



Monsanto Company

The status of Monsanto's glyphosate herbicides used for aquatic weed control in Australia sometimes is misrepresented because of a misstatement about the original Roundup® herbicide¹ in a 1997 website newsletter. Glyphosate products are approved for use near water in Australia; some glyphosate products are also approved for use over water. Monsanto is not aware of scientific evidence that direct application of the original Roundup product according to label directions to water for weed control resulted in adverse effects on amphibian eggs, tadpoles, or adults.

The misunderstanding stems from a March 1997 newsletter on the FROGLOG website, which included an item (Tyler 1997) with the following statements concerning the original Roundup formulation:

"The Australian government has taken unprecedented action and banned 84 herbicide products from use near water because of their impact on frogs and tadpoles. All of these products, of which Roundup (Monsanto) is the best known, contain glyphosate as the active ingredient. However, there is agreement that it is not the glyphosate that is the principal problem but a detergent additive termed a dispersant or wetting agent."

The statement about "banned ... herbicide products" is a misrepresentation of the situation for the following reasons:

- No glyphosate herbicides were banned from use near water in Australia. The Australian authorities changed the risk assessment criteria during the glyphosate review as follows: "*Where a need exists to control weeds growing in or over water, only formulations with a superior margin of aquatic safety (no toxicity to fish, daphnids and tadpoles at concentrations in excess of 100 mg.L⁻¹ whole formulation) will be registered.*" (National Registration Authority, 1996). Even though there was no direct evidence that applications of original Roundup were adversely affecting aquatic animal life, neither it nor any other glyphosate formulation registered in Australia at that time met the 100 mg/L criterion. As a result, Monsanto voluntarily restricted its glyphosate products to use on the dry margins of waterways only. Later in 1996, Monsanto introduced into Australia the product Roundup Biactive Herbicide, which satisfied the toxicity criterion and was approved for aquatic applications.
- The Tyler (1997) item referred to "...use near water...". In fact, the changes proposed by the Australian regulatory authorities involved only direct applications to water. Margin applications near water for all glyphosate herbicides were unchanged.

A more balanced assessment of the situation can be found in a Community Brief compiled by Australia's National Registration Authority for Agricultural and Veterinary Chemicals (NRA)¹ titled "Special Review of Glyphosate" (NRA, 1996). In that summary, the NRA concludes: "There is no evidence in the scientific literature to link the use of glyphosate products with toxic impacts on aquatic fauna in the field, even after decades of widespread use, but anecdotal reports continue to be received. Such reports are difficult to refute while theoretical safety margins remain narrow and scope exists to improve them". Theoretical safety margins are narrow if Roundup is applied directly to extremely shallow bodies of water (≤ 0.15 m). For aquatic applications of Roundup, interception by target vegetation, rapid breakdown and dissipation of the product can explain the lack of impacts under field conditions.

References

National Registration Authority (NRA). (1996) Community Brief: Special Review of Glyphosate (June). National Registration Authority for Agricultural and Veterinary Chemicals. Australia.
<http://www.apvma.gov.au/products/review/docs/glyphosate.pdf>

Tyler MJ. (1997) Herbicides Kill Frogs. In: Newsletter of the Declining Amphibian Populations Task Force of the World Conservation Union's Species Survival Commission. Number 21 (March).

¹ In 2003, the name was changed to Australian Pesticides & Veterinary Medicines Authority (APVMA).