Control of Pesticides in Hong Kong

20 July 2013

Agriculture, Fisheries and
Conservation Department

Pesticides Ordinance, Cap. 133 - History & Main Provisions

- The Agriculture, Fisheries and Conservation (AFCD) is responsible for the regulation of pesticides in Hong Kong
- Legislation first introduced in 1977 to regulate agricultural pesticides
- Amended in 1991 to cover both domestic and agricultural pesticides
- Pesticides (Amendment) Bill introduced to LegCo in 2013 to fulfill obligations under international conventions

Pesticides Ordinance, Cap. 133 - History & Main Provisions

- Currently, pesticides are regulated under the Pesticides Ordinance (Cap.133) through:
  - Pesticides Registration
  - Licensing of Pesticide Traders
  - Enforcing labeling requirements

Pesticides Ordinance, Cap. 133 - Definition of Pesticide (I)

- "pesticide" (除害劑) means-
- (a) any insecticide, fungicide, herbicide, acaricide or any substance used for preventing, destroying, repelling, attracting, inhibiting or controlling any insect, rodent, … , which is a pest; or
- (b) any substance used as a plant growth regulator, defoliant or desiccant,

Pesticides Ordinance, Cap. 133 - Definition of Pesticides (II)

- including household pesticides such as insect aerosols, mosquito coils, cockroach bait; and
- non-domestic use pesticides such as agricultural pesticides, herbicides, antifouling paints etc.

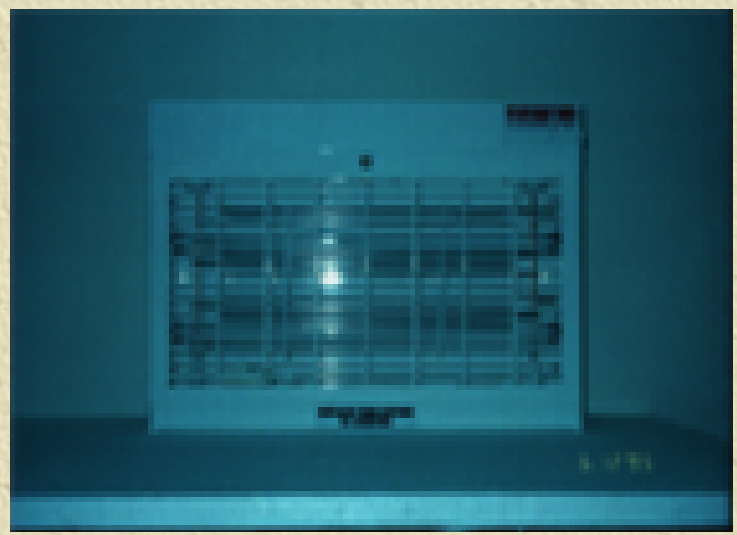
Pesticides Ordinance, Cap. 133 - Definition of Pesticides (III)

- but does **NOT** included-
- (i) any purely mechanical device;
- (ii) any purely electromagnetic or ultrasonic device;
- (iii) any antiseptic, disinfecting solution; and
- (iv) any pharmaceutical product within the meaning of the Pharmacy and Poisons Ordinance (Cap 138);

Pesticides Ordinance, Cap. 133 Non-pesticides (I)

- Examples of non-pesticides under the definition of Cap.133

Electrical Device



Mouse Trap

Pesticides Ordinance, Cap. 133 Non-pesticides (II)

- Examples of non-pesticides under the definition of Cap.133

Pharmaceutical products

Sanitary / disinfecting products

Pesticides Ordinance, Cap. 133 - Registration (I)

- Pesticides are registered by active ingredients with:
- formulation restriction
- maximum concentration for supply and retail
- Registered pesticides may be distributed freely for use
- Part I (ready-to-use : general household use)
- Part II (concentrates : farming, public health pest control and turf management)

Pesticides Ordinance, Cap. 133 - Registration (II)

- Part I pesticides (ready for immediate use & general household use)

Pesticides Ordinance, Cap. 133 - Registration (III)

- Part II pesticides (all other pesticides including pesticides used in agriculture, public health pest control, turf management and antifouling operations)

Pesticides Ordinance, Cap. 133 - Pesticide Registration Process (I)

- Registration involves evaluation of data submitted by the applicant on the active ingredients, formulated product and inert components.
- Data required include: chemical and physical properties, acute and chronic toxicological studies, fate in the environment and analytical methods.
- Only if the chemical is considered safe to human and the environment if used as directed by the manufacturer, is the pesticide registered.

Pesticides Ordinance, Cap. 133 - Pesticide Registration Process (II)

- For pesticides used on food crops
- Applicant is required to submit data on maximum residue limit and acceptable daily intake in countries where the same pesticides has been registered
- Overseas data are acceptable to support registration
- Applicants are not required to carry out field trials in Hong Kong to generate registration data

Pesticides Ordinance, Cap. 133 - Pesticide Registration Process (III)

- Full details of registration data requirement are stated in the pesticide registration application form which is available to the general public on the AFCD website.
- Current number of registered pesticides:
  - Part I pesticides: 196
  - Part II pesticides: 314

Pesticides Ordinance, Cap. 133 - Register of Pesticides (Part I)

- Pesticides which are in a form ready for immediate use and for general domestic use

Pesticide Registration and Control

REGISTERED PESTICIDES LIST - PART I

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

	Common Name of the Active Ingredient	Registration No.	Formulation and Maximum Concentration for Supply and Retail Sale *Note and Formulation Abbreviation*
A.	Abamectin	1P169	AL (0.019) w/w RB (0.05) w/w
	Acephate	1P140	RB (1) w/w
	Acephate / Diflubenzuron	1P177	RB (5/0.4) w/w
	d-Allethrin	1P74	FU (22) w/w VP (6) w/w

Pesticides Ordinance, Cap. 133 - Register of Pesticides (Part II)

- All other pesticides

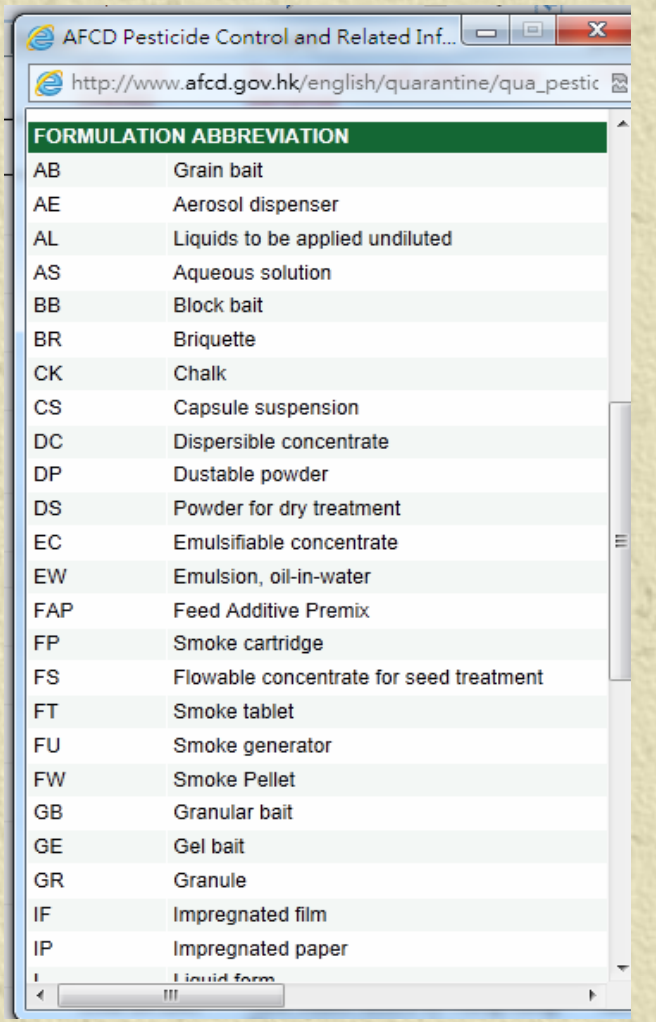
Pesticide Registration and Control

REGISTERED PESTICIDES LIST - PART II

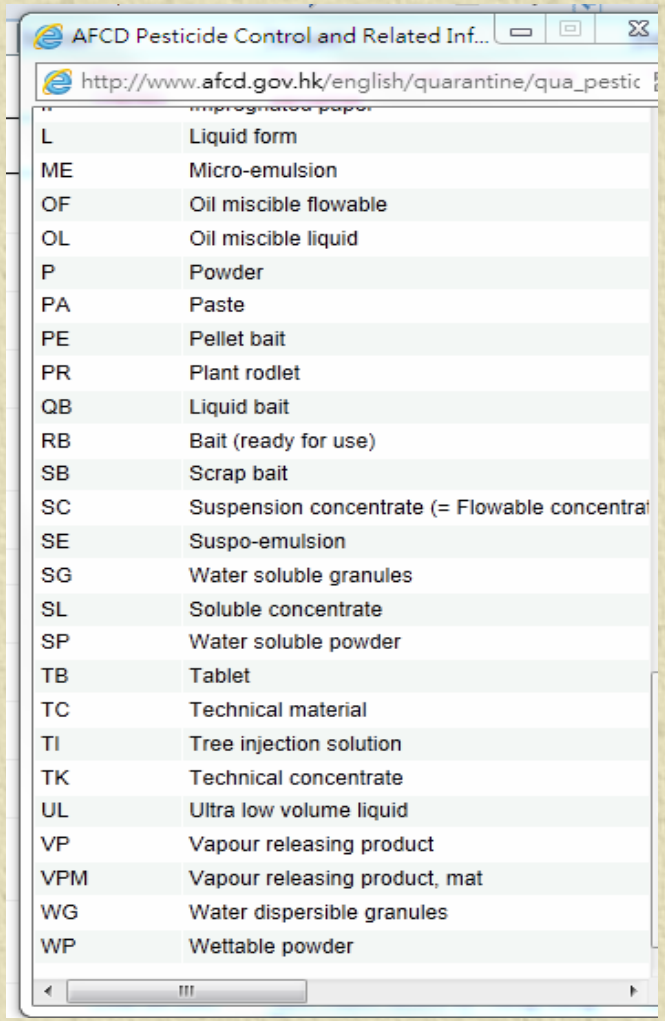
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

	Common Name of the Active Ingredient	Registration No.	Formulation and Maximum Concentration for Supply and Retail Sale *Note and Formulation Abbreviation*
A.	Abamectin	2P226	CS (1.9) w/w #2 EC (1.8) w/v #2 RB (0.05) w/w #2
	S-abscisic acid	2P310	L (-) P (-)
	Acephate	2P6	GR (16)w/w SP (75)w/w WP (75)w/w

Pesticides Ordinance, Cap. 133 - Formulation Abbreviation



FORMULATION ABBREVIATION	
AB	Grain bait
AE	Aerosol dispenser
AL	Liquids to be applied undiluted
AS	Aqueous solution
BB	Block bait
BR	Briquette
CK	Chalk
CS	Capsule suspension
DC	Dispersible concentrate
DP	Dustable powder
DS	Powder for dry treatment
EC	Emulsifiable concentrate
EW	Emulsion, oil-in-water
FAP	Feed Additive Premix
FP	Smoke cartridge
FS	Flowable concentrate for seed treatment
FT	Smoke tablet
FU	Smoke generator
FW	Smoke Pellet
GB	Granular bait
GE	Gel bait
GR	Granule
IF	Impregnated film
IP	Impregnated paper
L	Liquid form



L	Liquid form
ME	Micro-emulsion
OF	Oil miscible flowable
OL	Oil miscible liquid
P	Powder
PA	Paste
PE	Pellet bait
PR	Plant rodlet
QB	Liquid bait
RB	Bait (ready for use)
SB	Scrap bait
SC	Suspension concentrate (= Flowable concentrat
SE	Suspo-emulsion
SG	Water soluble granules
SL	Soluble concentrate
SP	Water soluble powder
TB	Tablet
TC	Technical material
TI	Tree injection solution
TK	Technical concentrate
UL	Ultra low volume liquid
VP	Vapour releasing product
VPM	Vapour releasing product, mat
WG	Water dispersible granules
WP	Wettable powder

Pesticides Ordinance, Cap. 133 - Review of Registration (I)

- The AFCD reviews the registration of registered pesticides on a regular basis
- If new information indicates that use of any registered pesticides may result in any unacceptable risks to the public or environment, the AFCD will cancel the registration of these pesticides.

Pesticides Ordinance, Cap. 133 - Review of Registration (II)

已被取消註冊除害劑列表
List of Deregistered Pesticides

取消註冊日期 Date of Deregistration	註冊編號 Registration Number	除害劑有效成份 Pesticide Active Ingredient
• 31.12.1979	AP/II/44	• Methomyl (滅多威)
• 31.12.1983	AP/II/19	• Ethylene dibromide (二溴乙烷)
	AP/II/25	• 2,4,5-T (2,4,5,-涕)
	AP/II/40	• Toxaphene/DDT/DDVP, mixture (毒殺芬/滴滴涕/敵敵畏, 混合物)
• 31.12.1987	AP/II/1	• Aldrin (艾氏劑)
	AP/II/2	• Dieldrin (狄氏劑)
	AP/II/5	• DDT (滴滴涕)
	AP/II/36	• DDT/Lindane, mixture (滴滴涕/林丹, 混合物)
	AP/II/42	• DDT/Naled, mixture (滴滴涕/二溴磷, 混合物)
	AP/II/53	• PCP/Dieldrin, mixture (五氯酚/狄氏劑, 混合物)
	AP/I/36	• Cyhexatin (三環錫)
• 15.03.1991	AP/II/37	• Chlordane (氯丹)
	AP/II/23	• Lindane (林丹)
	AP/II/43	• BHC (六六六)
	AP/II/59	• Nitrofen (除草醚)
	AP/II/57	• Thiram/Lindane/Rotenone, mixture (福美雙/林丹/魚藤酮, 混合物)
• 31.12.1992	2P36	• Captafol (敵菌丹)
	2P7	• Acetofenate/DDVP, mixture (三氯殺蟲酯/敵敵畏, 混合物)
• 31.12.1993	2P148	• Pentachlorophenol(PCP) (五氯酚)

Pesticides Ordinance, Cap. 133 - Review of Registration (III)

• 31.12.1996	1P111	• Acephate/Mirex, mixture (乙酰甲胺磷/滅蟻靈, 混合物)
	1P52	• Mirex (滅蟻靈)
	1P100	• Mirex/Rhodojaponin-I/Rotenone, mixture (滅蟻靈/閉羊花素/魚藤酮, 混合物)
• 02.07.2004	2P20	• Binapacryl (樂殺螨)
	2P46	• Chlorobenzilate (乙酯殺螨醇)
• 31.12.2009	1P143	• Sulfotine (全氟辛烷磺酸鋰)
	1P173, 2P258	• Sulfluramid (氟蟲胺)
• 01.10.2012	2P102	• Fenoprop (2,4,5-涕丙酸)
	2P140	• Omethoate (氧樂果)
	2P146	• Paraquat dimethyl sulphate (百草枯硫酸二 甲酯)
• 01.01.2013	1P22	• Coumatetralyl/Endosulfan (殺鼠醚/硫丹)
	2P92	• Endosulfan (硫丹)
	2P93	• Endosulfan/Pyrazophos (硫丹/吡菌磷)
	2P94	• Endosulfan/Triazophos (硫丹/三唑磷)
	2P8	• Alachlor (甲草胺)
	2P97	• Ethoprophos (滅線磷)

Pesticides Ordinance, Cap. 133 - Licence & Permit Systems

Pesticide Licence

[Registered pesticides]

- Manufacture
- Import
- Supply
- Sale

Pesticide Permit

[Unregistered pesticides]

- Manufacture
- Import
- Supply
- Sale
- Possess

Trading of Registered Pesticides under License

- No person shall import, manufacture or trade registered pesticides without a license
- Licenses are renewable annually
- Permitted activities include import, manufacture supply and retail registered pesticides
- Manufacture registered pesticides which mainly involve dilution and repacking activities
- AFCD inspectors carry out inspections to ensure the premises permitted are suitable for the approved activities
- Use of registered pesticides is not regulated

Trading and Use of Unregistered Pesticides under Permit

- No person shall import, use, manufacture, trade, possess or use unregistered pesticides without a permit
- Permits are renewable every six months
- Permitted activities include import, use, reformulate and supply unregistered pesticides
- Mainly issued for import and re-export activities
- A limited number of permits are issued to use fumigants for quarantine purposes
- AFCD inspectors carry out inspections to ensure the operators are up to the technical standard

Regulation of Convention Listed Pesticides (I)

- The Pesticides (Amendment) Bill was introduced to the LegCo in 2013 to give effect to the implementation of the Stockholm Convention (SC) and Rotterdam Convention (RC)
- China applied the SC and RC to HKSAR in 2004 and 2008 respectively

Regulation of Convention Listed Pesticides (II)

- The SC aims to protect human health and the environment from persistent organic pollutants (POPs). In implementing the SC, governments will take measures to reduce or eliminate releases from production and use of POPs
- The RC aims to promote cooperative efforts among countries in the international trade of hazardous pesticides through the Prior Informed Consent (PIC) Procedure to monitor and control the import and export of these pesticides

Regulation of Convention Listed Pesticides (III)

- Under Cap.133, DAFC shall not register any convention listed pesticides
- The SC covers 15 pesticides
- The RC covers 29 pesticides and 4 severely hazardous pesticide formulations
- The import, export, transship, use, manufacture, trade, possess or use of convention listed (Scheduled) pesticides are subject to permit regulation

Stockholm Convention Pesticides

- Aldrin
- Chlordane
- Chlordecone
- Diedrin
- Endrin
- Heptachlor
- Hexachlorobenzene (HCB)
- Alpha hexachlorocyclohexane
- Beta hexachlorocyclohexane
- Lindane
- Mirex
- Pentachlorobenzene
- Endosulfan
- Toxaphene
- DDT

Rotterdam Convention Pesticides

- 2,4,5-T & its salts & ester
- Alachlor
- Aldicarb
- Aldrin
- Azinphos-methyl
- Binapacryl
- Captafol
- Chlordane
- Chlordimeform
- Chlorobenzilate
- DDT
- Dieldrin
- Dinitroorthocresol (DNOC) & its salts
- Dinoseb & its salts & esters
- EDB (1,2-dibromoethane)
- Endosulfan
- Ethylene dichloride
- Ethylene oxide
- Fluoroacetamide
- HCH (mixed isomers)
- Heptachlor
- Hexachlorobenzene
- Lindane (gamma-HCH)
- Mercury Compounds
- Monocrotophos
- Parathion
- Pentachlorophenol & its salts & esters
- Toxaphene (Camphechlor)
- Tributyl tin compounds
- **Dustable powder formulations of benomyl (7%), carbofuran (10%) & thiram (15%)**
- **Methamidophos (soluble liquid formulations exceeding 600g / l)**
- **Methyl-parathion (EC formulations above 19.5% and dusts above 1.5%)**
- **Phosphamidon (soluble liquid formulations exceeding 1,000g/ l)**

Regulation of Convention Listed Pesticides (VI)

Website: http://chm.pops.int/

Website: http://www.pic.int/

Pesticides Ordinance, Cap. 133 - Labeling Requirements (I)

- There are specific requirements on a pesticide label to ensure vital information on application and safety is available
- Information must be provided on the container in both Chinese and English

Pesticides Ordinance, Cap. 133 - Labeling Requirements (II)

Professional Control for Mosquito Larvae

PESTICIDE is for the control of Mosquito Larvae.

Formulation: Water Soluble Granules

Target Pest(s): Mosquito Larvae

Direction for Use:
Use **PESTICIDE** as a spot treatment on flowerpot plates, in vases or any suspected site of stagnant water. In water tanks, flower pots or vase use 10g for every 90 liters of water. For ponds, drains marshes apply 5-10 kg per surface hectare.

Pest	Application Rate
Mosquito Larvae	10g for every 90 liters or water

First Aid Treatment:
Eyes : Immediately flush for 15 minutes with large amount of water. Get medical aid if irritation persists.
Skin : Remove all contaminated clothing at once; thoroughly wash affected areas with soap and water. Get medical aid.
Ingestion: Drink two glassed of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical aid.
Antidote : Atropine Sulphate
Always bring along this label when seeking medical treatment.

Precautions:
Hazards to humans and animals. Read and understand the label before using. Failure to follow the instructions on this label may result in serious injury or may be fatal. Avoid contact with skin or eyes. Use protective eyewear and clothing to minimize exposure during loading and handling. When preparing and using the pesticides do not eat, drink or smoke. Unprotected persons should be kept out of the site. Before and after application, warning notices with (POISON, NO ENTRY, NAME OF PESTICIDE, DATE AND TIME OF APPLICATION etc) should be posted at conspicuous locations. After use, wash hands and exposed skin thoroughly and wash contaminated protective clothing before reuse.

Environmental Hazards:
This product is toxic to birds and aquatic organism (e.g. shrimps and crabs.). Do not apply where these are important resources.

Storage and Disposal:
Do not contaminate water, food, or feed by storage or disposal. Store in a cool dry place and away from food, children and pets. Do not re-use the empty bag or container for any other purposes. Then break and dispose empty bag or container as standard municipal

除害劑
PESTICIDE

Active Ingredient (有效成份):
Temephos ..... 1% w/w
Inert Ingredient ..... 99% w/w
100% w/w

Net weight 淨重 : 25kg(公斤)

Registration No.
註冊編號 : 2P000

KEEP OUT OF REACH OF CHILDREN
遠 離 孩 童

SUPPLIER 供應商:
ABC Ltd.
18/F, ABC Building
123 ABC Road, H.K.

POISON
毒藥

Expire Date : 2 years from the date of Manufacturing
Date of Manufacture 製造日期 :

專業用滅蚊幼劑

除害劑 有效控制蚊幼成長

劑型: 水溶性粒劑

針對害虫: 蚊幼

使用方法:
除害劑 稱粒劑適宜用作於量點處理， 如使用在花盆、花瓶或任何積水處。
如使用在水槽、花盆或花瓶：每 90 公升水使用 10 克。
如使用在水池、排水渠或濕地：每公頃使用 5-10 公斤。

害虫	使用份量
蚊幼	每 90 公升水使用 10 克

急救方法 :
如眼睛沾上 : 立即使用大量清水清洗眼睛最少 15 分鐘，如刺激性持續，應即諮詢。
如皮膚沾上 : 脫下受污染的衣服、鞋襪，並用肥皂及清水清洗與身體曾接觸之處，如刺激性持續， 應即諮詢。
如誤服 : 飲水兩杯並用手指扣喉使嘔吐，如昏迷，切勿使嘔吐及飲用任何物品，應即諮詢。
解毒 : Atropine Sulphate
如求醫診治時，必須連同此標籤。

注意事項 :
對人畜有危害,使用前小心閱讀並了解標籤內容及使用方法，不遵守此標籤指引可導致嚴重損害甚至死亡，應避免與皮膚及眼睛接觸，在混合及應用時應使用眼罩及穿上保護衣物，稱配或使用時不可飲食及吸煙，沒有穿著保護性衣物者，不可進入施工範圍，施用前後，應在範圍的當眼處加上警告告示（毒藥、不准進入、已施放除害劑、除害劑名稱、施用日期及時間等），使用後須徹底清洗雙手和外露的皮膚，而受污染的保護性衣物須加以清洗才可再用。

環境危害 :
此產品對鳥類及水中生物（如蝦、蟹等）有毒，切勿使用在此類養殖場內。

存放及棄置:
存放及棄置時切勿污染水源、食物及飼料，存放於陰涼、乾爽及上鎖之處，並遠離食物、飲品及寵物，產品使用後，空的包裝袋或容器，不可作其他用途；應加以毀爛，再作一般廢物處置，未使用的除害劑必須貯存於附有標籤原裝容器內。

Pesticides Ordinance, Cap. 133 - Labeling Requirements (III)

- Mandatory warning wording (e.g. Danger)
- Trade name, common name
- Registration number,
- Formulation
- % active ingredient

Pesticides Ordinance, Cap. 133 - Labeling Requirements (IV)

- The wording “Systemic” for pesticides with systemic action
- Usage instructions and precautions
- Pre-harvest interval (for use on food crop)
- Antidote and first aid action
- Supplier name and address

Pesticides Ordinance, Cap. 133

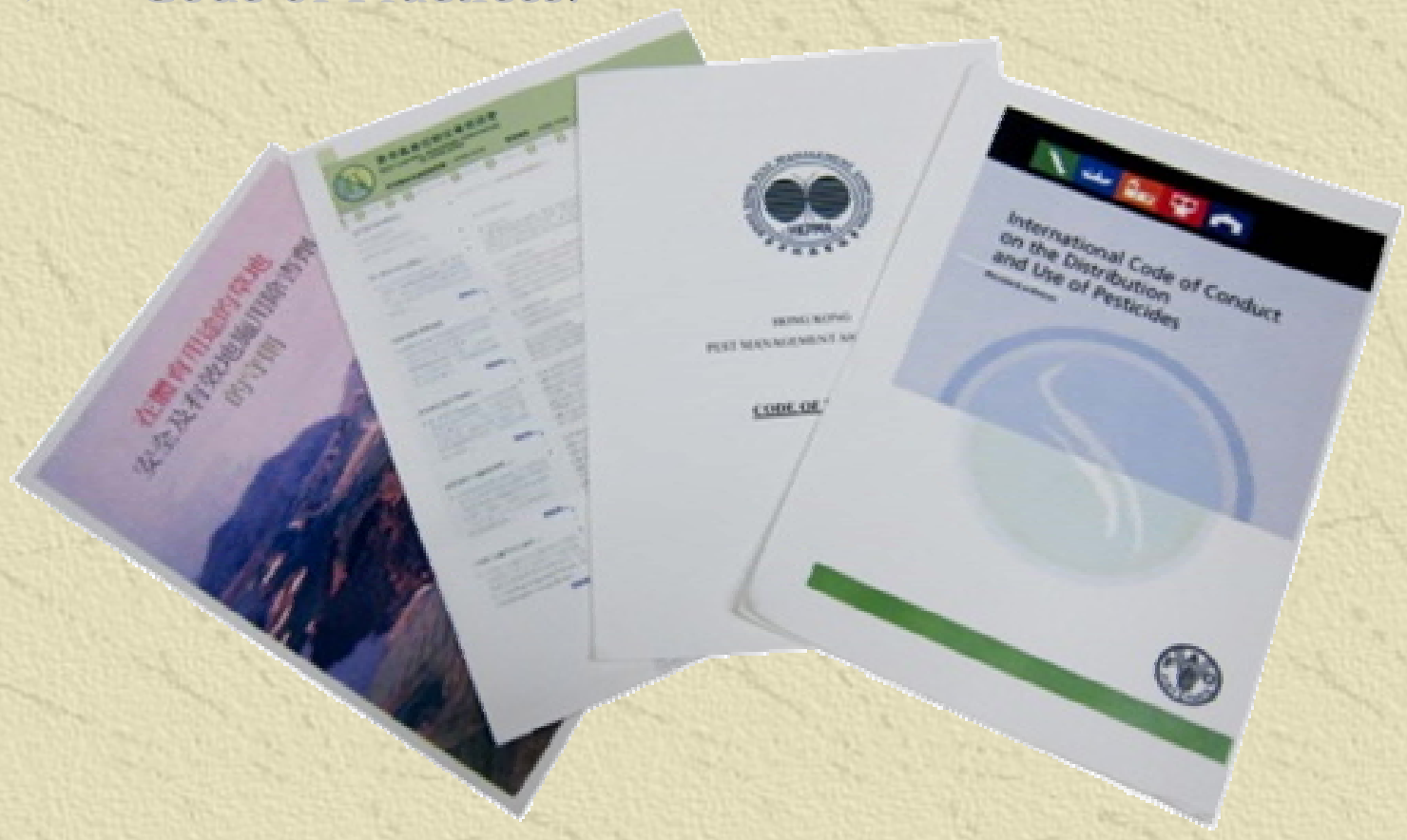
- Safe Use of Pesticides and Public Education (I)

- AFCD attaches great importance to the promotion of safe and proper use of pesticides; the department has prepared and make available a series of education leaflets on related subjects
- Assist pesticide users of various business nature to develop code of practice for the safe and proper use of pesticides (e.g. Pest Management Associations and Turf Management)

Pesticides Ordinance, Cap. 133

- Safe Use of Pesticides and Public Education (I)

- Code of Practices:



Pesticides Ordinance, Cap. 133

- Safe Use of Pesticides and Public Education (II)

Some recent publication includes:

- Safe Use of Household Pesticides (In both Chinese and English)
- Pesticide Safety – Increase Awareness; Reduce Hazards (In both Chinese and English)
- Safe Use of Household Pesticides for Mosquito Control (In both Chinese and English)
- Use of Pesticides for Outdoor Mosquito Control (In both Chinese and English)
- Pictorial Guide on Safe Use of Agricultural Pesticides (In Chinese only)

Pesticides Ordinance, Cap. 133

- Safe Use of Pesticides and Public Education (II)

- Publications:

Pesticides Ordinance, Cap. 133

- Further details of pesticide regulatory control and samples of our published leaflets are available at the AFCD websites at www.afcd.gov.hk

Thank you