

Safe Application of Pesticides

Introduction

Most greenkeepers will at sometime, be required to apply pesticides to their greens for the control of pests, diseases, weeds or some other issue. The following fact sheet outlines important requirements necessary when spraying, in order to comply with the law, avoid damage to the greens, yourselves and the environment.

Legislation

Current legislation which covers the management of pesticides includes:

- Health & Safety in Employment Act
- Resource Management Act via Regional Plans
- Hazardous Substances & New Organisms Act (HSNO)

Hazardous Substances and New Organisms Act

For more information refer to: www.ermanz.govt.nz

Key requirements

Approved Handler

An Approved Handler certificate is required when using many pesticides and to purchase some pesticides used on turf. The Approved Handler is responsible for the safe handling and use of pesticides. A person who is not an Approved Handler may still apply pesticides providing an Approved Handler:

- Is present on site (at the Bowling Club).
- Has provided guidance (instruction) to the person applying the pesticide.

Records

Records must be retained for three years and shall include:

- A Material Data Safety Sheet and/or Haznote[®] (available from your supplier) for each pesticide held in storage.
- A detailed spray diary for all applications. Diary should include as a minimum the following information:
 - Date and time of application
 - Product(s) and the rate(s) used
 - Target (weed, disease, insect, other)
 - Weather conditions (wind speed, direction, humidity etc)
 - Results (success or otherwise)
 - Person applying the product
- Tracking.
For products requiring tracking, the Approved Handler is required to keep a record of the product and its use from the point of purchase until the pesticide is used or disposed of.

Storage

Specific requirements will depend on the volume and classification of the pesticides being held. For most bowling clubs, minimum storage requirements will include:

- Storing the pesticides in a separate lockable shed or cupboard
- Signage on the shed should, as a minimum, include;
 - HAZCHEM 2WE
 - No smoking
- Sheds containing pesticides which are flammable (Class 3.1) require a 4.5kg dry powder extinguisher, located within 30m of the storage facility (not within the pesticide shed).

Application

Protective clothing must be worn when handling pesticides with the following classification: 6.1A; 6.1B; 6.1C; 6.1D; 6.3A; 6.5A; 6.5B; 6.6A, 6.6B, 6.7A; 6.7B, 6.8A, 6.8B, 6.8C, 6.9A, 6.9B, 8.2A; 8.2B; 8.2C & 8.3A. **In other words, wear recommended protective clothing at all times.**

Safe Application of Pesticides

For more information refer to NZS8409:2004 Management of Agrichemicals

Key considerations include:

Label

Prior to spraying, the label should be referred to in order to confirm key requirements when using this product, such as:

- Rate (where available) – ask if you are not sure!

- HSNO Classifications
- Special requirements (e.g. Kerb should be washed in after application)
- Personal protection requirements
- How to avoid off-target damage

Safety equipment

The safety gear required will depend on the product being used. As a guide, greenkeepers will require:

- Gumboots
- Overalls and/or waterproof spray suit (depending on product being used)
- Face shield or goggles
- Gloves
- Respirator
 - Make sure the respirator provides a complete seal over the face
 - The respirator is designed for pesticides
 - Following spraying, return the filters to a sealed bag or container and wash the mask in hot soapy water.
 - **Establish a replacement schedule for your respirator filters. They do not last forever!**

Sprayer

Sprayer should be in a safe and sound operating condition (for example: free of leaks).

Note: *At least annually, check the spray nozzles to ensure they are not worn and if so, replace them (for more information refer to the “Establishment & Management of Natural Bowling Greens in New Zealand” manual).*

Application

- It is essential that pesticides are applied uniformly over the entire green. The procedure for calibrating your sprayer and correct spraying of a green which is critical for achieving a uniform coverage is outlined in the “Establishment & Management of Natural Bowling Greens in New Zealand” manual.
- Ensure that the plant is healthy and/or in the correct growth phase (maniototo) to safely tolerate the pesticide being applied. This is particularly important when applying herbicides {for example: triclopyr (Grazon etc) should not be applied to winter leaf maniototo, starweed seedlings or dioica if it is in an unthrifty condition}
- Ensure weather conditions are suitable for spraying. Pesticides should not be applied in hot or very sunny conditions. Furthermore, for most leaf active pesticides, rain/irrigation should not occur within at least 3 – 6 hours of spraying.
- Ensure the correct follow-up maintenance procedures are followed. *For example:*
 - Mowing is withheld prior to and following the application of contact fungicides, leaf active herbicides (eg Grazon, Gallant) etc
 - Irrigation is managed appropriately. *For example* some products such as wetting agents, Kerb, Vydate require washing in after application, whilst for other products such as contact fungicides (eg Thiram) irrigation should be withheld for at least 12

hours after application.

- Watch for disease. Some pesticides such as Dalapon, Hyvar, Grazon etc will cause the plant to become soft/lush and consequently more susceptible to disease.
- ❑ Most bowling clubs are located in built-up areas. Consequently it is even more important to ensure your spraying technique does not result in drift of the pesticide. In some instances it may be necessary to:
 - Notify the neighbours prior to spraying
 - For greens close to places such as schools, or kindergartens, schedule spraying outside work hours.

Signage

During and after application, signs should be provided which include:

- Product applied (herbicide, insecticide, fungicide etc)
- Greens that have been sprayed
- Any special conditions required. *For example:* “Green 1 closed” or “Wash hands after play” etc.

Disposal

- ❑ Surplus spray mixture can be avoided, by ensuring the sprayer is correctly calibrated and only mixing as much product as is required for the job. If you do have surplus material the safest option is to apply it to a turf area (grass/bowling green/nursery)
- ❑ Where you have pesticides that are no longer required, your options include:
 - Give the product to another user (For many pesticides, this person should be an Approved Handler)
 - Use a commercial waste management company to collect and dispose of the pesticide
 - Some refuse tip sites will accept small quantities of pesticides
 - For some parts of NZ a collection service for unwanted pesticides will be carried out during 2007-08
- ❑ Containers
 - Triple rinse and puncture plastic containers.
 - A collection service “AgRecovery” has been launched to collect triple rinsed plastic chemical containers from participating manufacturers.
<http://www.61363.webwgt.com/CollectionSites.html>

Risk management

Although not a legal requirement, for most situations NZSTI encourages clubs to prepare a Property Spray Plan and Emergency Response Plan. Refer to NZS8409:2004 Management of Agrichemicals pages 153 and 47 respectively for detail. Key considerations would include:

- ❑ Refer to the Material Safety data sheets or Haznotes®.
- ❑ Have phone numbers for local doctor and National Poisons Centre (0800 764 766).
- ❑ Have kitty litter, sawdust or similar available for soaking up any spilled product.
- ❑ Have a first aid kit available within the greenkeepers shed.
- ❑ Planning ahead can help to minimise the need for pesticides.

Not sure/require additional training...

To complete a GROWSAFE® or Approved Handler's Course, contact one of our friendly training co-ordinators on 06 356 8090.

For more information on the safe application of pesticides contact your Regional Agronomist.

NZSTI SPORTS TURF ADVISORS – CONTACT DETAILS			
Alex Glasgow 09 529 5064 027 496 2486 alexg@nzsti.org.nz	Everett Darlington 09 529 486 027 232 4545 edarlington@nzsti.org.nz	David Ormsby 07 846 7698 027 442 8053 davido@nzsti.org.nz	Megan Cushnahan 06 355 7021 027 220 9957 mcushnahan@nzsti.org.nz
Andrew Mitchell 06 356 8090 ext 722 027 662 0148 amitchell@nzsti.org.nz	Brendan Hannan 06 355 7024 027 442 8046 bhannan@nzsti.org.nz	Chris Gribben 06 355 7026 027 552 4488 cgribben@nzsti.org.nz	Jaymie Batchelor 03 323 8010 027 446 2874 jbatchelor@nzsti.org.nz
David Howard 03 477 7333 027 446 2875 dhoward@nzsti.org.nz	www.nzsti.org.nz		

