

[English translation]

本函檔案 Our ref. : FH CR 2/3231/03
來函檔案 Your : CB2/PS/6/12
ref.

電話號碼 Tel nos. : (852) 3509 8700
傳真號碼 Fax : (852) 2136 3282
nos.

By Fax: 2136 3281

28 April 2014

Ms Alice LEUNG
Clerk to Subcommittee
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

Dear Ms Leung,

**Subcommittee on Pesticides Ordinance
(Amendment of Schedule 1) Notice 2014
Follow-up to the Meeting on 22 April 2014**

I refer to your letter of 22 April 2014. The supplementary information requested by Members at the captioned meeting is at Annex.

Yours sincerely,

[signed]

(Miss Jeanne CHENG)
for Secretary for Food and Health

c.c.: Agriculture, Fisheries and Conservation Department
(Attn.: Dr Thomas SIT
Mr Clive LAU)

Department of Justice
(Attn.: Ms Carmen CHU)

**Subcommittee on Pesticides Ordinance
(Amendment of Schedule 1) Notice 2014**

**Supplementary information requested by Members
at the meeting on 22 April 2014**

Code of Practice for the trade

The Agriculture, Fisheries and Conservation Department (AFCD) has made continuous efforts in assisting the trade to enhance their standard of using pesticides. Three sets of Code of Practice have been drawn up, in collaboration with the trade, for the sectors of pest control companies and workers, sports turf management personnel and local farmers to promote the safe and proper use of pesticides by the trade. The three sets of Code of Practice include –

- (i) The Code of Practice drawn up by the Hong Kong Pest Management Association;
- (ii) The Code of Practice for Pest Control (only available in Chinese) drawn up by the Pest Control Personnel Association of Hong Kong; and
- (iii) The Code of Practice for the Safe and Efficient Use of Pesticides on Sports Turf drawn up by the South China Turf Managers Association.

These sets of Code of Practice can be obtained by members of the trade or the public either through contacting the respective trade associations or via the website of AFCD¹. They are at **Appendices 1 to 3** respectively.

2. In addition, the Food and Environmental Hygiene Department (FEHD) has drawn up a set of safety guidelines, namely the Guidelines on Occupational Safety and Health for Pest Control Operators, which aims to enhance the awareness of the pest control workers on the safe and proper use of pesticides and to advise on the precautionary measures to be taken to prevent any

¹ AFCD's website:
www.afcd.gov.hk/english/quarantine/qua_pesticide/qua_pes_safe/qua_pes_safe.html

accidental poisoning or harm to human health. This set of guidelines is available on the website of FEHD² for public inspection. It is at **Appendix 4**.

3. At the meeting on 22 April 2014, Members suggested that the Government should make available the trade's Code of Practice on the safe and proper use of pesticides to schools and elderly care homes for their reference. The Food and Health Bureau will follow up the suggestion with the Education Bureau and the Labour and Welfare Bureau respectively for distributing the Code of Practice to schools and elderly care homes.

List of follow-up actions undertaken by the Administration to further promote the safe and proper use of pesticides

4. At the meeting on 22 April, we reported to Members on the series of follow-up actions taken by the Administration in light of the views provided by the Bills Committee of the Legislative Council on the safe and proper use of pesticides when scrutinising the Pesticides (Amendment) Bill 2013. The progress report on various follow-up actions is at **Appendix 5**.

List of deregistered pesticides

5. At the above meeting, Members requested for the list of pesticides deregistered by the Director of Agriculture, Fisheries and Conservation in accordance with the Pesticides Ordinance (Cap. 133). The list is at **Appendix 6**. The public may obtain the list from the website of AFCD³.

Food and Health Bureau
Agriculture, Fisheries and Conservation Department
April 2014

² FEHD's website: www.fehd.gov.hk/english/safefood/library/pest_control/pest_control.html

³ AFCD's website:
www.afcd.gov.hk/english/quarantine/qua_pesticide/qua_pes_safe/qua_pes_safe.html

CODE OF PRACTICE

CONTENT

Part I	Introduction	
1.0	Purpose	2
2.0	Obligation of the Companies	2
Part II	Rules & Guidelines	
3.0	Basic Information	3
4.0	Planning and Preparation of Operation	3
5.0	Directions and Instruction to Applicators	4
6.0	Record Keeping	5
7.0	Client's Right To Know	6
Part III	Safety & The Environment	
8.0	Occupational Safety and Health	7
9.0	Safety Measures for Clients	10
10.0	Environmental Protection	11
Part IV	Appendices	
Appendix 1	Pest Investigation Report (Sample)	13
Appendix 2	Tips on Safe Use and Disposal of Pesticides	14
Appendix 3	Sample of Material Safety Data Sheet (MSDS).....	15
Appendix 4	Tips on Occupational Safety and Health	26
Appendix 5	Record on Pesticide Stocks and Consumption (Sample)	27

Part I – Introduction

1.0 Purpose

- 1.1 This code of practice drawn up by the Hong Kong Pest Management Association with assistance from the Hong Kong Government – Agriculture, Fisheries and Conservation Department is aimed at providing a guideline to companies and persons conducting pest control operations in domestic, commercial and public places.
- 1.2 The guidance provided in this code centers mainly on the safe and proper use of pesticides. However, the guidance cannot deal with every situation. Companies or persons operating a pest control business should not assume strict observance of the code will always be sufficient.

2.0 Obligation of the Companies

- 2.1 The company, which means an organization or a person operating a pest control business, must meet all requirements, if any, by government if pesticides are used as part of the business.
- 2.2 The company must employ a person who holds some form of proper qualification or receives training in the pest control field on the use of pesticides. This qualification or training must be acceptable to the Hong Kong Pest Management Association.
- 2.3 The company must ensure that its employees involved in the application of pesticides have adequate training, instruction and guidance in the safe, efficient and humane use of pesticides and are competent for the duties they are called on to perform.
- 2.4 The company must make adequate provision of facilities and equipment for the safe storage, preparation, use and disposal of pesticides and also for the environmental protection, personal protection and hygiene of their employees as well as their clients.



Part II - Rules And Guidelines

3.0 Basic Information

- 3.1 The company should maintain up-to-date knowledge of:-
- 3.1.1 Pesticide regulations, fire regulations, legislation on environmental protection, regulations on occupational safety and health and any other legal requirements which apply to the use of pesticides in Hong Kong;
 - 3.1.2 Products to be used, having especial regard to potential hazards to living organisms, the environment and fire precautions necessary for safe use;
 - 3.1.3 Features of protective clothing and application equipment to prevent operator contamination;
 - 3.1.4 Proper storage, handling, mixing and disposal of empty containers, surplus pesticides and any product having a fire hazard;
 - 3.1.5 Necessary first-aid and the emergency action to take in the event of fire, accidental poisoning, spillage and leakage of pesticides (gaseous fumigants);
 - 3.1.6 Safe and responsible procedure to be followed before, during and after application to protect the operator and the clients as well as the environment; and
 - 3.1.7 Correct procedure for cleaning of all equipment and clothing used.

4.0 Planning and Preparation of Operation

- 4.1 Pesticides should be used judiciously and when absolutely necessary. Integrated Pest Management (IPM) approach is recommended for adoption. The essential components of IPM generally include the followings:
- 4.1.1 Identification, monitoring and assessment of pest problems;
 - 4.1.2 Adoption of a suitable pest control plan and conduct routine surveillance;



- 4.1.3 Good sanitation;
 - 4.1.4 Integration of physical, biological and chemical control; and
 - 4.1.5 Record keeping system.
- 4.2 The decision on which pesticides to use and how to apply them should be made by the companies only after:-
- 4.2.1 Correctly identifying the pest and the degree of infestation;
 - 4.2.2 Considering any alternative control measures;
 - 4.2.3 Considering any previous experience of the problem; and
 - 4.2.4 Determining whether it is the right time to use a pesticide.
- 4.3 Having decided that use of a pesticide is absolutely necessary, consideration should be given to safe and responsible use as well as efficacy.
- 4.4 All pesticides on stock should be clearly labeled in a form comprehensible to the applicators.
- 4.5 The most safe and proper method of application should be used.



5.0 Directions and Instructions to Applicators

- 5.1 A manual detailing the safe and proper application of pesticides should be prepared for use and reference by applicators. The manual should be based on the recommendations listed in the manufacturer's manual, Material Safety Data Sheet and label and should be in a form and language comprehensible to the applicators. Its contents should be clearly explained to each and every applicator as they start their employment and at regular intervals thereafter.
- 5.2 The manual should include information on the following:-
- 5.2.1 General information on types, formulations, modes of action and possible hazards of the pesticides used;
 - 5.2.2 General information on the types of equipment and their proper care and maintenance;
 - 5.2.3 Information on target pests and the relevant pest management strategies.

- 5.2.4 Necessary preparation e.g. to remove all food and absorbent material, to keep away all pets and children, to post warning notices in the premises etc. before, during and after treatment;
 - 5.2.5 All safety precautionary measures to be observed when handling and applying pesticides to protect the operator and the client as well as the environment;
 - 5.2.6 How to select suitable type of equipment and what to check before use;
 - 5.2.7 Proper and safe transportation and storage of pesticides;
 - 5.2.8 Proper and safe disposal of surplus pesticides and empty containers;
 - 5.2.9 Post-treatment checking of treated premises; and
 - 5.2.10 Action to be taken in the event of accidental poisoning spillage and leakage.
- 5.3 In the application of pesticides, cumulative exposure time should not usually exceed six hours per day. This limit should be subject to the particular pesticide used, volume, quantity, formulation, method of application, environmental conditions, etc. or the manufacturer's instruction manual for the specific pesticides used, if applicable.



6.0 Record Keeping

- 6.1 Adequate records must be kept of all operations involving applications of pesticides. Such records are essential for future reference and in case of accident.
- 6.2 Records must also be kept on all pesticides movements and stock keeping.



7.0 Client's Right To Know

7.1 In order to secure the confidence of clients, it is advisable to prepare some formal notes which clients may find useful when employing the company's service.

Important points, particularly on personal safety, should be explained to clients in case they are illiterate or fail to read the notes.

7.2 The notes for clients should include :-

7.2.1 safety measures to be observed during and after treatment;

7.2.2 action to be taken in the event of accident during treatment.

7.3 If the client requests information on the identity of the pesticide to be used, the company must disclose such information.



Part III - Safety & The Environment**8.0 Occupational Safety and Health****8.1 Personal hygiene & safety**

- 8.1.1 Do not eat, drink or smoke when working with pesticides.
- 8.1.2 Do not touch the face, bare skin or wound with contaminated hands or gloves.
- 8.1.3 Wash hand and face with soap and water after work and before eating and smoking.
- 8.1.4 Remove spills on skin and work clothes immediately with soap and water.
- 8.1.5 Clean equipment and any auxiliary material thoroughly after work.
- 8.1.6 Special attention should be paid when working on slippery floor, elevated platform, slope, enclosed and confined space.

8.2 Personal protective equipment

- 8.2.1 Wear appropriate personal protective equipment (PPE) as specified on the label (e.g. overalls, rubber gloves, boots, face mask, goggles etc.) when mixing and applying pesticides.
- 8.2.2 Protective clothing can help to prevent skin contamination. However, in hot climates like Hong Kong, the wearing of additional protective clothing may cause severe discomfort due to heat stress. It can be compromised by having lightweight work cloth covering most of the body.
- 8.2.3 Wash work clothing daily with soap or detergent and separately from family laundry.
- 8.2.4 PPE must be kept in a good state of repair so that there are no tears or worn area through which pesticide could penetrate.



8.3 Handling of pesticides and equipments

8.3.1 Purchase

8.3.1.1 The pesticide product for use should be registered under the Pesticides Ordinance (Cap. 133) in Hong Kong. Pesticides must always be properly packed, clearly labeled and conform with the regulations stipulated by Hong Kong Government.

8.3.2 Preparation

8.3.2.1 Make sure that the pesticide is for the intended use.

8.3.2.2 Material Safety Data Sheet (MSDS) of pesticides should be available.

8.3.2.3 Always read the label to make sure that the instructions for the safe and correct use of the pesticide are fully understood. In particular, pay close attention to the dilution and application rate, suitable application areas and special precautions on safety, etc.

8.3.2.4 Always adhere to the label recommended dose rates and dilutions. Higher doses will not produce better results. Lower doses will be less effective

8.3.2.5 Use suitable equipment for measuring and mixing. Use graduated cups or jugs for liquids, scoops for powders to measure pesticide for mixing, pour pesticide into the sprayer tank with water and fill water to the correct level, and mixed well.

8.3.2.6 Special care should be taken as concentrated pesticides are involved in this step. The wearing of gloves and eye protection is advised.

8.3.2.7 **NEVER USE HANDS AS SCOOPS OR DIP HANDS AND ARMS INTO LIQUIDS WHEN STIRRING.**

8.3.2.8 Mix the pesticide in a well-ventilated location.

8.3.2.9 Provide proper calibration, maintenance and regular checking of leakages from joints, pipes and worn or blocked nozzles (uneven spray pattern), etc.



8.3.3 Application

- 8.3.3.1 Do not spray under outdoor application in a strong wind or under a strong sunlight.
- 8.3.3.2 Pregnant or sensitized persons should not apply pesticides.
- 8.3.3.3 Do not smoke, eat or drink when spraying.
- 8.3.3.4 Pay attention to wind direction and keep to windward when spraying.
- 8.3.3.5 Beware of spray drift, do not inhale the mist.
- 8.3.3.6 Stop spraying immediately if you are feeling unwell. Bring along the label when seeking medical attention.
- 8.3.3.7 After pesticide application, fill and rinse sprayer with clean water. Flushing out the water through nozzles and drain the tank completely.
- 8.3.3.8 If a motorized sprayer is not going to be used within the next 48 hours, drain fuel tank and carburetor and leave empty.

8.3.4 Transportation and Storage

- 8.3.4.1 Load and unload pesticide containers with care.
- 8.3.4.2 Secure pesticide containers and equipments in place.
- 8.3.4.3 Avoid inhalation of pesticide vapours or dust while in vehicle or pesticide store.
- 8.3.4.4 Drive safely while transporting pesticides.
- 8.3.4.5 Pesticides should be stored under lock and key in their original, labeled container.
- 8.3.4.6 Do not store pesticides with food, drink and absorbent material.
- 8.3.4.7 Do not store diluted pesticides.
- 8.3.4.8 Avoid spillage and leakage from containers and spraying equipment.
- 8.3.4.9 Cloth, sand, empty container and cleaning materials should be readily available for handling immediate spillage or leakage.



8.3.5 Disposal

8.3.5.1 Read the pesticide label for specific instructions on proper disposal procedures.

8.3.5.2 Do not re-use container. Containers for liquid concentrates should be rinsed, punctured or crushed before disposal as standard municipal waste.

8.3.5.3 Bags containing pesticide powders should be thoroughly emptied before disposal through municipal trash disposal system.



9.0 Safety Measures for Clients

9.1 Before treatment

9.1.1 Inform the customer of what you are going to do and what he has to observe during and after treatment.

9.1.2 Prepare some formal notes and explain to clients particularly on personal safety and action to be taken in the event of accident.

9.1.3 Notify the owner or occupier of the site prior to the commencement of spraying.

9.1.4 For pesticide treatment in public area, warning notices (e.g. poison, no-entry, name of pesticide, date and time of application, etc) should be posted to avoid the public from entering the area under treatment. Building management should consider advising all occupants on the application and on spray drift risks.

9.1.5 Remove foodstuffs, kitchen utensils, cups and dishes which may come into contact with the product while spraying or effecting a space treatment.

9.1.6 Turn off the air conditioners and cover all electrical appliances.

9.1.7 Cover aquariums well with plastic sheets and remove pets.

9.1.8 Keep the pesticides securely out of reach of children.

9.1.9 Keep the public away from the pesticides operations.

9.1.10 Extinguish naked flames or pilot if using oil based sprays or solvent.

9.2 During treatment

- 9.2.1 Avoid spillage or spraying onto non-target surfaces.
- 9.2.2 Take great care to avoid spraying on or near electric cables and other electrical equipment.

9.3 After treatment

- 9.3.1 Check for any spillage and clean up.
- 9.3.2 Collect pesticides and equipment.
- 9.3.3 Complete records as appropriate.
- 9.3.4 For pesticide treatment in public area, warning notices should be posted to avoid the public from entering the treatment area before the re-entry time.
- 9.3.5 After the application of pesticides indoors, make sure that excess pesticides residues are not left on surfaces that will come into contact by the client and the public.
- 9.3.6 Advise client of re-entry time and after service general cleaning.



10.0 Environmental Protection

- 10.1 Use products that have less impact to the environment and non-target organisms.
- 10.2 Care must be taken not to apply pesticides to non-target areas, or permit pesticides to contact or to be taken up by non-target organisms.
- 10.3 Do not spray under outdoor application when target areas or objects are wet from rain or dew, in a strong wind or if rain is expected to fall within the next few hours as the pesticides can be easily drifted away or washed to non-target areas, such as streams or ponds.



- 10.4 Report any spills and leakage of pesticides that can threaten the environment to the relevant government department.
- 10.5 Collect rinsing from empty pesticide container and spray it evenly over the treated area. Do not contaminate water source.
- 10.6 Never dispose of pesticide waste by rinsing down drains, toilets, sinks, gully traps or into bodies of water.
- 10.7 Never dispose of pesticide wastes into public litter bins and private garbage bins.
- 10.8 Any obsolete or unwanted quantity of pesticide must be disposed of in accordance with the requirements of legislative control of waste disposal regulated by Environmental Protection Department.



Part IV - Appendices

Appendix 1 Pest Investigation Report (Sample)

Reporting pest infestation, type of action to be taken by pest control technicians and recommendation to clients to reduce or eliminate conditions that encourage pest infestations.

Client :		Technicians :		
Address :				
<u>Inspection Report :</u>				
Date:	Pest Sightings	Location	Number of pests	Action/Pesticide to be taken
Kitchen				
Dining Rooms				
F & B				
Guest Rooms				
Store Room				
Comments/Recommendation to Clients				

Appendix 2 Tips on Safe Use and Disposal of Pesticides

- Pesticides should be used in a judicious manner and only when necessary.
- Pesticide users must always handle pesticides safely and responsibly.
- Select the right pesticide products and equipment for target pest problems concerned.
- Know the type of pesticide to be sprayed and its associated hazard and risks.
- Wear appropriate personal protective equipment (PPE).
- Spray only in appropriate weather conditions.
- Manage pesticide drift by carefully assessing wind direction and strength.
- Care should be taken when applying pesticides in or near sensitive areas such as hospital wards, food handling places and water bodies.
- Pesticides must be kept away from all unauthorised persons.
- Post warning signs and cordon off treatment area before, during and after pesticide application.
- Clean up excess pesticide residues after application.
- Follow instructions in the pesticide label to properly dispose pesticides.
- Dispose of pesticides wastes in accordance with the waste disposal requirements of the Environmental Protection Department.



Appendix 3 Sample of Material Safety Data Sheet (MSDS)

MSDS is intended to provide workers and emergency personnel with procedures for handling or working with a pesticide in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.

Safety data sheet according to /Regulation (EC) No. 1907/2006

Date / Revised: 22.06.2007

Version: 3.0

Product: **FENDONA 100 G/L SC**

1. Substance/preparation and company identification

FENDONA 100 G/L SC

Use: crop protection product, insecticide

Company:

Telephone:

Telefax number:

E-mail address:

Emergency information:

International emergency number:

Telephone:



2. Hazard identification

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause paraesthesia.

3. Composition/information on ingredients

Chemical nature

crop protection product, insecticide, suspension concentrate (SC)

Hazardous ingredients

alpha-cypermethrine

Content (W/W): 9.6%

CAS Number: 67375-30-8

EC-Number: 257-842-9

Hazard symbol (s): T, N

R-phrase (s): 20, 25, 37/38, 48/22, 50/53

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

4. First-aid measures

General advice:

Avoid contact with the skin, eyes and clothing. Remove contaminated clothing. If difficulties occur: Obtain medical attention. Show container, label and/or safety data sheet to physician.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician:

Symptoms: numbness and tingling of hands and feet, lung oedema, convulsions

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-fighting measures

Suitable extinguishing media:

water spray, water fog, foam, dry extinguishing media

Specific hazards:

carbon monoxide, hydrogen chloride, hydrogen cyanide, nitrogen oxides, organochloric compounds

The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment :

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information :

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire, Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.



6. Accidental release measures

Personal precautions:

Use personal protective clothing. Avoid contact with the skin, eyes and clothing, Remove contaminated clothes, undergarments and shoes immediately.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Incinerate or take to a special waste disposal site in accordance with local authority regulations.

7. Handling and storage

Handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. The product is not capable of a dust explosion.

Storage

Segregate from foods and animal feeds. Segregate from strong bases. Segregate from oxidants.

Further information on storage conditions: Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage stability :
Storage duration : 36 Months

Protect from temperatures below : -10 °C
The product can crystallize below the limit temperature.

Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.



8. Exposure controls and personal protection

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4mm), chloroprene rubber (0.5mm), butyl rubber (0.7mm) and other

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).



General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Take off immediately all contaminated clothing. Store work clothing separately. Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and chemical properties

Form:	liquid, suspension
Colour:	white
Flash point:	(DIN EN 22719' ISO 2719) Non-foamable.
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating
Vapour pressure:	Not applicable
Density:	approx. 1.045 g/cm ³ (20°C)
Solubility in water	dispersible



10. Stability and reactivity

Thermal decomposition: No decomposition of stored and handled as prescribed/indicated.

Substances to avoid:
strong bases, oxidizing agents

Corrosion to metals: mild steel
tin

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological information

Acute toxicity

LD50 rat (oral): 2, 132 mg/kg

LD50 rat (dermal): >2,000 mg/kg

Information on: alpha-cypermethrine

LC50 rat (by inhalation): >1.59 mg/l 4 h

The test result applies only to the substance transferred into respirable aerosol (particles <20 µm).

Irritation

Primary skin irritation rabbit: non-irritant

Primary irritations of the mucous membrane rabbit: non-irritant

Sensitization

guinea pig: Skin sensitizing effects were not observed in animal studies.

Other relevant toxicity information

The product has not been tested. The statements on toxicology have been derived from products of a similar structure and composition. Misuse can be harmful to health. May cause paraesthesia.

12. Ecological information

Ecotoxicity

Information on: alpha-cypermethrine

Toxicity to fish:

LC50 (96 h) 0.0028 mg/l, Oncorhynchus mykiss

Information on: alpha-cypermethrine

Aquatic invertebrates:

LC50 (48 h) 0.0001-0.0003 mg/l, Daphnia magna

Information on: *alpha-cypermethrine*

Aquatic plants:

EC50 (96 h) > 0.1 mg/l, *Pseudokirchneriella subcapitata*

Persistence and degradability

Information on: *alpha-cypermethrine*

Elimination information:

Not readily biodegradable (by OECD criteria).

Additional information

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not discharge product into the environment without control.

13. Disposal considerations

Must be dumped or incinerated in accordance with local regulations

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport information

Land transport

ADR

Hazard class: 9

Packing group: III

ID number: UN 3082

Hazard label: 9

Proper shipping name: ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S. contains (ALPHA-
CYPERMETHRIN 10%)



RID

Hazard class: 9
 Packing group: III
 ID number: UN 3082
 Hazard label: 9
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S. contains (ALPHA-
 CYPERMETHRIN 10%)



Inland waterway transport

ADNR

Hazard class: 9
 Packing group: III
 ID number: UN 3082
 Hazard label: 9
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S. contains (ALPHA-
 CYPERMETHRIN 10%)



Sea transport

IMDG

Hazard class: 9
 Packing group: III
 ID number: UN 3082
 Hazard label: 9
 Marine pollutant: YES
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S. contains (ALPHA-
 CYPERMETHRIN 10%)



Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. contains (ALPHA- CYPERMETHRIN 10%)



15. Regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

EEC Directives:

Hazard symbol(s)

N Dangerous for the environment.

R-phrase(s)

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S2 Keep out of the reach of children.

S13 Keep away from food, drink and animal feeding stuffs.

S20/21 When using do not eat, drink or smoke.

S35 This material and its container must be disposed of in a safe way.

S57 Use appropriate container to avoid environmental contamination.

May cause paraesthesia.

Hazard determining component(s) for labelling: ALPHA-CYPERMETHRIN

Other regulations

For the user of this plant-protective product applies: To avoid risks to man and the environment, comply with the instructions for use. (Directive 1999/45/EC, Article 10, No. 1.2)

16. Other information

Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 3:

T	Toxic.
N	Dangerous for the environment.
20	Harmful by inhalation.
25	Toxic if swallowed.
37/38	irritating to respiratory system and skin.
48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.



Appendix 4 Tips on Occupational Safety and Health

- Wear appropriate personal protective equipment (PPE).
- Keep PPE and application equipment in a good state of repair.
- Never eat, drink or smoke when working with pesticides.
- Purchase and keep only the amount of pesticides required for operational needs.
- Avoid inhalation of pesticide vapours or dust during transportation of pesticide in vehicles, in store and when working with pesticides.
- Avoid contact with skin or wound. If contact does occur, wash with soap and copious amounts of water.
- Observe rules for safe preparation, application, storage, transportation, and disposal of pesticides and their containers.
- Special attention should be paid when working on slippery floor, elevated platform, slope, enclosed and confined space.
- Drive safely while transporting pesticides.
- Seek medical attention if you are feeling unwell.



Appendix 5 Record on Pesticide Stocks and Consumption (Sample)

FOR THE YEAR OF 2011

Name of Pesticides	Packing unit	YEAR END														
		JAN. Purchased	End JAN. In Stock	Total Consumed	FEB. Purchased	End FEB. In Stock	Total Consumed	MAR. Purchased	End MAR. In Stock	Total Consumed	Total Purchased	Total Consumed				
	lit.															
	drum															
	pcs															
	cylinder															
	kg															



香港蟲害控制從業員協會

Pest Control Personnel Association of Hong Kong

滅蟲(有害生物防控)專業操守

3/2011

文件編號: PCPA/CE32011/1

序言

在香港市民對居住環境和滅蟲服務水平的要求不斷提高下，本專業操守是為本會會員及提供有害生物防控服務的僱主、僱員和提供相關服務的從業人員編制而成，以供參考。

本專業操守旨在為有關的服務行業人士提供正確概念，從而能向市民提供有誠信而專業服務，並簡述從業人員應有的安全服務操守與營運規範，藉以保護市民、環境和業界人員的安全。

此外，本專業操守亦希望業內人士能關注到業界應有的責任，以確立專業服務的水平及形象並向市民推廣正確防治有害生物的意識。

行業相關法規及協會、世界組織的行業指引

1. 遵守香港政府頒佈相關法規
 - 香港法例第 57 章(僱傭條例)
 - 香港法例第 132 章(公眾衛生及市政條例)
 - 香港法例第 133 章(除害劑條例)
 - 香港法例第 201 章(防止賄賂條例)
 - 香港法例第 295 章(危險品條例)
 - 香港法例第 354 章(廢物處置條例)
 - 香港法例第 509 章(職業安全及健康條例)
 - 其他相關營運服務的香港法例
2. 遵守由本協會制定相關規範、規章和指引
3. 採納香港消費者委員會相關建議
4. 參考世界衛生組織(WHO)的技術及相關專業建議和指引

誠信的專業服務

1. 向受到有害生物滋擾或傷害人士提供服務的應有原則：
 - a) 用專業態度及技術提供優良服務(參考本協會印製的“防治蟲鼠手冊”)。
 - b) 向受到有害生物滋擾或傷害人士指出問題成因、將會採用的處理方法及其預期效果、避免再發生問題的方法(參考本操守之附件二)。
 - c) 收取合理服務費。

2. 處理個案的應有原則：
 - a) 採用選定方法處理有害生物問題前全面及詳細評估情況，採用綜合防治 **Integrated Pest Management, (IPM)** 概念之合適的方法，跟進有害生物為患情況及評估解決有關問題的進度(參考本操守之附件二)。
 - b) 當處理場所需要進行化學防治時，應由已接受適當訓練的操作人員使用合適的除害劑配合適當的施藥器具及合適的個人防護用品，以負責任態度依照除害劑標籤的內容指示小心使用(參考本協會印製的“防治蟲鼠手冊”第五章第五節[除害劑的施放]一欄)。
 - c) 任何儲存或使用的除害劑必須已在香港登記註冊及附有適當的中英文標籤。
 - d) 向客戶提供專業的意見，並確保及尊重客戶享有的知情權，如有需要可讓客戶或相關人仕隨時可以獲取服務過程中使用任何除害劑和其他化學物品的相關資料（如產品標籤、產品安全資料表 **MSDS** 等）。
 - e) 向客戶提供有關服務的資訊時，應盡力保證所有資訊內容的真實性。
 - f) 盡力解決問題，不可把問題拖延、隱瞞、淡化、誇大。
 - g) 履行向客戶所作的任何服務承諾。

安全服務與營運規範

1. 全面評估在進行防治蟲鼠(有害生物)工作時可能會引致施工人員、周邊人士、寵物、非目標生物及環境的安全及健康危害。
2. 確保服務人員已接受防治蟲鼠(有害生物)和相關職業安全培訓及定時向服務人員提供持續培訓，讓他們掌握最新蟲鼠害防治科技與技術及相關職業安全應注意事項。所有培訓記錄必須妥善管理和保存。
3. 在服務進行前為工作人員及有關人士提供足夠和合適的個人防護用品及建議。
4. 在惡劣及危險的工作環境(如濕滑地面、斜坡、高空工作、密閉空間、有害生物為患等)工作前，主管人員應先評估有關環境的情況，會否危害員工的安全及健康，繼而採取適當的措施去減低危害，並知會有關危害及安排。

PCPA of HK

5. 需進行化學處理時必須嚴格遵守香港政府頒佈相關法規，如除害劑條例、廢物處置條例...等等。(參考本協會“獲授權”印製的“防治蟲鼠手冊”第五章第七節[除害劑的安全使用]一欄)。
6. 所有除害劑的採購、儲存、運輸、使用和報廢等環節必須符合政府相關的規定(參考本操守之附件一及三)。
7. 嚴格遵守香港政府的法規及協會的相關規範，並參考國際組織的行業技術和指引。
8. 營運管理層必須確保全體人員隨時掌握行業相關法規、規定和指引(參考本操守之各附件)。
9. 所有服務過程使用的記錄及相關檔案，必須妥善保存並保持存放不少於二年。
10. 必須即時處理在進行防治蟲鼠(有害生物)工作時所遇到的工業意外事件，並詳細記錄意外事件的發生經過和處理方法。所有記錄必須妥善管理和保存。

對業界及社會的應有責任

1. 業界

- 不斷進修，更新及提昇有關知識及技術水平。
- 盡力維護業界聲譽。
- 向業界通報出現破壞業界聲譽的事情。
- 保持業內廉潔、公平及公正風氣。
- 以互相尊重和專業態度對待同業，避免對同業信譽進行攻擊和污蔑行爲。

2. 社會

- 推擴正確防治有害生物意識。
- 倡導廉潔、公平及公正風氣。
- 運用業內專業知識及能力，幫助社會發展。

附件/指引

1. 除害劑的使用及管理指引(附件一)
2. 有害生物爲患的調查指引(附件二)
3. 除害劑的優良管理(附件三)
4. 有害生物治理指引(參閱本協會“獲授權”印製的“防治蟲鼠手冊”)

註：本協會編寫的本文操守是初版，歡迎各會員、同業友好、相關人仕及機構向本會提出意見及指導，藉此令本操守日後有更充實完整的更新版本。

Code of Practice for The Safe and Efficient Use of Pesticides on Sports Turf



CODE OF PRACTICE FOR THE SAFE AND EFFICIENT USE OF PESTICIDES ON SPORTS

PART I INTRODUCTION

1. The purpose of the following Code is to promote the safe and efficient use of pesticides and ensure the protection of the environment (including indigenous flora and fauna), while maintaining good quality turf grass.
2. The practices detailed in the Code should not be taken as strict rules as turf grass management requires a flexible approach to wide ranging problems. The Code will, however, be adhered to as closely as individual circumstances allow.
3. This code of practice on the safe and efficient use of pesticides on sports turf has been drawn up by representatives from all golf courses in Hong Kong and the Hong Kong Jockey Club with assistance from the Hong Kong Agriculture, Fisheries & Conservation Department.
4. The code should be periodically reviewed in order to keep it up-to-date and effective, taking into account technical, economic and environmental benefits.

PART II APPOINTMENT OF COMPETENT PERSONNEL

5. Management should employ a person trained in the theory and practice of turf grass management and maintenance as the responsible person who will implement the Code. It is the responsibility of the turf grass manager to keep abreast of relevant up-to-date information on pesticides.

PART III GUIDELINES

a) Training

6. To ensure that pesticides, where needed, are applied safely and efficiently, management will ensure that all pesticide applicators have received training on basic issues including pesticide formulation, application methods, safety measures, effects on the environment and operation of application equipment.

b) Storage, Handling and Disposal

7. Pesticides must be stored in compliance with relevant Ordinances and Regulations. In particular, requirements under the Pesticides Ordinance, Cap. 133 must be met. Chemicals should be kept in secure, well ventilated storage areas with adequate fire control and spillage containment facilities.
8. Management should develop emergency procedures (e.g. action plans) for dealing with pesticide personal contamination, spillage, poisoning and fire.
9. A responsible person at the appropriate level should be appointed to receive pesticide deliveries and to ensure prompt transport to the established storage facility. He will also ensure all deliveries are in original, undamaged containers.
10. Any waste chemicals and/or containers should be disposed of through a licensed waste collector in accordance with the Waste Disposal (Chemical Waste) (General) Regulations.

c) Planning Pesticide Use

11. When any turf grass problem occurs, the cause must first be correctly identified. If the cause is found to be a pest, non-chemical control methods should initially be considered (e.g. hand weeding). If these are not applicable, the safest (in terms of human exposure and effects on the environment) effective chemicals should be considered. When making such decisions, it is recognized that not all chemicals registered in Hong Kong are necessarily recommended for use in turf grass management. At all times, long term effects, as well as short term controls, should be considered when selecting pesticides and chemicals should be chosen which best fit into an Integrated Pest Management programme.
12. Once a chemical has been identified, formulation and concentration should be selected to maximize effect against the target while minimizing risk of affecting non-target organisms and the environment. Before any control programme is initiated, the safety rules as advocated by the Agriculture, Fisheries & Conservation Department in their leaflet on "Safe Use of Pesticides" should be considered.

d) Pesticide Application

13. It is the responsibility of the turf grass manager to ensure that all applications of pesticides are in accordance with the product label instructions. Following such instructions (which should be in English and Chinese) will ensure the safe and effective delivery of the chemical to the target. The guidelines laid down in AFCD advisory leaflet should be followed and from that, a pesticide operation manual be developed, including a checklist of do's and don'ts in pesticide use.

e) Protective clothing and personnel health.

14. Management will provide appropriate protective clothing for pesticide applicators and ensure that it is worn when chemicals are being handled as recommended on the specific product label or material safety data sheet. Management should monitor the health of pesticide applicators and arrange proper care for them as and when necessary.

f) Posting notices.

15. As an integral part of the pesticide application process, management should post notices informing the turfgrass users of product application to the turf prior to the application. Notices should include information on the pesticide and where it will be applied.

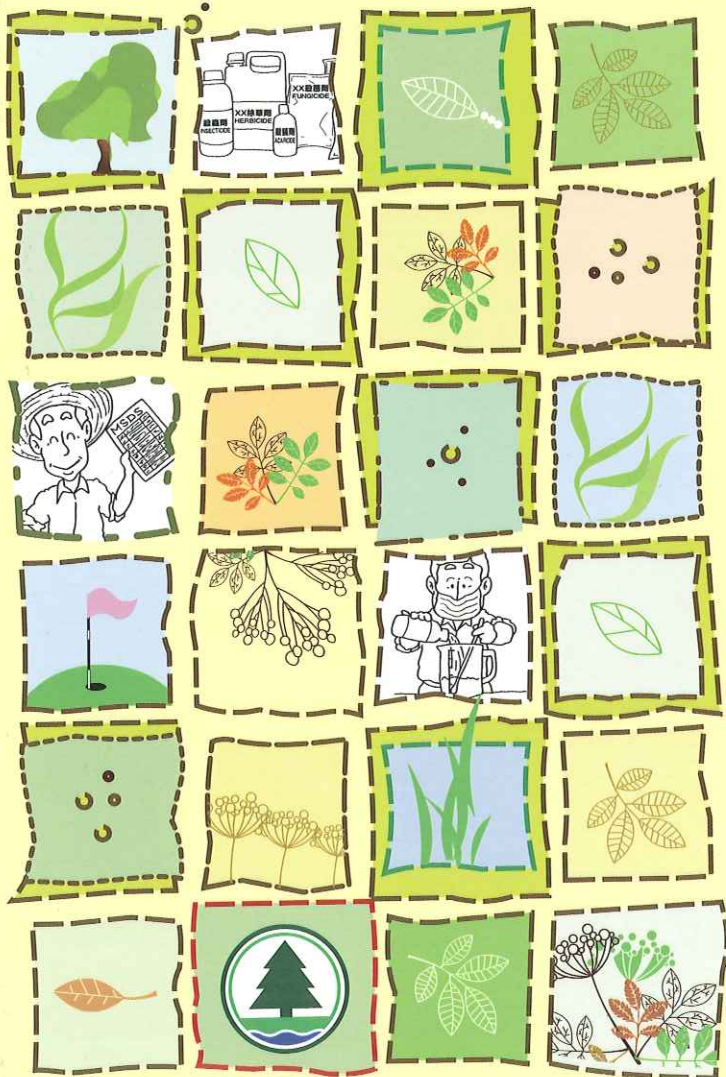
g) Record Keeping.

16. Records should be kept on pesticide stocks, analytical data and pesticide use. Turf grass managers should also keep reference material such as copies of relevant Ordinances, material safety data sheets and label information.

正確安全施用除害劑

草地及園藝保養

Safe Use of Pesticides
Turf and Landscape
Management



漁農自然護理署

Agriculture, Fisheries and Conservation Department



目錄
Content



-  簡介 P.3
Introduction
-  主要的綜合蟲害防治方法 P.4
The essential components
of IPM
-  準備工作 P.7
Preparation
-  裝備 P.11
Equipment
-  施藥 P.12
Field application
-  運輸、貯藏及棄置 P.17
Transportation, Storage
and Disposal



簡介

Introduction

大部分除害劑本身含一定毒性，因此必須慎用，不可視之為解決蟲害的唯一方法。漁農自然護理署建議從事草地及園藝保養的人士採用綜合蟲害防治方法 (Integrated Pest Management, IPM)，減少施用除害劑。此舉不但能保障市民的健康及保護環境，而且亦可減低害蟲產生抗藥性的機會，從而提高其防治效果。

Most pesticides, given their intrinsic properties, are toxic in nature. Use of pesticides should not be regarded as the only solution to any pest problem but should only be used in a judicious manner. AFCD recommends the adoption of an **Integrated Pest Management (IPM)** approach to those who are engaged in turf grass and landscape management. Such approach can safeguard human health and protect the environment. It will not only reduce the use of pesticides but also prevent the development of pest resistance and enhance the effectiveness on pest control.

主要的綜合蟲害防治方法一般包括：

The essential components of IPM generally include the followings:

- 鑑別、監察及評估蟲害情況
Identification, monitoring and assessment of pest problems
- 採用適當防治計劃及定期檢視
Adoption of a suitable pest control plan and conduct routine surveillance
- 保持園林清潔衛生
Good field sanitation
- 配合物理、生物及化學防治方法
Integration of physical, biological and chemical control
- 保存有關記錄
Record keeping system



鑑別、監察及評估蟲害情況。

Identification, monitoring and assessment of pest problems.



保持園林清潔衛生。
Good field sanitation.



保存有關記錄。
Record keeping system.



只選購已註冊、包裝妥當及附有合格標籤的產品。
Purchase only properly packed, labeled and registered pesticides.



閱讀及遵照標籤上的指示。
Read and follow labeling instructions after use.

若有必要使用除害劑，使用者須顧己及人，格外小心使用。以下列舉了一些安全指引以供參考：

When pesticides are indeed needed to be used, pesticide users must always handle pesticides safely and responsibly. Some general safety guidelines are listed below for reference :

準備工作

Preparation

- 因應有關園林及蟲害情況，選用合適的除害劑。

Select the right pesticide products for target areas and pest problems concerned.

- 只選購已註冊、包裝妥當及附有合格標籤的產品。

Purchase only properly packed, labeled and registered pesticides .

- 必須閱讀及遵照標籤上的指引，並特別留意施用的濃度及使用次數、適用範圍、有關的特別安全措施等。

Always read and follow labeling instructions. In particular, pay close attention to the dilution and application rate, suitable application areas and special precautions on safety, etc.

- 殺蟲劑 / 除真菌劑及除草劑應使用不同噴霧器噴灑。每個噴霧器須加上明顯的標記，以便易於辨別。

Use separate, clearly marked sprayers for insecticides/fungicides and herbicides.

- 使用特別為除害劑而設的量杯，用後要徹底清洗。

Use proper measuring cylinders which are reserved for use with pesticide and must be washed thoroughly after use.

- 準確量度除害劑的使用量，切勿稀釋超過即時所需的份量。

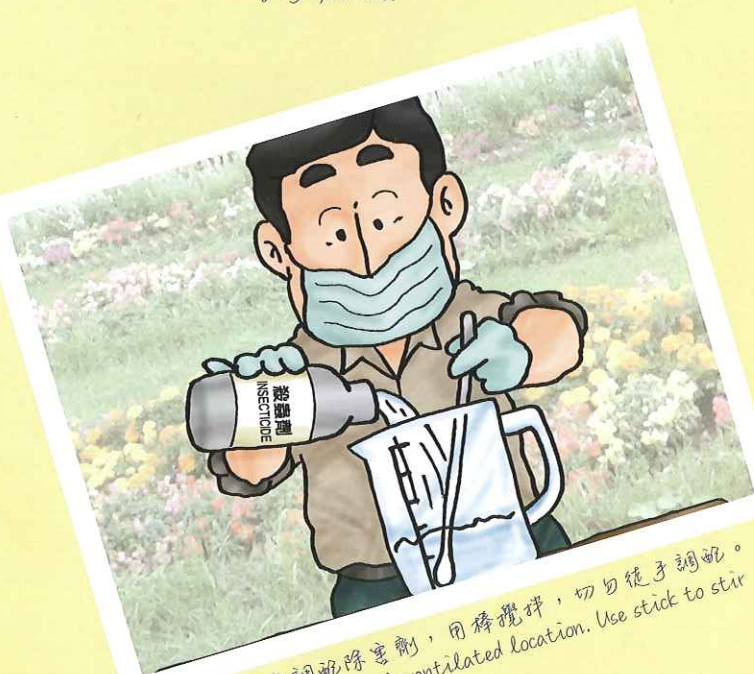
Measure carefully and mix only the amount needed for immediate use.

- 在空氣流通處調配除害劑，用棒攪拌，切勿徒手調配。

Mix the pesticide in a well-ventilated location. Use a stick to stir the mixture. Do not use bare hands.



使用特別為除害劑而設的量杯，用後要徹底清洗。Use proper measuring cylinders which are reserved for use with pesticide and must be washed thoroughly after use.



在空氣流通處調配除害劑，用棒攪拌，切勿徒手調配。Mix the pesticide in a well-ventilated location. Use stick to stir the mixture. Do not use bare hands.



採用標籤指明的個人安全裝備。

Wear appropriate personal protective equipment (PPE).



定期檢查、維修及適當調校噴霧器。

Provide proper calibration, maintenance and regular checking.

裝備

Equipment

- 調配及施用除害劑時，應採用標籤指明的個人安全裝備(例如工作服、膠手套、膠靴、面罩、護目鏡等)。

Wear appropriate personal protective equipment (PPE) as specified on the label (e.g. overalls, rubber gloves, boots, face mask, goggles etc.) when mixing and applying pesticides.

- 定期檢查、維修及適當調校噴霧器，留意噴霧器可能出現的毛病：例如藥液由接口、喉管或破損處漏出；噴咀腐蝕或阻塞(引致噴霧不均勻)等。

Provide proper calibration, maintenance and regular checking of leakages from joints, pipes and worn or blocked nozzles (uneven spray pattern), etc.

- 使用噴霧器後，應以清水沖洗，並將噴咀及噴筒內的水份徹底排清。

Fill and rinse sprayer with clean water. Flushing out the water through nozzles and drain the tank completely.

- 若未來 48 小時不會再使用機動噴霧器，應將油箱及化油器內的燃油徹底排清。

If a motorized sprayer is not going

to be used within the next 48 hours, drain fuel tank and carburetor and leave empty.

施藥

Field application

- 在下列情況下切勿在戶外施藥：
Do not spray under outdoor application：
 - 施藥範圍或目標作物已受雨水或霧水沾濕
when target areas or objects are wet from rain or dew
 - 吹強風時
in a strong wind
 - 預測在未來數小時內可能會下雨
if you expect rain to fall within the next few hours
- 勿在烈日當空下施藥，盡量於清晨或黃昏時分施藥。
Do not apply pesticides under strong sunlight and as far as possible, apply during early morning or at nightfall.
- 孕婦及對除害劑敏感之人士不宜施藥。
Pregnant or sensitized persons should not apply pesticides.



切勿在吹強風時施藥。
Do not spray in a strong wind.



切勿在預測在未來數小時內可能會下雨時施藥。
Do not spray if you expect rain to fall within the next few hours.



勿在烈日當空下施藥。
Do not apply pesticides under strong sunlight.



施藥前後，應在當眼處加上警告告示。
Post warning notices before and after spraying.



留意風向，須順風向施藥。
Pay attention to wind direction and keep to windward when spraying.

- 施藥前後，應在當眼處加上警告告示（如毒藥、不准進入、除害劑名稱、施藥日期及時間等）。

Post warning notices (e.g. Poison, no-entry, name of pesticide, date and time of application, etc) at conspicuous locations before and after spraying.

- 施藥時不可吸煙或飲食。

Do not smoke, eat or drink when spraying.

- 留意風向，須順風向施藥。

Pay attention to wind direction and keep to windward when spraying.

- 施藥時應避免藥霧飄散至非目標範圍，例如溪澗或池塘。

Avoid spray drift contaminating non-target areas, such as streams or ponds.

- 小心藥霧，避免吸入或接觸到口、眼睛、皮膚及衣物。

Beware of spray drift, do not inhale the mist. Avoid contact with mouth, eyes, skin and clothing.

- 若感到不適，須立即停止施藥工作，並應攜同標籤求醫診治。

Stop spraying immediately if you are feeling unwell. Bring along the label when seeking medical attention.

- 慎防被藥液濺到。施藥時應在附近放置一桶清水及肥皂備用，如不慎被藥液濺及，便可立即清洗。

Avoid getting pesticides on you. Keep a bucket of water and soap handy when you spray.... if you splash yourself with pesticides, wash immediately.

- 如用剩少量已稀釋的藥液，可將之均勻地噴灑在施藥區內。

If you are left with a small quantity of diluted spray, spray it evenly over the treated area.

- 施藥後須以清水及肥皂徹底清洗身體。每次施藥時所穿的衣服，穿後應即清洗，並須與日常衣物分開洗滌。

Wash thoroughly with soap and water after handling or using pesticides. Wash clothing after each pesticide application and wash them separately from other laundry.

- 將空容器及攪拌棒徹底清洗3次，然後把該容器作一般都市廢物處置。

Triple rinse empty container and wash mixing stick thoroughly and dispose of the container as standard municipal waste.

- 收集清洗液並均勻地噴灑在施藥區內，切勿污染水源。

Collect rinsing and spray it evenly

over the treated area. Do not contaminate water source.

運輸、貯藏及棄置

Transportation, Storage and Disposal

- 裝卸除害劑時必須小心。
Loading and unloading the pesticides with care.
- 盛載除害劑之器具和容器，在運輸過程必須牢固穩妥地存放。
Always keep pesticide apparatus and container in a stable position during transportation.
- 避免除害劑由容器或噴霧器內濺出。
Avoid spilling and leaking of pesticides from container or sprayer.



切勿污染水源。
Do not contaminate water source.

- 不宜購買過多除害劑，足夠應付日常所需便可。

Purchase and keep only the amount of pesticides required for operational needs.

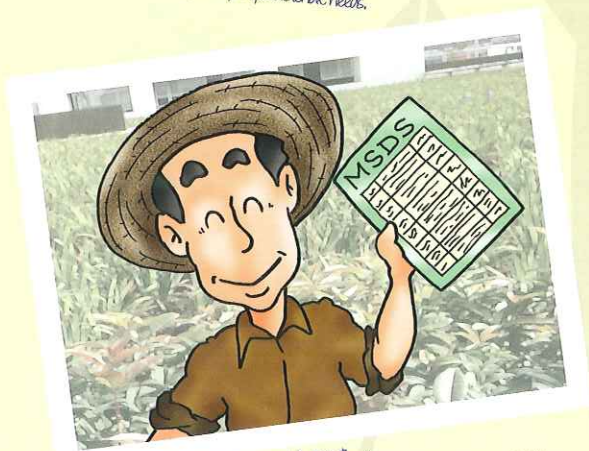
- 常備除害劑物料安全資料表。

Material Safety Data Sheet (MSDS) of pesticides should be available.



不宜購買過多除害劑。

Purchase and keep only the amount of pesticides required for operational needs.



常備除害劑物料安全資料表。

Material Safety Data Sheet (MSDS) of pesticides should be available.

- 必須備存除害劑購買及棄置記錄，並備存最新的存貨清單及完整的施用日誌。
Record on all pesticide movements, stock keeping and detailed job application record sheet should be kept updated.

- 不要貯存已稀釋的除害劑。
Do not store diluted pesticides.

- 除害劑必須貯存在附有標籤的原裝容器內。貯藏前，須確保瓶蓋已封好。必須把除害劑緊鎖，遠離食物、飲料或飼料，不可讓兒童或禽畜接觸，並須貯存於陰涼乾燥處。

Pesticides should be stored under lock and key in their original, labeled container. Ensure all containers are tightly closed. Store pesticides away from food, drink and feed. Keep out of reach of children and livestock animals and store under cool and dry place.

- 除草劑必須與其他殺蟲劑 / 除真菌劑分開存放。

Herbicides should be stored separately from other insecticides/ fungicides.

- 不可將空容器作其他用途。

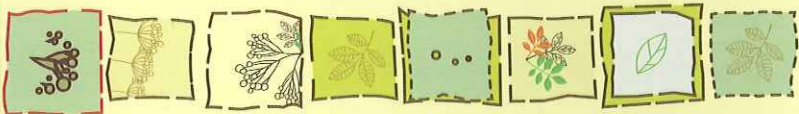
Do not use the empty container for other purposes.

- 準備布料、沙、空容器、清潔用品等，以便在藥劑洩漏時可立即處理。

Cloth, sand, empty container and cleaning materials should be readily available for handling immediate spillage or leakage.

- 若要棄置過期或不需要的除害劑，必須符合環境保護署規管廢物處置所訂的法律管制規定。

Any obsolete or unwanted quantity of pesticide must be disposed of in accordance with the requirements of legislative control of waste disposal regulated by Environmental Protection Department.



漁農自然護理署

Agriculture, Fisheries and Conservation Department

植物及除害劑監理科

Plant and Pesticides Regulatory Division

電話/Tel : 2150 7010

電郵/Email : mailbox@afcd.gov.hk

網頁/Website : <http://www.afcd.gov.hk>



Pest Control

[Posters](#) | [Pamphlets](#) > Guidelines on Occupational Safety and Health for Pest Control Operators > Text Version | [Graphic Version \(Chinese Only\)](#)

Guidelines on Occupational Safety and Health for Pest Control Operators

Food and Environmental Hygiene Department
Occupational Health Service, Labour Department

Table of Contents

[1. Introduction](#)

[2. Safety and Health Hazards that Pest Control Operators are Exposed to](#)

[1. Pesticide poisoning](#)

[1.1 Routes of entry of pesticides into body](#)

[1.2 Symptoms of poisoning](#)

[1.3 Safe practice in using pesticides](#)

[2. Other safety and health hazards](#)

[2.1 Contraction of infectious diseases](#)

[2.2 Pest attack](#)

[2.3 Adverse working environment](#)

[2.4 Manual handling operations](#)

[2.5 Fire and explosion](#)

[3. Legislation Related to the Use of Pesticide](#)

[4. Further Information](#)

1. INTRODUCTION

This set of guidelines, designed for pest control workers, aims to enhance their awareness of safety and health hazards at work and advises them on precautionary measures so as to prevent any accidental poisoning or harm to health.

Pest control workers often have to apply pesticides in places like godowns, factories, food premises, offices, household units, parks etc. In the course of their work, they may be exposed to various safety and health hazards arising from:

- Inhalation of pesticides
- Contraction of diseases
- Pest attack
- Adverse working environment
- Dangerous manual handling operation
- Fire and explosion

2. SAFETY AND HEALTH HAZARDS THAT PEST CONTROL OPERATORS ARE EXPOSED TO

1. Pesticide poisoning

Those pesticides as used by pest control workers are substances for repelling, killing or preventing pests. They destroy pests by restraining their central nervous system or circulatory system, or damaging their major organs. Therefore, pesticides are normally harmful to humans and animals alike.

Exposure to excessive pesticides may lead to acute poisoning, chronic poisoning or allergic reactions. Pesticides which cause irritation or corrosion can damage the eyes and skin directly.

1.1 Routes of entry of pesticides into body

- Workers can be exposed to pesticides in three ways:
- Dermal exposure
- Oral exposure
- Inhalation exposure

1.1.1 Dermal exposure

Pesticides may be absorbed through intact or broken skin. Therefore, one should:

- avoid coming into direct skin contact with pesticides
- not wear clothing contaminated with pesticides
- avoid exposure to pesticide droplets or vapours

1.1.2 Oral exposure

Pesticides can enter the body through the digestive system. Thus,

- after coming into contact with pesticides, one should not drink, eat or smoke until having cleaned their hands and faces
- pesticide containers should be clearly labelled to avoid accidental swallowing of pesticides
- one should avoid contamination of food by pesticides

1.1.3 Inhalation exposure

Volatile or aerosol pesticides can enter the body through the respiratory system. Therefore, one should:

- maintain good ventilation
- use protective respirators properly
- prevent pesticides from spreading through the ventilation system

1.2 Symptoms of poisoning

Symptoms depend on the toxicity of the pesticide as well as dose and mode of intake. Common symptoms include:

- headache, giddiness, nervousness
- a feeling of general numbness
- diarrhoea, vomiting
- contraction of eye pupils
- excessive sweating, tearing, saliva secretion

Severe cases may include the following symptoms:

- irregular heart beat
- breathing difficulty
- convulsion
- confusion
- coma

1.3 Safe practice in using pesticides

1.3.1 Risk assessment

Unnecessarily using pesticides may increase the hazards to humans, animals and the environment. Consider other effective pest control measures before resorting to the use of pesticide. If no alternative is practicable, avoid causing damage to the environment or hazards to human and animal health when using pesticides.

Points to note when conducting risk assessment on the use of pesticides:

- The pesticide is permitted by law for the intended purpose.
- The user has adequate safety training.
- Adequate safety measures have been put in place.
- The pesticide can be used at the place and time planned for its application.
- The pesticide poses least risk to humans, animals and the environment.

1.3.2 Precautionary and control measures

Selecting pesticides

- The pesticides must have been registered in Hong Kong and are clearly labelled in accordance with the law.
- Select the pesticides with least harmful effect on humans, animals and the environment.

Storing pesticides

- Do not store pesticides together with food, drinks or feed.
- Keep pesticides out of reach of children.
- Lock the room or cabinet keeping pesticides. Only designated personnel can keep the key.
- Those pesticides which are listed as dangerous goods must be stored in dangerous goods store if the storage amount exceeds the exemption level.
- Check the store regularly and keep the storage record.
- Undiluted pesticides should be handled by designated personnel only.

Transporting pesticides

- Transport pesticides with safe containers.
- Take care when transporting pesticides to avoid spillage.
- Pesticides as well as any equipment or protective gear contaminated with pesticides must be kept separately with other articles to avoid contamination.

Diluting and preparing pesticides

- Check all equipment and tools to ensure that they are in good working conditions. If there are any cracks or defects, stop using them and arrange replacement or repair.
- Read carefully the user's guide and the label of the pesticide for understanding thoroughly the safe use of the pesticide.
- Wear appropriate protective gear such as working clothes, PVC aprons, goggles, gloves, protective respirators etc.
- Dilute or prepare the pesticide accurately in accordance with the manufacturer's instructions. Prepare the pesticide in a well-ventilated location where no other people is unnecessarily present.
- Stay upwind and take care during work to avoid spillage or leakage of the pesticide.
- Thoroughly clean the working tools, working tables and floor surfaces on completion of the procedures.

Application of pesticide

Inform all those who may be affected by the application of pesticide of the work arrangements and the safety measures to be taken.

- Ask everyone except the pest control workers to leave the scene.
- Remove food, utensils, crockery and pets before applying the pesticide.
- Switch off the air conditioners and cover up the ventilation openings.
- Extinguish all kindling materials.
- Wear appropriate protective gear such as working clothes, PVC aprons, goggles, gloves, protective respirators etc.
- Strictly adhere to the operational safety guidelines and the instructions on the label of the pesticide for application.
- Select the appropriate nozzle and adjust spray pressure accurately to avoid "over-spray" of pesticide.
- Avoid applying the pesticide to the area indiscriminately.
- Do not apply pesticide in liquid or powder formulation outdoors under strong wind.

After application of pesticide

- Clean up spills of pesticide.
- Clear up the unused pesticide and all the equipment.
- Fill in the record on application of pesticide.
- Advise the venue users on the safety measures for using a pesticide-treated venue. For instance, users should not return to the venue until it has been ventilated for a period of time.
- Wash your hands, face and skin that may be contaminated by pesticide with water and soap.
- Clean the equipment thoroughly after returning to the office.

Disposal of pesticide containers and unused pesticides

- Pesticide containers except those containing compressed aerosol pesticides should be rinsed several times with water and punctured or crushed before disposal to make them unfit for further use that may result in accidental poisoning.
- The pesticide waste should be handled in accordance with the Waste Disposal (Chemical Waste) (General) Regulation enforced by the Environmental Protection Department to avoid damaging the local ecology.

Personal protection

- As a supplement to inadequate preventive measures, personal protective equipment is the last defence against using pesticides. The equipment serves to protect your skin, eyes, personal clothing from contamination by the pesticide and to prevent inhalation of the same. Working clothes, PVC aprons, masks or hats, goggles, gloves, protective respirators etc. are the commonly used personal protective equipment against pesticide hazards.
- To provide effective protection for the workers, choose the appropriate personal protective equipment with reference to the information provided by the manufacturers and suppliers. The workers should also know the correct way of using and maintaining the equipment. Cracked or damaged equipment should be replaced.
- The pesticides should be stored separately from the personal protective equipment and other articles to avoid contamination.
- Wash the personal protective equipment immediately after use. Working clothes should be washed every day with soap or washing powder and separately from ordinary clothing.

Personal hygiene

- Do not drink, eat or smoke when handling pesticides.
- Do not touch the face and skin with contaminated hands or gloves.
- Wash your hands and face with water and soap immediately after using pesticides.

First aid

- First aid is merely a temporary measure to relieve the symptoms of the victim who should be taken to the hospital as soon as possible. The label of the pesticide should be brought along to the hospital for the doctor's reference.
- Follow the directions of the manufacturer or supplier of the pesticide when giving first aid.

2. Other safety and health hazards

2.1 Contraction of infectious diseases

Frequent visits to pest-infested places to perform their work render pest control workers more susceptible to pest-borne diseases. The excrement and urine from rodents and the excrement from fleas often carry viruses, bacteria as well as pathogens such as rickettsiae. Inhalation of dirt and dust containing flea and rodent excrement or exposure of wounds to such dirt and dust can cause illnesses. Flea, tick and mosquito bites also spread diseases.

Pest-borne diseases include Hantaan Fever, Murine Typhus, Boutonneuse Fever, Leptospirosis, Malaria and Dengue Fever, etc.

Precautionary and control measures

- Disinfestation of fleas should be carried out, if practicable, prior to any anti-rodent work.
- Apply flea or mosquito repellent on clothing or exposed skin as necessary.
- Avoid as far as possible direct skin contact with anything that may contain pathogens, e.g. the bodies and excrement of pests and soiled water.
- Wounds should be covered with water-proof sterilized dressing.
- Wear long-sleeved clothing and put on personal protective equipment such as plastic gloves, boots, aprons, protective respirators, etc.

- Strictly observe personal hygiene.

2.2 Pest attack

In the course of disinfestation, pest control workers are prone to being bitten by rodents and mosquitoes, or stung by wasps.

Precautionary and control measures

Attack by rodents - use long pliers to fetch rodents caught.

Attack by wasps - cover your whole body by wearing thick long-sleeved overalls, gloves and beekeeper's veil. People not taking part in the operation should stay away from the site under disinfestation or remain indoors.

Attack by mosquitoes - apply mosquito repellent on the skin.

2.3 Adverse working environment

Pest control workers often have to work in places of adverse environment. They have to work, for example, in slippery kitchens, damp back lanes, dingy and poorly ventilated godowns, workplaces full of odds and ends, and construction sites with uneven ground surface, etc. Working in these adverse environments increases the chance of workers getting hurt by slipping, bumping and spraining themselves, and contracting infectious diseases.

Precautionary and control measures

Before commencing work at a new site, the supervisor should assess the working environment in the first instance to see if there would be any safety or health hazards posed to the workers. He/She should then take appropriate measures to reduce the hazards, and inform the workers of those hazards and the arrangements made, e.g.

- arranging additional lighting
- removing objects which cause obstruction to work
- providing the workers with and ensuring that they would put on suitable personal protective equipment, such as safety shoes and protective respirators

2.4 Manual handling operations

As pest control workers often have to carry a lot of equipment and pesticides to work in different places throughout the territory, it is inevitable that they frequently need to lift heavy objects. Workers' attention should therefore be drawn to the fact that they are liable to sustaining physical injury if the ways they adopt in manual handling operations are improper.

Risk factors contributing to greater chances of workers sustaining injury may include the following examples:

- lifting objects with a poor posture, e.g. bending the body or twisting the back
- using force in a rapid manner
- making certain movements over a long period of time or repeating the same movements many times
- moving an object which is too heavy or with a smooth surface
- inadequate physical strength of the worker
- uneven, slippery or irregular ground surface and narrow space

Precautionary and control measures

Before commencing a manual handling operation, assessment should be made to take into account all risk factors. Appropriate precautionary measures should be taken and the workers should be duly informed.

The precautionary measures may include:

- using suitable containers to carry the equipment and pesticides
- using handcarts
- lifting heavy objects by more than one worker
- lifting heavy objects with a correct posture

2.5 Fire and explosion

Many pesticides need to be diluted with such inflammable liquids as petrol or kerosene, so they carry the risk of fire or explosion. Compressed aerosol pesticides in canned form also contain inflammable liquids and have the same kind of risk.

Precautionary and control measures

- Pesticides should not be stored under strong sunlight or high temperature.
- Smoking and the use of naked flame should be prohibited in the storage area and the place where pesticides are being applied.
- Never spray pesticides onto places where the temperature is high, a flame is burning, or an electrical appliance is operating.
- Be always equipped with suitable fire-extinguishers.
- Keep the means of escape clear and know the route well.

3. LEGISLATION RELATED TO THE USE OF PESTICIDE

1. Occupational Safety and Health Ordinance (Cap. 509)

1.1 Employer's Responsibility

The employer is responsible for ensuring the safety and health of his employees. He/She should adopt proper precautionary and control measures according to the actual need. The measures include:

- assessing safety and health hazards arising from work
- formulating safety working procedures and guidelines
- providing safety training and instructions to employees

- providing tools and personal protective equipment that are in compliance with the safety standards

- conducting regular inspection and maintenance of all tools and personal protective equipment
- monitoring employees on compliance with the safety regulations

1.2 Employee's Responsibility

The employee has the responsibility to cooperate with his employer in adhering to the safety working procedures as laid down by the latter and using all tools and personal protective equipment in the correct way, in order to protect the safety and health of his own self and the others.

2. Pesticides Ordinance (Cap. 133)

The Ordinance mainly regulates the import, production, preparation, distribution and sale of all pesticides. The Agriculture, Fisheries and Conservation Department will publish in each January and July the names of registered pesticides in the Gazette. The Ordinance also provides for the proper labelling of all pesticides for sale.

3. Dangerous Goods Ordinance (Cap. 295)

Some pesticides have been listed as dangerous goods whose quantity and location of storage are controlled by the Fire Services Department.

4. Waste Disposal Ordinance (Cap. 354)

Pesticides are chemical goods and their disposals are controlled by the Environmental Protection Department.

4. FURTHER INFORMATION

For further information or help, please contact:

Occupational Health Service, Labour Department

Address: 15th floor, Harbour Building, 38 Pier Road, Central, Hong Kong.

Telephone No.: 2852 4041

Fax No.: 2581 2049

Website: www.labour.gov.hk

E-mail Address: enquiry@labour.gov.hk

Pest Control Advisory Section, Food and Environmental Hygiene Department

Address: 6/F Yung Fung Shee Memorial Centre, 79 Cha Kwo Ling Road, Kwun Tong, Kowloon

Telephone No.: 3188 2064

Fax No.: 2314 3413

Website: www.fehd.gov.hk

E-mail Address: enquiries@fehd.gov.hk

Pesticides Commonly Used in Hong Kong

	Chemical Classification	Pesticides	Formulations (Abbreviations)	Specialties and Scope of Application	Health Implications
1	Organophosphates	Chlorpyrifos	Emulsifiable concentrate (EC) Capsule (CS)	Mainly prevent and kill such pests as cockroaches, mosquitoes and flies. Some chlorpyrifos formulations can prevent termites.	It may enter the human body via the esophagus, airway and skin, reaching various organs and tissues. Degradable quickly inside the human body, it is excreted mainly through the kidney and partially through defecation. There will be no obvious accumulation inside the body. Toxication mainly affects the normal transmission of nerve cells, resulting in neurotic disorder.
2		DDVP	Emulsifiable concentrate (EC)	Can be used as contact or stomach poison. As the fumigation and penetration powers are much stronger, it is a powerful pesticide which can be used as an indoor fumigant to kill pests like mosquitoes, flies, fleas and cockroaches.	
3	Carbamates	Propoxur	Emulsifiable concentrate (EC)	Can be used as contact or stomach poison or fumigant. It is used mainly to control and eliminate urban pests such as cockroaches.	Similar to organophosphorus, it mainly affects the normal transmission of nerve signals.
4		Bendiocarb	Wettable powder (WP)	Functions as a contact and stomach poison against most winged and crawling insects which are urban pest.	
5	Synthetic-pyrethroids	Permethrin	Emulsifiable concentrate (EC) Aqueous solution (AS)	Used in the control of pests harmful to public health, industries and timber.	It may enter the human body through the esophagus, airway and mucous membrane. If it goes into the blood via oral or nasal passage, the whole body (especially the internal organs such as the nervous system, liver and kidney) will be affected. In
6		Deltamethrin	Emulsifiable concentrate (EC) Suspension concentrate (SC)	Used in the control of pests such as cockroaches, mosquitoes and flies that threaten public health and stored products.	
7		Bifenthrin	Emulsifiable concentrate (EC)	Effect is long lasting. The	

				formulations currently available on the market are mainly for the control of timber pests such as termites and beetles. It can also be used to control public health pests in general.	addition to feeling burnt, itchy and numb, mucous membrane in contact with the pesticide will also cause the nose to run and sneeze and even lead to contact dermatitis and allergic dermatitis.
8		Cypermethrin	Emulsifiable concentrate (EC)	Used in the prevention of public health and stored product pests such as cockroaches, mosquitoes and flies. Some Cypermethrin formulations can control termites and wood-boring insects.	
9		Alpha-Cypermethrin	Suspension concentrate (SC) Wettable powder (WP)		
10	Hydrazone	Hydramethylnon	Gel (GE) Bait (RB)	Functions as a stomach poison. The formulations currently available on the market are mainly for control of cockroaches and ants.	It may enter the human body via the esophagus. Degradable quickly inside the body, it is excreted mainly through excrements and urination. There will be no obvious accumulation inside the body. It is not a irritant to the skin.
11	Phenylpyrazoles	Fipronil	Emulsifiable concentrate (EC) Gel (GE)	A stomach and contact poison. The gel is mainly used to control cockroaches. The emulsifiable concentrates currently available are mainly for the control of termites.	It may enter the human body via the esophagus and skin, affecting the normal nerve signal transmission. It is, however, not a irritant to the skin. The pesticide is excreted from the body mainly through excrements as it can be degraded much quicker inside the body.
12	Inorganic	Boric Acid	Gel (GE)	Functions as a stomach poison. The formulations currently available on the market are mainly for the prevention of cockroaches.	Massive accumulation of boric acid in organs such as brain, liver and kidney weakens the body immunity, resulting in cerebral aedema as well as liver and kidney damage.
13	Anticoagulant	Bromadiolone	Bait (RB)	Used in the elimination of rodents.	It may damage the normal blood clotting mechanism and the percolation of blood capillary. Walls of the blood vessels will become fragile, resulting in vascular
14		Brodifacoum	Block bait		
15		Coumatetralyl	Dustable powder (DP) Grain bait (AB)		

**List of follow-up actions undertaken by the Administration
to further promote the safe and proper use of pesticides**

Progress report on the follow-up actions

The Administration attaches importance to the safe and proper use of pesticides. To protect human health and the environment, we amended the Pesticides Ordinance (Cap. 133) (the Ordinance) in 2013 to fully meet the requirements of two international treaties, namely the Stockholm Convention on Persistent Organic Pollutants and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. The Pesticides (Amendment) Ordinance 2013 (the Amendment Ordinance) commenced operation on 27 January 2014. In light of the views expressed by the Bills Committee of the Legislative Council (LegCo) on the safe and proper use of pesticides when scrutinising the Pesticides (Amendment) Bill 2013 (the Bill), as well as the concerns of the public, the Administration has undertaken to roll out a series of follow-up actions for the purpose of further promoting the safe and proper use of pesticides. These actions include adopting appropriate safety measures, enhancing public education, promotion and publicity, etc. We are progressively taking forward the follow-up actions, the progress of which is set out in the ensuing paragraphs.

Safety measures

2. On strengthening safety measures, we have undertaken to discuss with the relevant Government departments and other stakeholders in the industry on ways to promote the safe and proper use of pesticides, with particular attention given to safety measures which are related to the application of pesticides, including the use of warning signs, such as the design, size, content of such signage and location to place them. We will incorporate the enhanced safety measures, including requirements on warning signage, into the existing Codes of Practice (COPs) for the pest control industry, as well as the training syllabus of the relevant training bodies. We will also make extra efforts in checking the labels of pesticides to ensure that adequate safety information has been included in the labels, and explore with the trade to see if the instructions and cautions on the labels could be highlighted and complemented by suitable pictograms.

3. In this connection, Government departments including the Agriculture, Fisheries and Conservation Department (AFCD), the Food and Environmental Hygiene Department (FEHD) as well as the Leisure and Cultural

Services Department (LCSD) have set up an inter-departmental working group to discuss matters relating to the Code of Practice on the use of pesticides for Government departments and the requirements on warning signage. The working group has already commenced work. AFCD is discussing with relevant departments on details of the Code of Practice on the Safe and Proper Use of Pesticides intended for reference of Government departments, and preparing a preliminary draft of the Code by making reference to the existing guidelines of relevant departments on the applications of pesticides, for further deliberation by the inter-departmental working group. The working group is reviewing various safety measures which are related to the application of pesticides, including the use of warning signs, such as the design, size, content of such signage and location to place them, and also producing some samples of such warning signs to accommodate different uses. Subsequently, AFCD will incorporate the enhanced safety measures, including requirements on warning signage, into the existing Code of Practices for the pest control industry, as well as the training syllabus of the relevant training bodies.

4. To step up efforts in checking the labels of pesticides, AFCD is recruiting additional staff in 2014-15 for the related work to ensure that adequate safety information has been included in the labels. Such work includes checking the instructions and cautions on the labels and, when necessary, requesting that the labels be complemented by suitable pictograms.

Promotion and publicity

5. On enhancing public education, promotion and publicity, we have undertaken to step up our efforts in this respect, in particular on the safe use of household pesticides and the application of pesticides in schools.

6. To promote the safe use of household pesticides, AFCD distributed in August 2013 over ten thousand copies of a leaflet entitled "Proper and Safe Use of Pesticides – Household Mosquito Control" to public housing estates in the New Territories via the Home Affairs Department and to pest control service contractors of FEHD and the Housing Department via these two departments. As a routine practice, AFCD will continue providing leaflets and promotional materials to pesticide licensees for free distribution to their customers. In parallel, AFCD is producing a new promotional leaflet on the safe use of household pesticides by domestic households, which is expected to be distributed in the second half of 2014 and sent to 2.6 million households in the territory together with their water bill in the first quarter of 2015.

7. To ensure that traders and users will not be confused by the common Chinese translations of the names of pesticides, AFCD has provided on its

website information regarding the common Chinese names of pesticides as well as relevant official websites for public reference. To facilitate reading and understanding by the general public, education and promotional materials on pesticides of AFCD are presented with terminology which is easy to understand.

8. Regarding the promotional and publicity efforts in schools, AFCD organised four talks in collaboration with the Education Bureau (EDB) during the period from March to April 2014 and invited representatives from kindergartens, primary and secondary schools, international schools and special schools to participate, with a view to promoting messages related to the safe and proper use of pesticides in schools. The four talks attracted participants, including principals, teachers and/or school staff, from nearly 100 schools. In addition, AFCD has published an education and promotional leaflet entitled “Use Pesticides Safely in Schools, Follow Precautionary Rules” on the safe and proper use of pesticides in schools. The leaflet was distributed at the aforesaid talks and uploaded onto the websites of EDB and AFCD for reference of schools and members of the public. EDB will also continue to assist AFCD in distributing promotional leaflets on other appropriate occasions.

9. As for Government departments, a circular was issued by the Food and Health Bureau to all departments in December 2013 setting out the content of the Ordinance and the statutory requirements. Two briefings were also conducted by AFCD in December 2013 and February 2014 respectively to inform the relevant Government departments of the latest regulatory requirements and related matters on the safe and proper use of pesticides. AFCD will organise similar briefings on a regular basis to keep Government staff up-to-date on the regulatory requirements and related matters on the safe and proper use of pesticides.

10. On enhancement of public education, AFCD set up a dedicated booth at “Farmfest 2014” to promote the safe and proper use of pesticides and distribute various kinds of promotional leaflets and souvenirs on the safe and proper use of pesticides to members of the public. AFCD is arranging for four roving exhibitions to be organised in mid-2014 in the public area of Government Offices in different districts for strengthening public education on the safe use of household pesticides.

Registration and use of pesticides

11. On registration and use of pesticides, AFCD will continue to review periodically the registration of pesticides to ensure that all registered pesticides are safe to use, as well as assisting the trade in enhancing their standard of using pesticides.

12. In scrutinising the Bill, some Members of the Bills Committee of LegCo were particularly concerned about the registration of diazinon and paraquat dichloride. AFCD has undertaken to formulate a plan to phase out these two pesticides. The Director of Agriculture, Fisheries and Conservation (DAFC) cancelled the registration of diazinon in part I¹ of the register on 1 January 2014, and also plans to cancel the registration of both diazinon and paraquat dichloride in part II¹ of the register. AFCD will, having regard to the relevant international standards and the experience of other places, continue to make enhanced efforts in reviewing and examining the latest international developments on application of pesticides. Such efforts include taking into account the pesticides which are banned in the European Union in the next round of review, keeping in view the trend of development of pesticides derived from natural products and refining the regulation on such pesticides as appropriate.

13. AFCD will continue to organise seminars for the trade to assist them in upgrading their standard of using pesticides. Since the passage of the Amendment Ordinance in July 2013, AFCD has conducted a total of 27 workshops and seminars for farmers and members of the pest control industry to publicise and promote the message of safe and proper use of pesticides. In the second half of 2014, AFCD will organise a series of technical seminars to introduce to farmers the alternatives for paraquat dichloride and diazinon as well as weed management and pest control techniques.

14. Members of the Bills Committee were concerned about the regulation of pesticide applicators. In 2007, the then Health, Welfare and Food Bureau conducted a public consultation on a package of legislative proposals to amend the Pesticides Ordinance, which sought to comply with the requirements of the two international treaties and, at the same time, introduce a pesticide product registration system and a scheme to regulate applicators of pesticides. During the consultation, there were concerns that the combined effects of the proposals might result in small pest control companies being driven out of business due to high operational costs and that a substantial number of existing pesticide applicators would fail to be registered as the training requirement might be too high. Having regard to the possible impact on the trade, we decided to drop the proposals and confine the Bill to mainly comply with the requirements

¹ At present, the import, manufacture, sale and supply of pesticides in Hong Kong are regulated by the Pesticides Ordinance (Cap. 133). AFCD is responsible for enforcing the relevant provisions. All pesticides intended for sale in Hong Kong must be registered with DAFC. In accordance with section 4 of Cap. 133, DAFC shall maintain a register of pesticides in which –

- (i) Part I contains a list of all pesticides which are in a form ready for immediate use without going through any treatment or process and which are for general domestic use; and
- (ii) Part II contains a list of all other pesticides. In practice, these are usually for professional and horticultural applications.

of the two Conventions. Since then, we have taken considerable amount of time and efforts in strengthening the training for pest control workers, developing Codes of Practice for the relevant sectors in collaboration with the trade and promoting public awareness on the safe and proper use of pesticides. We consider these measures effective in enhancing the standard of pest control workers. We will continuously assess the effectiveness of various measures to see if there is a need to strengthen the regulation of pesticide applicators.

Others

15. As for other related matters, we have been taking forward the follow-up actions progressively. Regarding public enquiries and complaints concerning pesticides, AFCD has already had a mechanism in place to handle these cases. Upon receipt of public enquiries and complaints, AFCD will, in accordance with established procedures, pursue these cases expeditiously with the users of the pesticides (including schools, pest control agents, etc.), and when necessary, refer the cases as soon as possible to the responsible unit(s) for handling.

16. To tie in with the commencement of the Amendment Ordinance, AFCD has revised the licence and permit application forms by inserting suitable notes to remind applicants that authorised officers may enter without a warrant the premises or place (whether domestic or not) located at the address stated in their applications. All application forms have been uploaded onto the website of AFCD.

17. As for the concerns raised by individual Members of the Bills Committee about the long-term impact of pesticides on the health of pesticide applicators, we are liaising with the Department of Health and related organisations to consider the feasibility of conducting a study in this regard in collaboration with the industry.

**Food and Health Bureau
Agriculture, Fisheries and Conservation Department
April 2014**

香港法例第133章除害劑條例
Pesticides Ordinance, Cap. 133

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 AP/II/25 AP/II/40	• Ethylene dibromide (二溴乙烷) • 2,4,5-T (2,4,5-涕) • Toxaphene/DDT/DDVP, mixture (毒殺芬/滴滴涕/敵敵畏, 混合物)
• 31.12.1987	AP/II/1 AP/II/2 AP/II/5 AP/II/36 AP/II/42 AP/II/53 AP/I/36	• Aldrin (艾氏劑) • Dieldrin (狄氏劑) • DDT (滴滴涕) • DDT/Lindane, mixture (滴滴涕/林丹, 混合物) • DDT/Naled, mixture (滴滴涕/二溴磷, 混合物) • PCP/Dieldrin, mixture (五氯酚/狄氏劑, 混合物) • Cyhexatin (三環錫)
• 15.03.1991	AP/II/37 AP/II/23 AP/II/43 AP/II/59 AP/II/57	• Chlordane (氯丹) • Lindane (林丹) • BHC (六六六) • Nitrofen (除草醚) • Thiram/Lindane/Rotenone, mixture (福美雙/林丹/魚藤酮, 混合物)
• 31.12.1992	2P36 2P7	• Captafol (敵菌丹) • Acetofenate/DDVP, mixture (三氯殺蟲酯/敵敵畏, 混合物)
• 31.12.1993	2P148	• Pentachlorophenol(PCP) (五氯酚)
• 31.12.1996	1P111 1P52 1P100	• Acephate/Mirex, mixture (乙酰甲胺磷/滅蟻靈, 混合物) • Mirex (滅蟻靈) • Mirex/Rhodojaponin-I/Rotenone, mixture (滅蟻靈/鬧羊花素/魚藤酮, 混合物)
• 02.07.2004	2P20 2P46	• Binapacryl (樂殺蟎) • Chlorobenzilate (乙酯殺蟎醇)
• 31.12.2009	1P143 1P173, 2P258	• Sulfotine (全氟辛烷磺酸鋰) • Sulfluramid (氟蟲胺)
• 01.10.2012	2P102 2P140 2P146	• Fenoprop (2,4,5-涕丙酸) • Omethoate (氧樂果) • 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)

- 01.01.2014 1P33 • Diazinon (二嗪磷)
- 1P34 • Diazinon/Triforine (二嗪磷/噻胺靈)



漁農自然護理署
植物及除害劑監理科