

Appendix A

Definitions and Abbreviations

Active ingredient

That portion of a pesticide formulation that is toxic to pests (a.i.).

Acute toxicity

Ability of a substance to cause ill effects that develop soon after exposure.

Actual

The active ingredient of a fertilizer; for example 13-16-10 contains 13 kg nitrogen, 16 kg phosphate and 10 kg potash in each 100 kg of fertilizer mix.

Adjuvant

A chemical or agent added to a pesticide mixture that helps the active ingredient do a better job of wetting, sticking to or penetrating the target pest or weed.

Aeration

The process by which air in soil is replaced by air in the atmosphere; often refers to the time required for a toxic fumigant to leave treated soil before it is safe to seed or transplant into the soil.

a.i.

Active ingredient.

Carrier

A material mixed with active ingredients to make a fertilizer or pesticide safer to handle and easier to apply (e.g. finely divided clay or talc).

Chelate

A type of chemical compound in which a metallic ion (e.g. Fe) is firmly combined with an organic (contains carbon) chemical to improve uptake into the plant.

Chronic toxicity

Ability of a substance to cause ill effects that last a long time. They may not appear for some time after exposure.

Compatibility

Materials are compatible if one does not reduce the effectiveness of the other, and if crop injury does not result from use of the combination.

Contact pesticide

A pesticide that kills the insect or weed by direct contact. The spray must actually touch the insect or the insect must walk onto a droplet in order to be effective. A contact herbicide must cover as much of the foliage as possible to be effective. Good coverage is essential for control with contact pesticides.

Detergent

A cleaning agent. Because of their surface active properties, detergents have a variety of other uses. (See “Surfactant.”)

D In pesticide terms, a **dust** formulation.

DF

A **dry flowable** formulation of a pesticide in which water dispersible granules are used instead of wettable powders which are dusty and more hazardous for the person filling the spray tank; sometimes referred to as WDG.

DG

A **dry granular** formulation of a pesticide; usually applied in the planting furrow (in the case of insecticides) or broadcast on the soil surface (in the case of herbicides).

Drench

A drench is a spray applied in a high volume of water in order to penetrate dense foliage or soak the soil with pesticide in an attempt to control soil-inhabiting insects or pathogens.

Dust

A pesticide formulation in which a low concentration of active ingredient is attached to finely ground dry particles which are applied without further dilution.

E A liquid pesticide formulation in which the active ingredient will form an **emulsion** when mixed with water; also referred to as EC.

EC

In pesticide terms, an **emulsifiable concentrate**; in soil/water terms, **electrical conductivity** of the solution.

Electrical conductivity (EC)

The ability of a salt solution to conduct an electrical current. In crop production, a term for expressing the salt concentration which approximates the total of all nutrients in the soil solution. Not all nutrients are detected (e.g. urea). It is also used to describe the suitability of water for irrigation purposes.

Emulsifiable concentrate

A liquid pesticide formulation consisting of active ingredient, solvent and an emulsifier that can mix with water to form an emulsion (e.g. **Diazinon 500 EC**).

F Abbreviation for a **flowable** formulation of pesticide.

Flowable

Finely ground particles suspended in a liquid carrier.

Formulation

A mixture of active ingredient, carrier and adjuvants.

Fumigation

The use of pesticides in gaseous form to destroy pests or disease organisms.

G Granular formulation of a pesticide.

Granular pesticide

Relatively coarse particles with a low concentration of active ingredient. They are applied dry with a spreader, seeder or special applicator.

Instar

Any of the various stages in the life cycle of an insect between moults.

IPM

Integrated pest management; management of pests using a combination of cultural, biological and chemical methods with due consideration for the environment.

L or LC

A liquid formulation of a pesticide; similar to E and EC.

LD₅₀

Method of expressing the acute toxicity of a pesticide. Expressed as milligrams of chemical per kilogram of body weight of the test animals required to kill 50% of the test population. The lower the LD₅₀, the more acutely toxic the pesticide. This does not, however, indicate the long term (chronic) health effects of the pesticide.

Nematicide

A pesticide used to control nematodes.

Pesticide

Any kind of material that is used to kill, control or manage pests. Pesticides include insecticides, fungicides, herbicides, nematicides, rodenticides, etc.

Pesticide residue

A deposit that remains in, or on, a product following application of a pesticide.

pH

A measure of acidity or alkalinity. It measures the activity of H⁺ ions in solution. (Expressed as a negative logarithmic scale, e.g. pH = 6 has ten times more H⁺ ions than pH = 7.)

Phytotoxicity

Damage to a crop plant following the application of pesticides. Chances of phytotoxicity can be reduced by reading the warnings on the label and carefully measuring the correct quantities and observing conditions prior to application.

PPM

A measure of concentration expressed as parts per million; often used to describe the concentration of nutrient sprays, disinfectant solutions, solubility of soil-applied herbicides and pesticide residues. 1ppm = 1 gram in 1000 kilograms or 1 mL in 1000 litres.

Residue tolerance The maximum amount of a pesticidal residue that may lawfully be present in, or on, a food product offered for sale. It is expressed in parts per million.

SC A sprayable concentrate pesticide formulation.

SG A soluble granule pesticide formulation.

SL A soluble liquid pesticide formulation.

SP A soluble powder pesticide formulation.

Spray

A pesticide formulation or nutrient dissolved or suspended in a liquid (usually water or oil), so it can be applied in fine droplets.

Spreader sticker

An adjuvant that assists in the even distribution of the spray solution over the target and also helps it to adhere to the treated surface.

Surfactant

Compounds which reduce the surface tension of a liquid (e.g. emulsifiers, soaps, wetting agents, detergents and spreader stickers).

Systemic pesticide

A pesticide which is absorbed into and flows through the vascular system of a plant or animal so that the plant becomes toxic to the pest to be controlled.

Toxicity

The degree to which a substance is harmful or poisonous to a plant or animal.

W or WP

A wettable powder formulation of a pesticide.

Wettable powder

Dry formulation which is normally mixed with water to form a sprayable suspension. Due to the danger of inhalation and spilling the powder while filling the spray tank, most toxic wettable powders are now sold in small soluble bags which can be dropped in the spray tank without being opened.

Wetting agent

An adjuvant that helps solutions or suspensions make better contact with surfaces to be treated.