



Glyphosate-Based Herbicides and Modern Farming Practices in Australia

Innovation in modern agriculture is helping farmers grow healthy crops using fewer natural resources.

Australian farmers provide us with cheap and reliable access to safe, nutritious produce all year round. In fact, 93%¹ of the food we eat comes from Australian farmers, which makes us one of the most food secure places on earth!



/// The problem with weeds

When it comes to crop protection, there is no single approach in the fight to protect crops. Farmers today use many tools - from digital technologies like sensors and satellite imagery that provide essential data analytics, to hybrid and genetically modified seeds, to precision equipment and crop protection products like herbicides.

Weeds are a big headache for farmers. Weeds invade crops, aggressively competing for water, nutrients and sunlight which results in reduced crop yield and quality. Weeds are also very expensive, costing Australian farmers \$4.8 billion dollars every year, this equates to \$13 million a day.²



/// Managing weeds

Glyphosate-based herbicides, as one tool in an Integrated Weed Management system, have provided efficient, safe and cost-effective weed control for more than 40 years.

In Australia, the most common land management practice for crops and pasture continues to be zero or minimum till where farmers undertake no cultivation apart from sowing or planting. In 2017 of the 18.3 million hectares of crop land cultivated, 75% (or 13.8 million hectares) received no cultivation, apart from sowing or planting.³ By using glyphosate farmers can reduce the number of times they disturb the soil to remove weeds. This means less tractor runs, less petrol use, less carbon emissions and less soil erosion.



The use of glyphosate to control weeds helps us operate a minimum to no tillage cropping program. By not cultivating the land we can minimise soil erosion and retain soil moisture. Glyphosate also increases the nutrient value of the soil. Soil in good condition will mineralise nitrogen at the rate of up to one unit per hectare per day. A very efficient way to fertilise a crop by any standard. *Chris, cereal grower, Cowra NSA*





/// Glyphosate safety

All crop protection products, including glyphosate, are subject to rigorous testing and oversight by regulatory agencies. Glyphosate, given its effectiveness and wide adaptation, is one of the most studied herbicides in the world.

The Australian Pesticides and Veterinary Medicines Authority (APVMA) takes a risk-based, scientific approach to regulation which ensures that each agricultural chemical product is thoroughly and independently assessed. As recently as 2018 the APVMA has determined that “glyphosate is safe to use according to label directions.”⁴

In 2019, following a scientific review of glyphosate, Health Canada said “No pesticide regulatory authority in the world currently considers glyphosate to be a cancer risk to humans at the levels at which humans are currently exposed.”⁵



/// Is there glyphosate in my food?

Before crop protection products like glyphosate can be approved for use, scientific evaluations are conducted to determine potential risk of residues on food. If the risk is too high, the product never makes it to market.

For products that pass scientific evaluation, the next step is to submit the studies to government regulators who review them and establish their own safe levels of residues, and then monitor harvests to ensure those levels are not exceeded.

All crops will contain trace amounts of elements that are used or present in the environment in which they are grown. When it comes to pesticide residues, regulatory authorities have strict rules. Food Standards Australia New Zealand and the APVMA have set daily exposure limits at least 100 times below levels shown to have no negative effect in safety studies.^{6,7} Based on the miniscule amounts in which glyphosate is sometimes found in food, a person would have to consume an incredible amount to reach the daily exposure limit which would still have no effect on you.



You could eat **450 BOXES OF CEREAL** every **24 HOURS** for the rest of your life and still be at a level of glyphosate exposure considered safe by the APVMA

 Find out more: <https://www.bayer.com/glyphosate>

1. National Farmers Federation, Food, Fibre and Forestry Facts. Available at https://docs.wixstatic.com/ugd/f1f1d0_8ba2beb5a0444390ad18a7b97083e85e.pdf (Retrieved 9 May 2019)
2. Centre for Invasive Species Solution, Annual Costs of Weeds in Australia, 2018. Available at: <https://invasives.com.au/wp-content/uploads/2019/01/Cost-of-weeds-report.pdf> via <https://invasives.com.au/our-publications> (Retrieved 9 May 2019)
3. National Farmers Federation, Food, Fibre and Forestry Facts. Available at https://docs.wixstatic.com/ugd/f1f1d0_8ba2beb5a0444390ad18a7b97083e85e.pdf (Retrieved 9 May 2019)
4. APVMA, Media Statement: <https://apvma.gov.au/node/32991> (Retrieved 9 May 2019)
5. Health Canada, Media Statement: <https://www.canada.ca/en/health-canada/news/2019/01/statement-from-health-canada-on-glyphosate.html> (Retrieved 9 May 2019)
6. APVMA, Acceptable Daily Intakes for Agricultural and Veterinary Chemicals. <https://apvma.gov.au/node/26596> (Retrieved 9 May 2019)
7. APVMA, Final regulatory position: consideration of the evidence for a formal reconsideration of glyphosate. Available at: https://apvma.gov.au/sites/default/files/publication/26561-glyphosate-final-regulatory-position-report-final_0.pdf (Retrieved 9 May 2019)