

Pesticide use

This fact sheet provides guidance for blueberry farmers on the safe use of pesticides and how to comply with NSW legislative requirements for the use of pesticides in relation to training, record keeping, and pesticide storage. It also provides guidance on soil and water management, rinsate management, buffer zones and how to prevent spray drift.



Photo 1: Blueberry Crops, Coffs Harbour; Photo: NSW DPI

Pesticides training

If incorrectly applied or managed, pesticides can be harmful to farmers, the community and the environment. Training in the safe and correct use minimises these risks.

Training in the use of pesticides is compulsory under the NSW Pesticides Regulation 2017 (the Regulation). If you are employed in the blueberry industry and use, as part of your work, any type of pesticide, which includes herbicides, insecticides or fungicides, you must be appropriately trained.

The Pesticides Regulation 2017 requires blueberry farmers (and other occupational users of pesticides) to be accredited in specific chemical competencies. Training must be renewed every 5 years by completing a short refresher course. Unsupervised operators should obtain Australian Qualifications Framework (AQF) Level 3 training. If literacy is a problem, level 2 training is permissible but operators must be supervised by an AQF level 3 qualified person. The Regulation provides an exemption from the training requirement for itinerant workers, but only for occasional pesticide use of handheld and hand powered equipment supervised by a qualified person. Occasional use is defined as no more than 12 occasions within 12 months. The qualified supervisor must set up the spray equipment for unqualified persons.

Authorised officers from the EPA may ask for evidence of training at any time and if you are unable to show evidence that you have current compulsory training accreditation in pesticides use, you will be fined \$500.

Penalties also apply if you engage a person to apply pesticides who is not trained and accredited. The fine for a company is \$1000.

For more information on training courses and providers please refer to the EPA web page on Compulsory pesticide training.

Different requirements apply to persons who hold a licence issued under the *Pesticides Act 1999* for aerial application and commercial pest management technician's work.

Record keeping

You must make a record of pesticide application if you apply pesticides by hand or powered equipment to blueberry crops. This includes crops, cuttings, grafted plants or seedlings grown in orchards, open fields, nurseries, or in greenhouses. Even if you dip fruit or vegetables in a pesticide after harvesting to treat post-harvest moulds, fungi or insects you must make a record.

The EPA's Pesticide record keeping fact sheet for the horticultural industry provides guidance on how to comply with record keeping rules as set out in the Regulation.

It includes a sample record keeping form. You should check if your industry quality assurance scheme has additional requirements.

You must record the following information as soon as practicable and no later than 48 hours after applying a pesticide:

- full product name
- name of crop treated
- label rate and quantity used
- equipment used (optional)
- property address and clear delineation of the area sprayed including the order in which the area of land was sprayed (optional)
- date of application
- start and finish time (optional)
- wind speed and direction at the start of application and when there is a significant change plus any other weather conditions if specified on the label e.g. humidity
- name, address and contact details of the person who applied the pesticide. If the pesticide was applied by a person employed to apply the pesticide, the name, address and contact details of the employee
- name, address and contact details of the owner or occupier of the land (optional).

You do not need to make a record if you are spot spraying fruit tree crops which are located more than 20 metres from the property boundary, or if you meet the domestic-like use small-scale exemption requirements detailed in the EPA [Pesticide record keeping fact sheet for the horticultural industry](#).

Safe storage and handling of pesticides

Incorrectly stored pesticides pose a threat to the safety of workers, the community and the environment. Access must be restricted to authorised people only. SafeWork NSW provides details on storage requirements.

Pesticide containers must display the appropriate approved readable label and labels. If labels become damaged or faded they must be replaced. Copies of approved labels or approved text for labels are available from the Australian Pesticides and Veterinary Medicines Authority (APVMA) [PubCRIS web page](#).

Pesticides must be stored in a secure designated area where any spills or emergencies can be controlled. Keep storage areas well organised to

prevent spills. Clean up any spills immediately. Appropriate bunding prevents spills from entering the environment. Emergency equipment must be available such as an eye wash station, an emergency shower and spill kits.

The NSW Department of Primary Industries (DPI) provides a fact sheet about [Storing pesticides safely on a farm](#) detailing the appropriate siting and construction of a pesticide storage area which can be found on their website.

Wearing Personal Protective Equipment (PPE) reduces your risk of accidental exposure or poisoning when handling pesticides, particularly when mixing products prior to spraying. Pesticide labels specify the PPE required to be used when handling a pesticide. Any pesticide on your hands can be easily ingested when drinking or smoking, or absorbed into your skin which could cause poisoning.

SafeWork NSW's [code of practice](#) provides detailed, practical and informative guidance for agricultural industries about how to conform with relevant legislation relating to the use and storage of chemicals including pesticides.

Safe use of pesticides

You must only use pesticides which are registered by the APVMA or approved by an APVMA permit for the purpose it is being used.

It is illegal to possess, prepare for use or use an unregistered pesticide in NSW unless you are authorised to use it under an APVMA permit. You must read the label or the permit directions or have them read to you, before use.

It is very important that the correct pesticide is used at the correct rates for the targeted pest. In NSW it is an offence to use an unregistered pesticide to use a pesticide contrary to label directions or an APVMA permit. Fines of \$500 apply for these offences. The maximum penalty is up to \$120,000 for business.

Under clause 57 of the Regulations you can use an insecticide or fungicide on an additional pest for blueberries if the crop is listed on the pesticide label. Also under section 15 of the *Pesticides Act* you can use a lower rate as long as the label does not prohibit this when you are following all other relevant instructions on the label. Seek specialist advice on resistance management of the pest you are trying to control if you are considering using a lower rate.

If the wrong type of pesticide is used or too much, it can affect the quality of the crop. If your crop has high levels of pesticide residues it may not be safe for people to eat and it will be rejected for sale by retailers. Where the EPA is informed of high residues, produce can be traced back to the grower who can be fined if pesticides have been incorrectly used.

Product labels and safety data sheets include safe handling instructions, which must be explained to all workers if they are unable to read the instructions themselves.

The EPA provides educational resources including a training video to help farmers and farm workers to use pesticides safely and lawfully. DVDs and posters can be ordered from the Environment Line info@epa.nsw.gov.au. They are available in English, Arabic, Chinese, Khmer and Vietnamese community languages.

Preventing spray drift and buffer zones

It is an offence under the *Pesticides Act 1999* to injure people, damage property, harm non-target plants and animals or to use pesticides in a way that is likely to injure people or property. The maximum penalties for these offences are \$60,000 for an individual and \$120,000 for a business. People who take all reasonable precautions and exercise due diligence when using a pesticide have a defence against prosecution.

Winds can blow pesticides over long distances, causing them to drift onto neighbouring properties or into waterways. Observing weather conditions and wind directions determines when it is safe to spray. Pesticide should not be applied when wind speeds are above 15 kph or in still conditions. Gusty conditions should be avoided to prevent spray drift. Identifying nearby sensitive areas (including residential properties, schools and public amenities) prior to spraying is critical.

The blueberry industry is encouraged to adopt 'a good neighbour approach' by developing a communication strategy and providing early notice of their proposed pesticide use. Early communication between growers and neighbours is critical and is good practice.



Photo 2: Spraying rig, Coffs Harbour; Photo: NSW DPI

There is no formal requirement for a blueberry grower to provide a buffer unless required as a condition of development consent. However, it is considered good practice where incompatibility land uses exist such as adjoining dwellings, schools or waterways. Effective buffers reduces noise and odour and may consist of trees and shrubs, or wide grassed areas. Pre-planting consultation with neighbours is encouraged particularly during a change of land-use activities.

If a spray incident occurs and it has the potential to harm human health or the environment you have a duty to notify the EPA. Record the date, time, location, product used and duration of incident and report it by calling the EPA's Environment Line on 131 555. More information on who and when to notify can be found on the EPA's web page

Rinsate management

Rinsate is a mixture of pesticides diluted by water, solvents, oils, commercial rinsing agents or any other substances. It is produced from cleaning pesticides application equipment or pesticides containers. The inappropriate disposal of pesticide rinsate can harm people and the environment. Never dispose of pesticides and their rinsate down creeks, rivers or stormwater drains. In NSW you can be prosecuted for allowing pesticides to pollute waters.

The EPA's Guidelines for managing the disposal of pesticide rinsate provides practical solutions for reducing the amount of rinsate generated and advice on safe disposal.

Disposing empty containers or concentrate

Empty, clean pesticide containers marked with the drumMUSTER logo can be taken to a drumMUSTER collection point for recycling. Containers must be triple-rinsed (rinsed three times). Rinsate should be tipped back into the spray tank and re-applied over the crop. [drumMUSTER](#) can be contacted on 1800 008 707 or visit [their website](#).

ChemClear® can be contacted for the collection and safe disposal of unwanted agricultural and veterinary chemicals on 1800 008 182 or visit [their website](#).

Managing run-off and preventing soil erosion

Maintaining permanent groundcovers between rows and in all waterways minimises erosion. Vegetation should only be cleared when removal is essentially required. Reducing erosion can be done by limiting the amount of water entering the cultivated area, and diverting water around the area by building diversion drains and capturing water into a dam or a sedimentation pond.

Many blueberry farms have been established on disused banana lands which can be steep. Surface run-off should be diverted into the growers water supply dam for removal or storage. Sub-surface drainage may help very wet areas.

Managing nutrient run-off is done by a correctly designed and regularly maintained irrigation system. Regular sampling and testing of fertigation water is required to manage nutrient loads to ensure that excess nutrients will not run-off. Run-off from fertiliser application can cause a high-level of nutrients entering water courses and causing excessive algal growth. This can also cause reduced dissolved oxygen levels in the water affecting aquatic life.

NSW DPI has developed a [best management practice guideline](#) for new and existing blueberry growers in the northern NSW. It provides comprehensive information about soil and water management for the region.



Photo 3: Mulch in rows to retain moisture, Coffs Harbour; Photo: NSW DPI

Integrated pest management

A key aspect of an integrated pest management strategy is selecting the correct pesticide for the situation. Pesticide rotation should be considered so that the pest, disease or weed is not continually exposed to the same *Mode Of Action* group. It is also important to identify pesticide groups by checking the activity group identification symbol, which are on registered pesticide labels.

When a pest problem arises, always consider all control options available. Biological controls should be considered to reduce the quantity and toxicity of pesticides where an effective option exists. Cultural options such as using a pest resistant variety could also be considered. Some growers are moving away from broad spectrum pesticides and are adopting an integrated approach to pest and disease management. Biological control includes use of insect predators to control pest outbreaks. If it is necessary to apply a pesticide, consider the range of effective options and choose the one which may have the least impact on the environment and biological control agents.

[NSW DPI's berry plant protection guide 2017-2018](#) provides comprehensive information for commercial blueberry growers with current technical information on all aspects of crop protection including biological control and pesticide resistance management.

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ISBN 978-1-925688 68 9 | EPA 2017P0435

December 2017