia

Major Crops : Rice, rubber, maize, cotton, cassava, sugar cane, oil crops, coffee, tea, etc.

Minor Crops : tropical fruits, vegetables, spices, etc.

2. Trends of Pesticide Use in Asia

Report from CropLife (2003) world pesticide market declining about 5%

However, the trends in Asia in the last five years (2000-2005) showed increasing in many countries about 2-5%

In general, one-fourth of pesticides manufactured in the world are used in Asia

(Waibel 2007)

3. Pesticide Regulation & Management in Asia.

Most of the countries have established pesticide regulations, generally in accordance with FAO guidelines. The major issues include *Registration, Labeling, Licensing for sale, storage and distribution, Advertisements, etc.*

Pesticide management such as *banning and restriction* had been initiated in many countries based on international recommendations and internal decision



4. Pesticide Residues in Developing Countries

4.1 The levels of pesticide residues were found in some fruits and vegetables from extensive monitoring exceeded Codex MRLs

Pesticide residues exceeded Codex MRLs

Country	Commodity	Pesticide
Indonesia	Vegetables	carbendazim, carbofuran, chlorpyrifos, fenvalerate, dithiocarbamate
Malaysia	Fruits & Vegetables	chlorpyrifos, profenophos, iprodione, monocrotophos, dithiocarbamate
Thailand	Fruits & Vegetables	methamidophos, chlorpyrifos, cypermethrin, profenophos
Vietnam	Fruits & Vegetables	monocrotophos, cypermethrin, methamidophos, lambda-cyhalothrin

Source: International Seminar on Food Safety and Quarantine Inspection.2000



4.2 Differences in International Standards

- **Codex MRLs**
- **U.S. Tolerance**
- **E.U. MRLs**
- **Japan Positive list**



The Movement among ASEAN Member Countries on Harmonization of MRLs of Pesticides

10 ASEAN member countries:

- Brunei
- Cambodia
- Indonesia
- Lao PDR
- Malaysia
- Myanmar
- Philippines
- Singapore
- Thailand
- Vietnam

Issues on Minor Crops:

- **Potential as trade barrier due to unavailability of standards**
- **Considered not economically feasible to produce data by industry**
- **Where Codex MRLs are available for similar crops, extrapolation should be considered on a case-by-case basis**
- **Work sharing was proposed to save resources and manpower**



The first meeting of the EWG was held in 1996 and agreements could be made on:

- **Procedure in setting ASEAN Harmonized MRLs**
- **Principles of harmonization**
- **Prioritized pesticide/commodity for harmonization**
- **Collation of GAP information relating to the identified pesticides**

Principles of Harmonization:

- **Pesticides proposed for setting up ASEAN MRLs should have registered use in any ASEAN countries**
- **If Codex MRLs are available and applicable, should be adopted for harmonization as ASEAN MRLs**
- **If Codex MRLs are not acceptable, modification of MRLs should be supported with residue trial data and dietary risk assessment**
- **If Codex MRLs are not available, member countries could propose MRLs to the ASEAN EWG with supporting data based on Codex procedure**

Examples of ASEAN MRLs set up by extrapolation from similar crops.

Pesticide	Crop	ASEAN MRLs (mg/kg)	Similar crops with Codex MRLs
cypermethrin	cabbage	1	brassica vegetables
cypermethrin	crucifers	1	brassica vegetables
cypermethrin	garlic stem	0.5	leek
cypermethrin	shallot bulb	0.1	onion bulb
diazinon	garlic	0.05	onion bulb
malathion	chilli	0.5	pepper
malathion	stringbean	2	common beans
malathion	chinese cabbage	8	cabbage
metalaxyl	maize	0.05	cereal grain
methomyl	chilli	1	pepper
methomyl	shallot bulb	0.2	onion bulb



In conclusion, the ASEAN MRLs could be established by 3 ways:

- 1. Adoption from Codex MRLs, if available and acceptable**
- 2. Extrapolation from similar crops**
- 3. Establishment follow Codex procedure, using data from local residue trial and dietary risk assessment**



**Examples of regional collaboration/work sharing
having been initiated from *ASEAN* members:
*Malaysia, Philippines, Singapore, Thailand and
Indonesia* to work for local residue data on :**

pesticides cypermethrin, chlorpyrifos, carbosulfan,
cyhalothrin, carbendazin, monocrotophos,
methamidophos

crops mango, litchi, longan, banana, chilli pepper,
asparagus, okra, yard long bean, oil palm

Future Initiatives

- ❖ Consideration is given to the development of extrapolation of data, crop grouping and minimum data requirements in the harmonization process
- ❖ **Initiation and intensification of collaboration in the generation of residue data on minor crops**

Challenges

- **Pesticide regulatory harmonization among countries in the region is developed for implementation, with guidelines on minor crops and related issues**
- **Close cooperation between governments and pesticide industries to increase capabilities in generating residue data on minor crops**
- **Exposure assessment utilizing national/regional diets developed for the region**

THANK YOU



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