

Pesticide stewardship in the Mackay-Whitsunday region



More than 90% of Mackay-Whitsunday agriculture is dedicated to sugarcane farming, making it a major sugarcane region of over 100,000 hectares condensed within a relatively small area.

The region boasts a strong history of rigorous water quality monitoring at paddock and creek levels. This monitoring has revealed concerning pesticide concentrations in waterways, with certain chemicals exceeding ecosystem protection guidelines. Local growers are leading enhanced pesticide management practices, setting a benchmark for other growers in the region and beyond.

Pesticide use and environmental risks

Growers rely on pesticides for productive crops, with insecticides targeting destructive insects such as sugarcane grubs, and herbicides, like diuron, used to control weeds.

While these pesticides are integral to farming, these chemicals can harm plants and animals in waterways if they runoff from paddocks.

The highest direct risk from pesticides is to receiving local waterways, including freshwater ecosystems and inshore seagrass meadows close to the shoreline. This is where pesticide concentrations are typically the highest.

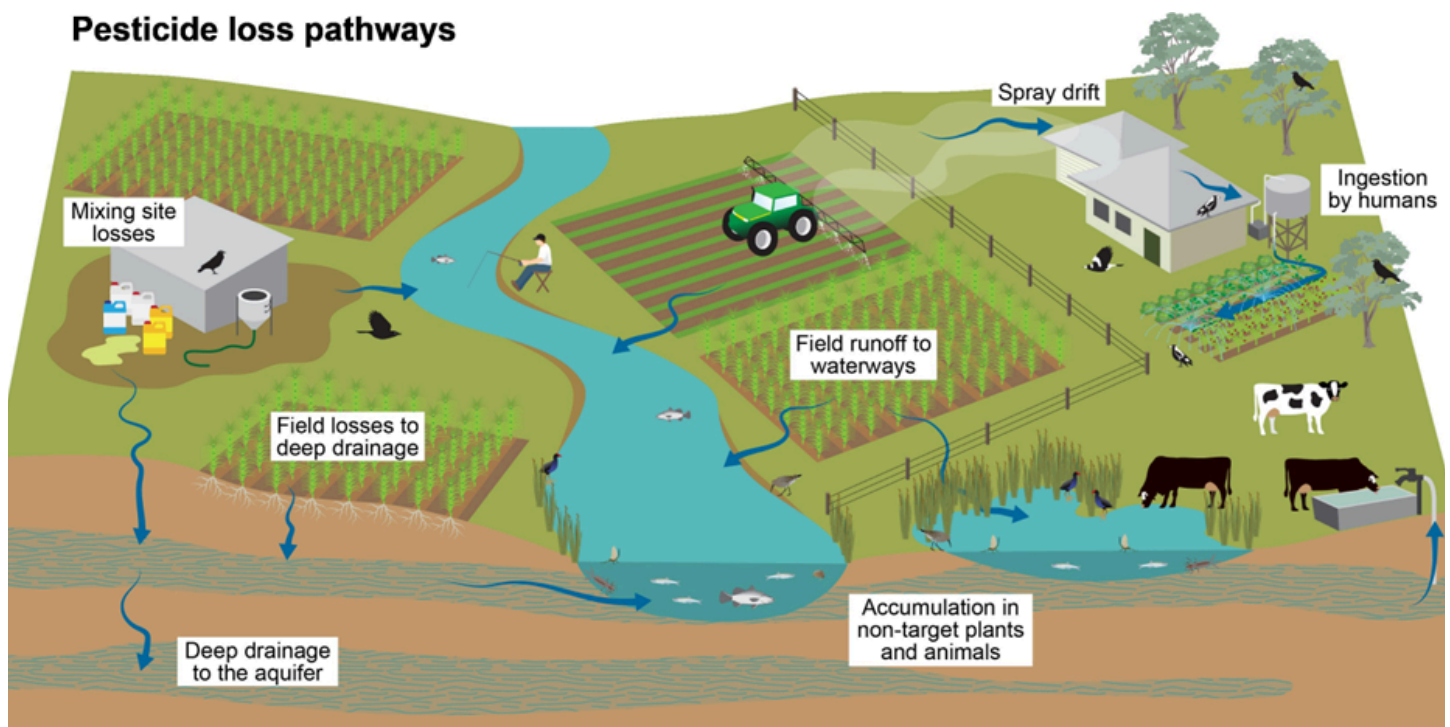
How pesticides are lost

Scientists and extension staff now have a good understanding of how common pesticides move and their toxicity in receiving waterways.

During farming, pesticides can be lost into the landscape through spray drift, mixing site spills, flushing and cleaning spray tanks, deep drainage and paddock runoff.

The intricate network connecting waterways, wetlands, and groundwater intensifies these challenges, facilitating the movement of runoff between these waterways.

Pesticide loss pathways



Pesticide stewardship in the Mackay-Whitsunday region



Improvements in pesticide loss

Water quality data shows year to year improvements in the Mackay-Whitsundays region, based on actions from growers in changing their land management practices.

Growers are exploring 'alternative herbicides' that offer equal efficiency but are less prone to runoff and pose lower ecological risks to the receiving environment.

In some cases, farmers face challenges with conflicting advice from chemical resellers. Addressing this issue is a focus for this industry. For reliable guidance, growers are encouraged to consult extension staff.

Contact local extension staff

Contact your local extension staff for reliable advice on adopting improved farming practices:

Robert Sluggett, Farmacist roberts@farmacist.com.au
Adam Keilbach, Farmacist adamk@farmacist.com.au

How growers are controlling loss

Mackay-Whitsunday growers are leading enhanced pesticide management practices, providing a proven model for other growers to adopt. This includes:

- Upgrading spray equipment to the latest drift reduction nozzles and application technology
- Using the Pesticide Decision Support Tool, growers are choosing lower-risk active ingredients
- Improving safety through better selection and use of personal protective equipment (PPE)
- Undertaking specialised spray training and professional development activities
- Hosting demonstration sites and participating in farm runoff monitoring
- Sharing knowledge and learnings with other growers

The Pesticide Decision Support Tool (PDST) has been released to support selection of lower risk active ingredients. Growers should talk to local extension staff for more information.



Key messages

1

Pesticides can leave the field where they are applied via drift, deep drainage, volatilisation and runoff to waterways.

2

Various pesticides have been detected locally in streams and groundwater in the Mackay-Whitsunday region.

3

Mackay-Whitsunday farmers are adopting innovative methods to reduce off-farm pesticide losses through careful product selection and application techniques.

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