

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.

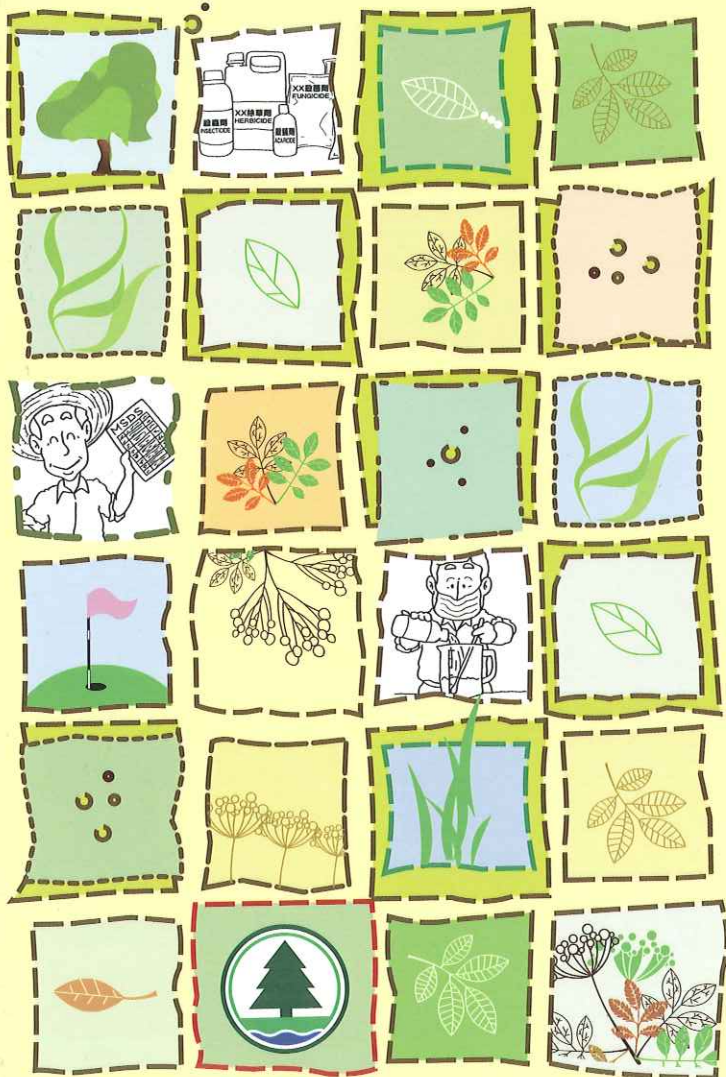
g) Record Keeping.

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



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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。

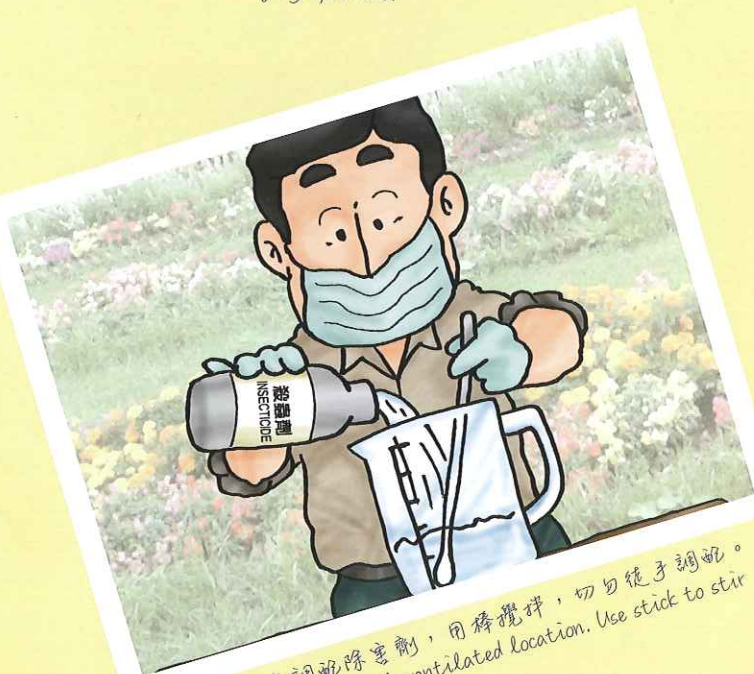
Measure carefully and mix only the amount needed for immediate use.

- 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.

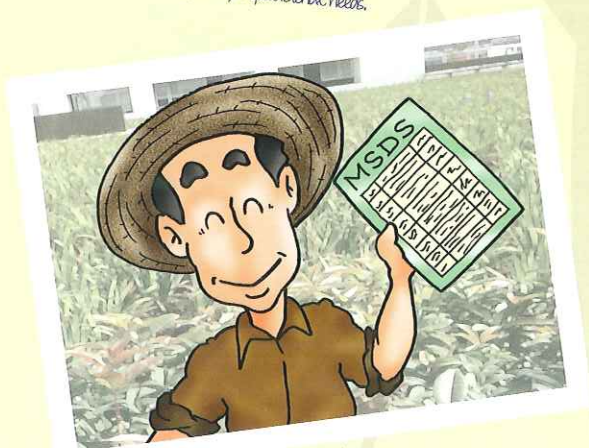
- 常備除害劑物料安全資料表。

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。

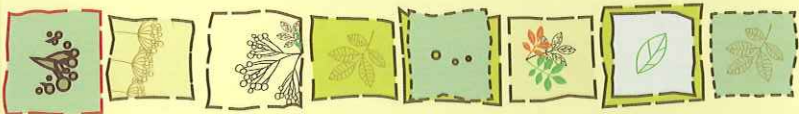
Do not use the empty container for other purposes.

- 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

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