



Legal responsibilities in applying pesticides

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The main national and NSW government agencies involved in legislation related to pesticides are the Australian Pesticides and Veterinary Medicines Authority (APVMA), NSW Environment Protection Authority (EPA) and Safe Work NSW.

Australian Pesticides and Veterinary Medicines Authority

Pesticides are controlled in Australia through an inter-governmental arrangement known as the National Registration Scheme for Agricultural and Veterinary Chemicals. Under this scheme, the APVMA is the Commonwealth agency responsible for assessment and registration of pesticides in Australia and their regulation up to and including the point of sale under the *Agricultural and Veterinary Chemicals Code Act 1994*.

The states and territories are responsible for controlling the use of pesticides beyond the point of sale, that is, for their use, handling, storage and disposal.

Before registering a product, the APVMA is required to conduct an assessment of the potential impacts of the pesticide on the environment, human health and trade, and of the likely effectiveness of the pesticide for its proposed uses. When a pesticide contains an active constituent not previously used in Australia, the APVMA must seek public comment before registering the product.

Only registered pesticides can be used in NSW. Registration includes approval of label directions for each pesticide product. Label directions specify how, and under what circumstances, the pesticide may be used to treat the relevant target pest or pests. Labels also give directions on clean-up, storage, disposal, personal and environmental safety.

The APVMA's Chemical Review Program reviews the registration of existing agricultural and veterinary chemicals if new information regarding

a higher risk to human health, the environment or trade becomes available. The public, the Office of Chemical Safety and the Australian Department of Environment can report problems known as 'adverse events' regarding specific chemicals or products to the APVMA. The new and existing information is reviewed by the Office of Chemical Safety, the Department of Environment and the APVMA. The APVMA also invites public comment for chemicals under review as part of the process.

Permits for off-label use

Special provisions exist under legislation administered by the APVMA to allow people to use pesticides in a way that is not described on the approved label. The APVMA can approve off-label use of the pesticide by issuing a minor use permit. In NSW off-label use is not allowed unless a permit has been issued. A permit is similar to a label in that all instructions must be strictly followed.

Permits

A permit is issued for a limited use over a specified period of time if the Australian Pesticides and Veterinary Medicines Authority (APVMA) are convinced that such a use is justified. Justification is usually on the grounds that a suitable registered alternative is not available, it is required as part of an emergency management response program or to manage a pest or resistance management strategy.

In addition the pesticide:

- will not cause undue hazard to the safety of people exposed to it, during handling the pesticide or anything containing its residues
- should not have an unintended effect that is harmful to animals, plants or the environment
- will not unduly prejudice export trade
- will be effective against the intended pest.

Consult the APVMA for information about new permits. Growers wishing to use a chemical in the manner approved under a permit should obtain a copy of the relevant permit from the APVMA

and must read and comply with all the details, conditions and limitations on the permit. Current permit and registration details are available on the APVMA web site: <http://apvma.gov.au/>

Industry bodies, organisations and corporations can apply for permits for off-label use. Inquiries should be made to the APVMA at:

PO Box 6182 Kingston ACT 2604

Phone: 02 6210 4700

Web: <http://apvma.gov.au/>

Current APVMA permits related to grapevines in NSW (as at 25 July 2018) are listed in Table 27

The Environmental Protection Authority

The Pesticides Act 1999 and Regulation 2009

The Pesticides Act 1999 and Regulation 2009 are two of the primary legislative instruments controlling the use of pesticides after the point of sale in NSW. They aim to reduce the risks associated with the use of pesticides to human health, the environment, property, industry and trade. They also aim to promote collaborative and integrated policies for the use of pesticides. The EPA enforces the proper use of all pesticides in NSW.

The underlying principle of the Pesticides Act is that

pesticides must only be used for the purpose described on the product label and all the instructions on the label must be followed.

The Act and Regulation require all commercial pesticide users to:

- only use pesticides registered or permitted by the APVMA
- obtain an APVMA permit if they wish to use a pesticide in a way not covered by the label
- read the approved label and/or APVMA permit for the pesticide product (or have the label/permit read to them) and strictly follow the directions on the label
- only keep registered pesticides in containers bearing an approved label
- prevent injury to people, damage to property and harm to non-target plants and animals, the environment and trade through the use of a pesticide
- undertake approved training in pesticide application and renew this qualification every 5 years
- keep records of their pesticide application.

Compulsory training in pesticide use

Since 1 September 2003 training in the use of pesticides has been compulsory in NSW. If you use pesticides in your job or business you must now achieve and maintain a specific level of competency in pesticide use.

There is a range of training available to suit all types of pesticide users. In most cases the training involves a two-day course, based on competencies from the Agriculture, Horticulture and Conservation and Land Management Training Package (AHC10). You can also become qualified by demonstrating to a registered training organisation that you know how to use pesticides in your job or business.

The minimum prescribed training qualification is the AQF2 unit of competency, 'Apply chemicals under supervision'. Owner-applicators are encouraged to train and be assessed in the two higher AQF3 competencies: 'Prepare and apply chemicals' and 'Transport, handle and store chemicals'.

Note: the lower level AQF2 competency will provide a minimum qualification that satisfies the Regulation. For more information on training in pesticide use refer to the [EPA website](#).

These training requirements do not apply where the pesticide is all of the below:

- ordinarily used in the home or garden
- widely available to the general public at retail outlets
- being applied by hand or using hand-held equipment only
- being used in small quantities:
 - for outdoor use in quantities of no more than 5 litres/5 kilograms of concentrated product or 20 litres/20 kilograms of the ready-to-use product
 - for indoor use in quantities of no more than 1 litre/1 kilogram of concentrated product or 5 litres/5 kilograms of the ready-to-use product.

Pesticide record keeping

The EPA's Pesticides Regulation makes it compulsory for all people who use pesticides for commercial or occupational purposes to make a record of their pesticide use. Pesticides include herbicides, fungicides, insecticides, fumigants, nematocides, defoliant, desiccants, bactericides and vertebrate pest poisons. A small use exemption, similar to that for training, applies to record keeping.

To comply with the record keeping rules set out in the Regulation you must record the following within 24 hours of applying the pesticide:

- date, start and finish time
- the operator details – name, address and contact information
- the crop you treated e.g. Shiraz grapes
- the property address and a clear delineation of the area where the pesticide was applied – you can mark this on a rough sketch or map of your property
- type of equipment used to apply the pesticide e.g. knapsack, air blast sprayer, tractor mounted boom-spray
- the full product name of the pesticide applied (e.g. Bayfidan 250 EC Fungicide® – not just ‘Bayfidan’). If you mixed two pesticides together, record both
- the total amount of concentrate product used
- the total amount of water, oil or other products mixed in the tank with concentrate
- size of block sprayed
- order blocks were treated
- an estimate of the wind speed and direction at the start of spraying. You can use a wind meter (anemometer) or the Beaufort scale to help estimate the wind speed (Beaufort scale is available from the [BOM](#))
- if other weather conditions are specified on the label as relevant to the proper use of that pesticide (such as temperature, humidity, rainfall) you must record these weather conditions at the start of the application
- if wind and weather conditions change significantly while you are spraying you need to record these changes
- records must be made in English.

If you already keep records for other purposes (e.g. for the winery you are supplying), you can simply add to that record any of the requirements listed above that are not already in that record.

Records must be kept for 3 years. If you are the owner or the person who has the management or control of the property on which you, your employees or a contractor applied the pesticide, you are responsible for keeping the records.

Note: If you applied the pesticide yourself, then it is your responsibility to make the record. You can get someone else to write it down for you but it is up to you to make sure the record is made and that it is accurate. If you employed someone to apply the pesticide then that person must record their name as well as your name, address and contact details as their employer. If the pesticide was applied by a contractor, the contractor must record their own name, address and contact details, the name, address and contact details of the owner or the person who has the management or control of the land where the pesticide was applied. You only have to record this additional information if the person who owns or manages the property and the person who applied the pesticide are different.

Dangerous goods and hazardous substances (chemicals)

Many hazardous substances are also classified as dangerous goods. These are substances, mixtures or articles that, because of their physical, chemical (physicochemical) or acute toxicity properties, present an immediate hazard to people, property or the environment. Types of substances classified as dangerous goods include explosives, flammable liquids and gases, corrosives, chemically reactive or acutely (highly) toxic substances.

The criteria used to determine whether substances are classified as dangerous goods are contained in the [Australian Code for the Transport of Dangerous Goods by Road and Rail \(ADG Code\)](#). The ADG Code contains a list of substances classified as dangerous goods.

Hazardous substances (chemicals) are those that, following exposure, can have an adverse effect on health. Examples of hazardous substances include poisons, substances that cause burns or skin and eye irritation and substances that may cause cancer.

A substance is deemed to be hazardous if it meets the classification criteria specified in the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)] (Approved Criteria).

Substances that have been classified according to the approved criteria are provided in the online database called the [Hazardous Substances Information System \(HSIS\)](#).

Safe Work NSW

Under the [Work Health and Safety Act 2011](#) (WHS Act), Safe Work NSW seeks to protect workers in the workplace. Regulations under the WHS Act control the use of hazardous substances including most pesticides. The [Work Health and Safety Regulation 2011](#) is the most recent and important of these. It covers identification of hazardous substances in the workplace and the assessment and control of risks associated with their use. A copy of the *Work Health and Safety Act 2011* is available at this link: <https://www.legislation.nsw.gov.au/#/view/act/2011/10>.

The Act and accompanying Regulation are intended to protect workers from both the short and long-term health effects of exposure to hazardous chemicals and to improve current health and safety practices by:

- provision of health and safety information to workers (including a list or register of all hazardous chemicals and an Safety Data Sheet (SDS) for each hazardous chemical)
- consultation with workers
- training of workers
- minimising the risks arising from hazardous chemicals exposure
- health surveillance (if organophosphates are used).

To help industries implement the Act and Regulation, Safe Work NSW developed a code of practice: [Safe Use and Storage of Chemicals \(Including Pesticides and Herbicides\) In Agriculture 2006](#). This does not replace the WHS laws, but can help you understand what you have to do.

Note: this code of practice is the 2006 edition. The Pesticides Regulation 2009 and the Work Health and Safety Act and Regulation 2011 have been enacted after this code of practice was published. Safe Work's statement on this issue is:

"These codes of practice were developed based on the Occupational Health and Safety Act and Regulation (or older laws) which were replaced with the [Work Health and Safety Act and Regulation in NSW](#) from 1 January 2012. These codes are taken to have been made under the Work Health and Safety Act, which means they are current and can still be used to help you meet your WHS requirements, however to ensure you comply with your legal obligations you must refer to the appropriate legislation."

For further guidance see – [Managing risks of hazardous chemicals in the workplace](#) July 2014.

The WHS Regulations (2011) include specific responsibilities of a person conducting a business or managing risks to health and safety associated with handling and storing hazardous chemicals at a workplace. These include:

- correct labelling of containers, using warning placards and maintaining a register and manifest (where relevant) of hazardous chemicals and providing notification to the regulator of manifest quantities if required
- identifying risk of physical or chemical reaction of hazardous chemicals and ensuring the stability of hazardous chemicals
- ensuring that exposure standards are not exceeded
- provision of health monitoring to workers
- provision of information, training, instruction and supervision to workers
- provision of spill containment system for hazardous chemicals if necessary
- obtaining the current Safety Data Sheet (SDS) from the manufacturer, importer or supplier of the chemical
- controlling ignition sources and accumulation of flammable and combustible substances
- provision and availability of fire protection, firefighting equipment, emergency and safety equipment
- preparing an emergency plan if the quantity of a class of hazardous chemical at a workplace exceeds the manifest quantity for that hazardous chemical
- stability and support for containers of bulk hazardous chemicals including pipework and attachments
- decommissioning underground storage and handling systems
- notifying the regulator of abandoned tanks in certain circumstances.

NSW dangerous goods and hazardous substances transport legislation

Not all pesticides are dangerous goods or hazardous substances but many are. If a pesticide is a dangerous good or hazardous substance, it will be noted on the label and the SDS.

Prior to the implementation of the Work Health and Safety Regulations 2011, workplace storage, handling and use of hazardous chemicals were regulated under separate instruments for hazardous substances and for dangerous goods.

The new WHS Regulations cover hazardous substances and dangerous goods under a single framework for hazardous chemicals. It also introduces a new hazard classification and hazard communication system based on the United Nations' Globally Harmonised System of Classification and Labelling of Chemicals (GHS). The specific requirements of the ADG code for the transport of dangerous goods do not usually apply to the transport of farm chemicals because they are normally in small quantities.

Large operations should check the amounts for which marking of the vehicle and other special conditions are required by the ADG code.

The following rules apply to small quantities of pesticides being transported in unopened containers:

- keep them in a compartment of the vehicle separate from persons or foodstuffs
- the vehicle must be locked to prevent public access to chemicals when parked near a public road
- do not leave your loaded vehicle unlocked or unattended
- protect the load from the weather
- do not accept or load damaged or leaking containers
- secure the load and limit its movement.

The following rules apply to small quantities of pesticides being transported in opened containers:

- keep in a separate airtight compartment, or on the rear section of an open vehicle (ute, truck or trailer)
- all other items carried (e.g. personal protective equipment, a change of clothes, food and drink) should be carried in clean containers preventing contact with any chemical pest control equipment and chemicals carried

on the vehicle should not be in contact with porous surfaces

- the internal and external surfaces of the vehicle, chemical containers and spray equipment should be kept clean
- protect the load from the weather
- do not leave your loaded vehicle unlocked or unattended
- do not load damaged or leaking containers
- secure the load and limit its movement.

Some critical elements of the label

Re-entry intervals

The re-entry interval is the time which must elapse between applying the pesticide and re-entry into the sprayed crop, unless the person is wearing the personal protective equipment specified for re-entry on the label. The reason for setting a re-entry interval is that pesticides sometimes remain on crops in the form of foliar aerosol particles. Residues can be dislodged by contact with the crop and absorbed through the skin by those working in the crop.

Re-entry intervals only appear on the label of a small number of newer products and older products that have recently been reviewed by the APVMA. If there is no re-entry period on the label, the general rule is to wait 24 hours after application or until the crop is dry, whichever is the longer.

Crops should not be re-entered when wet from dew or light rain within the re-entry period unless appropriate personal protective equipment, as described on the label is worn.

Pesticides and the environment

Many insecticides are toxic to aquatic organisms, bees and birds. Fungicides and herbicides are relatively safe to bees in terms of their active ingredients, but their carriers and surfactants may be toxic.

Protecting the aquatic environment

The risk to aquatic organisms can be managed by following label instructions.

Protecting bees

Many pesticides are toxic to bees, however this risk can be reduced by following label instructions. The label provides the following statement:

Dangerous to bees.
DO NOT spray any plants in flower while bees are foraging.

Protecting birds

Organophosphate and carbamate insecticides can be toxic to birds, especially in granular formulations. See the label for details on how to minimise the danger to birds.

Managing residues resulting from pesticide application

Withholding periods (WHPs)

The withholding period (WHP) is the minimum time which must elapse between the last application of a pesticide and harvest. The purpose of the WHP is to avoid residues in raw agricultural commodities and in foods for consumption by humans and animals.

- pesticides used on crops may have WHPs for both harvest and grazing
- WHPs are specific to use patterns, i.e. to chemical, crop and pest
- WHPs are product specific
- harvest WHPs may vary with formulation (e.g. ultra low volume or extra concentrated), rate (which may vary with the pest controlled), and whether or not the crop can be harvested green or dry
- not all labels include all registered use patterns for a particular active ingredient. Consequently, not all labels carry the same information on WHPs. On some labels the WHP is contained within the tables giving directions for use; on other labels the WHP appears separately below the directions for use
- where no WHP is given on the label, it will carry a statement to the effect that no WHP is necessary if label directions are followed
- where appropriate, growers are advised to contact the chemical manufacturer or the winery they are supplying for advice on managing chemical residues in the crop or in stock.

Export requirements

Some export markets have a lower maximum residue limit (MRL) than Australia or no MRL. Contact your winery to determine their requirements

Managing spray drift

Spray drift is the airborne movement of agricultural chemicals onto a non-target area. There may be a risk of injury or damage to humans, plants, animals, the environment or property. If you are responsible for spray drift that causes off-target damage you may be fined or required to pay compensation.

Buffer zones

Buffer zones assist in minimising drift into sensitive and non-target areas. A buffer zone may consist of fallow, pasture, a non-sprayed strip of the crop or purpose planted vegetation such as a crop or wind break. Vegetative buffer zones should be sufficiently open to allow the spray to penetrate and of sufficient depth to trap the bulk of any drift.

Analytical laboratories

In some situations a chemical analysis of fruit may be required. Listed below are some laboratories which undertake this type of work:

Agrisearch Analytical
Level 1, 48 Victoria Road
Rozelle NSW 2039
Phone 02 9810 3666
Fax 02 9810 3866
E-mail: contact@agrisearchanalytical.com.au

National Measurement Institute
36 Bradfield Road
Lindfield NSW 2070
Phone 02 8467 3600
Fax 02 8467 3610
Email: info@measurement.gov.au

National Association of Testing Authorities
P.O. Box 7507
Silverwater NSW 2128
Phone 02 9736 8222
Fax 02 9743 5311

More laboratories can be found at the [National Association of Testing Authorities](#).

Poison Schedules

Pesticides are classified into four categories in the Poisons Schedule (Table 26) based on the acute health hazard to the user of the pesticide. They are either Unscheduled or Schedule 5, 6 or 7. Each schedule has a corresponding signal heading which appears in large contrasting lettering on the label of the pesticide product, generally above the brand name on the front of the label.

Note: Some active ingredients can appear under more than one schedule, generally because the carrier is more hazardous than the active ingredient or due to the concentration of the active ingredient. For example, parathion is a schedule 6 poison if the concentration of the active ingredient is 45% or less of the total formulation. Pennicap-M, which contains 240 g/L parathion, is schedule 6, whereas Folidol M500, which contains 500 g/L parathion, is a schedule 7.

The safety directions specify the personal protective equipment that should be worn and what safety precautions should be taken, e.g. 'do not inhale spray mist'. The first aid Instructions specify what action should be taken in the event of a poisoning. Safety directions and first aid instructions may be different for different formulations of the same pesticides.

Note: Before opening and using any farm chemical, consult the label and the Safety Data Sheet (SDS) for specific safety directions.

Applying pesticides by aircraft

Additional legal obligations apply if the pesticide is to be applied by aircraft. More information on the legal requirements for aerial application is available on the EPA website: <http://www.epa.nsw.gov.au/pesticides/aerialapplicators.htm>

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Table 26. The poisons schedule.

Schedule 1	This Schedule is intentionally blank.
Schedule 2	Pharmacy Medicine – substances, the safe use of which may require advice from a pharmacist and which should be available from a pharmacy or, where a pharmacy service is not available, from a licensed person.
Schedule 3	Pharmacist Only Medicine – substances, the safe use of which requires professional advice but which should be available to the public from a pharmacist without a prescription.
Schedule 4	Prescription Only Medicine, or Prescription Animal Remedy – substances, the use or supply of which should be by or on the order of persons permitted by State or Territory legislation to prescribe and should be available from a pharmacist on prescription.
Schedule 5	Caution – substances with a low potential for causing harm, the extent of which can be reduced through the use of appropriate packaging with simple warnings and safety directions on the label.
Schedule 6	Poison – substances with a moderate potential for causing harm, the extent of which can be reduced through the use of distinctive packaging with strong warnings and safety directions on the label.
Schedule 7	Dangerous Poison – substances with a high potential for causing harm at low exposure and which require special precautions during manufacture, handling or use. These poisons should be available only to specialised or authorised users who have the skills necessary to handle them safely. Special regulations restricting their availability, possession, storage or use may apply.
Schedule 8	Controlled Drug – substances which should be available for use but require restriction of manufacture, supply, distribution, possession and use to reduce abuse, misuse and physical or psychological dependence.
Schedule 9	Prohibited Substance – substances which may be abused or misused, the manufacture, possession, sale or use of which should be prohibited by law except when required for medical or scientific research, or for analytical, teaching or training purposes with approval of Commonwealth and/or State or Territory Health Authorities.
Schedule 10	Substances of such danger to health as to warrant prohibition of sale, supply and use – substances which are prohibited for the purpose or purposes listed for each poison.

For more information see <https://www.tga.gov.au/publication/poisons-standard-susmp>.

Table 27. Current APVMA permits related to grapevines in NSW (as at 25 July 2018).

Permit no.	Chemical	Crop	Pest/disease	Expiry date
PER11748	Sodium metabisulfite	Table grapes (packaged)	Phylloxera	31 October 2024
PER12439	Trichlorfon	Table grapes	Fruit fly	31 May 2021
PER13378	Torque miticide (fenbutatin-oxide)	Table grapes	Rust mite and two spotted mite	30-September 2020
PER13859	Dimethoate	Orchard clean up fruit fly host crops	Fruit fly	31 July 2024
PER14492	Acramite miticide	Table grapes	Two spotted mites	31 October 2020
PER81476	Ethephon	Sultana, sunmuscat, sunglo or carina grapes grown for drying	Cordon bunch removal	31 December 2018
PER85499	Sulphur dioxide and carbon dioxide	Table grapes	Redback spiders	30 November 2022
PER85594	Lannate	Table grapes	Redback spiders	28 February 2023