

# Principles for Establishing Maximum Residue Limits for Pesticide Residues in Food in Hong Kong

1 March 2011

# Outline

- ✿ Key principles for determining Maximum Residue Limits (MRLs) / Extraneous Maximum Residue Limits (EMRLs) for pesticide residues in food in Hong Kong
- ✿ An introduction of food classification
- ✿ An overview of database of proposed MRLs/EMRLs for pesticide residues in food in Hong Kong

# Key Principles

- 1) Adopt MRLs and EMRLs of individual pesticides recommended by the Codex Alimentarius Commission (Codex) in full as the backbone;
- 2) Adopt MRLs and EMRLs of the Mainland when there are no corresponding Codex standards; and
- 3) Supplement MRLs and EMRLs from the USA and then Thailand when there are no corresponding standards from Codex and the Mainland.

# (1) Adopt Codex standards in full as the backbone

## ✿ Codex standards

- ✿ established by the Food and Agriculture Organization and the World Health Organization of the United Nations in 1960s
- ✿ important international reference point for consumers, food producers, processors, national food control agencies and the international food trade in developing food associated standards.

## **(2) Adopt standards of the Mainland when there are no corresponding Codex standards**

- ✿ The Mainland is the largest and most important source of food in Hong Kong
  - ✦ 34% of fresh and semi-processed fruits, vegetables and cereals were imported in 2009
- ✿ Many of the Mainland standards are applicable locally
  - ✦ Application of pesticides in some parts of the Mainland is similar to that in Hong Kong

### **(3) Supplement related standards from the USA and Thailand when there are no corresponding standards from Codex and the Mainland**

- ✿ USA and Thailand are our next most important trading partners, after the Mainland, in fresh fruits, vegetables and cereals
- ✿ USA
  - ✦ Regulatory system is well-established, transparent and science-based
- ✿ Thailand
  - ✦ MRLs set for cereals and tropical fruits are particularly relevant

# Other Related Principles

- 1) Adopt Codex's classification of food
- 2) Adopt Codex's pesticide residue definitions
- 3) Adopt the higher MRL/EMRL available when a chemical is used as both pesticide and veterinary drug
- 4) Not to consider MRLs in individual food supplying countries for import control purpose

# (1) Adopt Codex's classification of food

- ✿ Supplement MRLs/EMRLs from the Mainland/USA/Thailand (in order of priority) only if their respective classification of the particular food commodity/subgroup/group fits in the Codex's classification



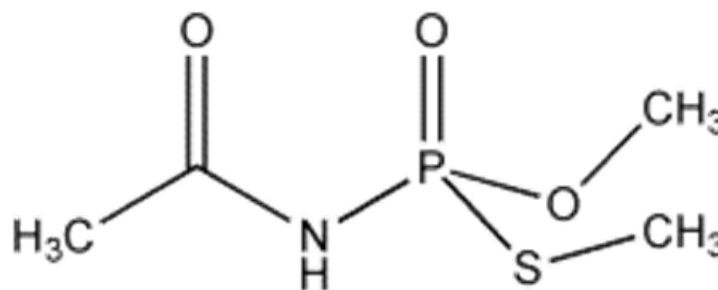
## (2) Adopt Codex's pesticide residue definitions

- ✿ The “residue definition of a pesticide” defines the exact combination of the pesticide and its metabolites, derivatives and related compounds to which the MRL/EMRL applies
- ✿ Impossible to compare standards of Codex and those of other countries if the residue definitions are different
- ✿ Adopt related MRLs/EMRLs of a particular pesticide from the Mainland/USA/Thailand (in order of priority) only if the residue definition is the same as that of Codex

# Example of different residue definitions

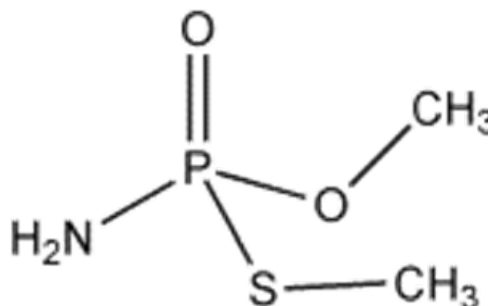
## Acephate

Codex



Acephate

+



Metabolite, O,S-dimethylphosphoramidothioate

USA

### **(3) Adopt higher MRL/EMRL available when a chemical is used both as pesticide and veterinary drug**

- ✿ Codex MRLs/EMRLs for both pesticide and veterinary drug
  - ✿ undergone thorough safety assessment
  - ✿ adequate to protect public health

### **(3) Adopt higher MRL/EMRL available when a chemical is used both as pesticide and veterinary drug**

- ✿ Recommended by the JECFA/JMPR Informal Harmonization Meeting held in 1999
  - ✿ Adopt higher MRL/EMRL available if both JECFA and JMPR have set the MRL/EMRL for the same chemical-food pair
- ✿ Risk assessment would be conducted to ensure that the proposed MRLs/EMRLs are adequate to protect public health locally

## (4) Not to consider MRLs/EMRLs for import control purpose

- ✿ If the MRLs/EMRLs of a particular pesticide from the Mainland/USA/Thailand are established solely for import control purpose, that means there is no such registered use in that country, hence not applicable to HK

USA MRL for import control:  
Deltamethrin in lychee & starfruit



Proposed MRL in HK :  
**NO** – No such registered uses in USA

# Food Classification – An Introduction

# Codex's Classification of Food (1)

- ✿ Uniform nomenclature among international trade
- ✿ Facilitate the adoption of MRLs/EMRLs
- ✿ Five classes 🖱️ 19 types;  
each type 🖱️ commodity groups 🖱️ subgroups 🖱️  
individual commodities
- ✿ Each commodity/subgroup/group with an assigned  
code number

# Codex's Classification of Food (2)

## ✿ Five classes:

- ✿ Class A Primary Food Commodities of Plant Origin
- ✿ Class B Primary Food Commodities of Animal Origin
- ✿ Class C Primary Animal Feed Commodities
- ✿ Class D Processed Foods of Plant Origin
- ✿ Class E Processed Foods of Animal Origin

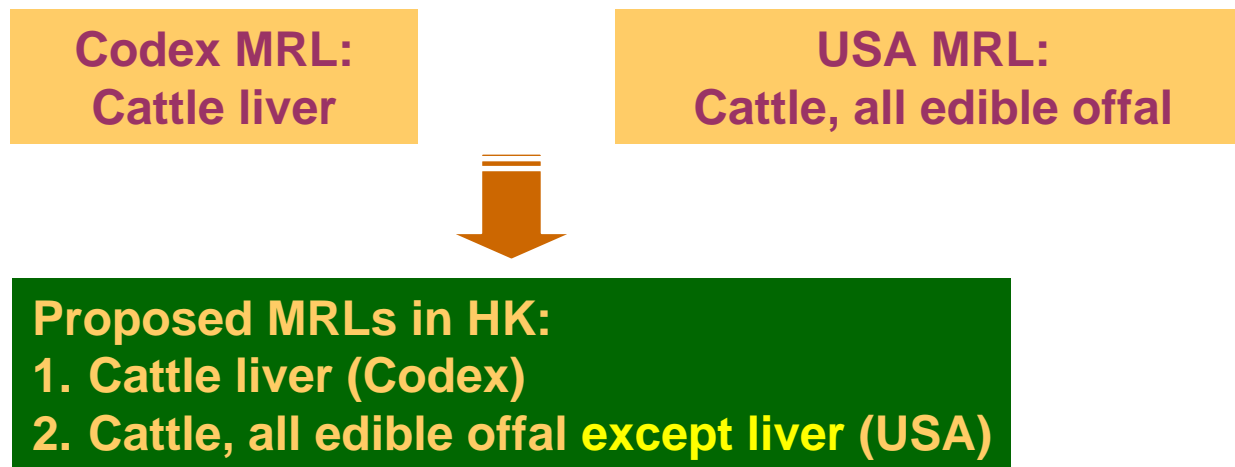


Class A Primary Food Commodities of Plant Origin			
Type	No.	Group	Group Letter Code
01 Fruits	001	Citrus fruits	FC
	002	Pome fruits	FP
	003	Stone fruits	FS
	004	Berries and other small fruits	FB
	005	Assorted tropical and sub-tropical fruits – edible peel	FT
	006	Assorted tropical and sub-tropical fruits – inedible peel	FI
02 Vegetables	009	Bulb vegetables	VA
	010	Brassica (cole or cabbage) vegetables, Head cabbages, Flowerhead cabbages	VB
	011	Fruiting vegetables, Cucurbits	VC
	012	Fruiting vegetables, other than Cucurbits	VO
	013	Leafy vegetables (including Brassica leafy vegetables)	VL
	014	Legume vegetables	VP
	015	Pulses	VD
	016	Root and tuber vegetables	VR
	017	Stalk and stem vegetables	VS
03 Grasses	020	Cereal grains	GC
	021	Grasses, for sugar or syrup production	GS
04 Nuts and Seeds	022	Tree nuts	TN
	023	Oilseed	SO
	024	Seed for beverages and sweets	SB
05 Herbs and Spices	027	Herbs	HH
	028	Spices	HS

# Database of Proposed Local MRLs / EMRLs – An Overview

# Example 1 – Adopt Codex MRLs in full as backbone

- ✿ Codex - MRL for individual commodity is available, but not for the whole group;
- ✿ Mainland/USA/Thailand – group MRL is available



# Example 2 – Adopt Codex’s food classification

## ✿ Cyfluthrin in “root and tuber vegetables”

Commodity	Codex	Mainland	USA	Thailand	Proposal
Vegetable, tuberous and corm			0.01		--
Potato	0.01*				0.01*
Radish, root			1.0		1.0
Carrot			0.20		0.20
Sugar beet			0.01		0.01

✿ Codex does not have the subgroup “vegetable, tuber and corm, except potato”

# Example 3 – Merging of group MRL and individual commodity MRL

## ✿ Buprofezin in citrus fruits

Commodity	Codex	Mainland	USA	Thailand	Proposal
Citrus fruits		0.5	2.5		0.5
Oranges, sweet, sour	0.5				--

- ✿ Group MRL and individual commodity MRL share the same numerical value

# Import MRL and Import Exemption

- ✿ Trade facilitation measure in overseas jurisdictions
  - ✿ Canada, EU, Japan and USA
- ✿ Purpose
  - ✿ To cater for pesticide-food pairs or pesticides that have been found to be acceptable from the public health perspective but not yet included in the local legislation

# Import MRL and Import Exemption

## ✿ The proposal:

- ✿ A person may apply to DFEH
- ✿ Pre-requisite –
  - An MRL/exemption is available in Codex or in another jurisdiction
  - Necessary document is provided
- ✿ Application fee will be charged on full-cost recovery basis and is not refundable

# Required Documentation for Import MRL/Exemption

- ✿ Documents showing that the concerned MRL or exemption is currently in force in another jurisdiction or adopted by Codex;
- ✿ Any other information that would be required for processing the application, e.g.,
  - ✦ residue definition of the concerned pesticides
  - ✦ appropriate laboratory method
  - ✦ supervised field trial data
  - ✦ results of food processing studies
  - ✦ relevant toxicological data, etc.



# Import MRL and Import Exemption

## ✿ If adopted -

- ✿ DFEH will make announcement in the Gazette
- ✿ Concerned import MRL/exemption will apply as if it is included in the Regulation
- ✿ DFEH will keep a list of import MRLs/exemption currently in force and allow for free public inspection
- ✿ Incorporated into the future legislation in the long run

# Conclusion (1)

## ✿ Key principles

- 1) Adopt MRLs and EMRLs of individual pesticides recommended by the Codex Alimentarius Commission (Codex) in full as the backbone;
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# Conclusion (2)

## ✿ Other related principles

- 1) Adopt Codex's classification of food
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- 4) Not to consider MRLs in individual food supplying countries for import control purpose

# Conclusion (3)

- ✿ To cater for pesticide-food pairs or pesticides that have been found to be acceptable from the public health perspective but not yet included in the local legislation
  - ✿ A person may apply to DFEH for setting an import MRL/exemption

# Thank you