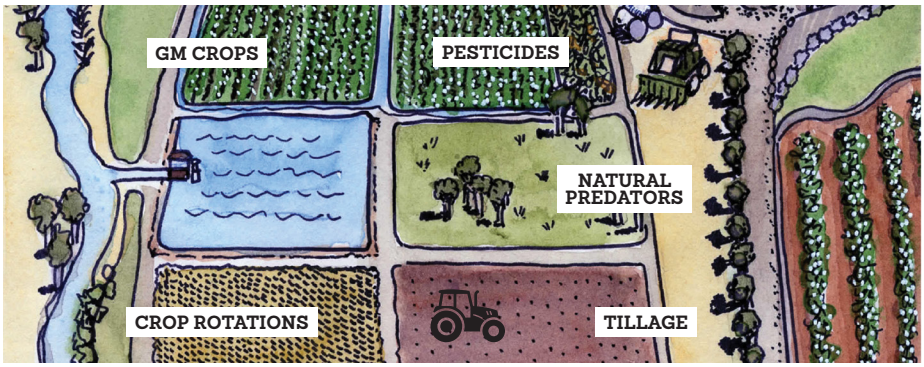
PLANET

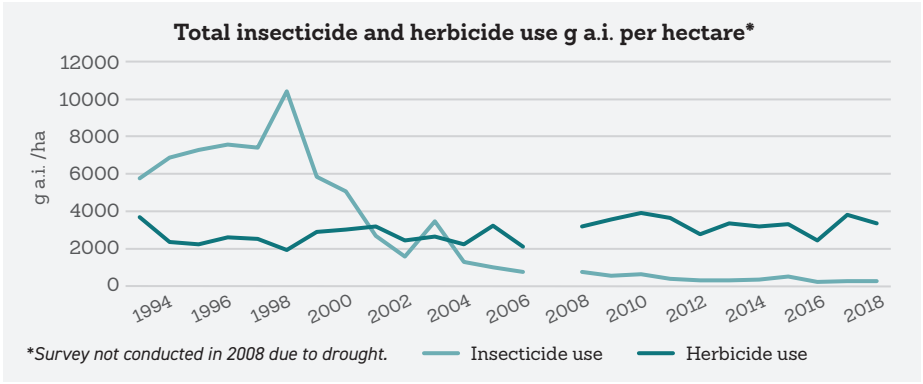
PESTICIDES

| efficient, responsible pest control



Pesticides are one tool used to control pests

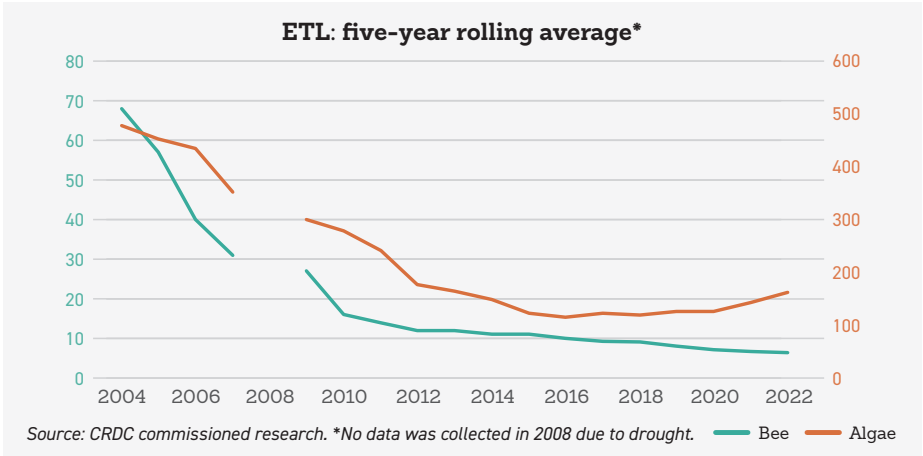
Pesticides (including insecticides and herbicides) are part of a cotton grower's pest control toolbox called Integrated Pest Management (IPM). IPM is a management approach to choose the tool that best controls pests with the least risk to human and environmental health. All pesticides in Australia are approved by a government regulator: if a grower chooses a pesticide to control a specific pest, it has been assessed as safe to use as directed by the label.



The amount of pesticides used has changed over time

Australian cotton growers reduced insecticides by 95 per cent per hectare between 1993 and 2019 as GM cotton and IPM was introduced.

In the same period, a move to less tillage to control weeds increased herbicide use by 20 per cent. This has been a deliberate change by farmers to trade off increased (but still safe, as determined by the government regulator) use of some herbicides, for improved environmental outcomes including a likely increase in soil carbon and moisture and reduced fuel use.



The environmental impact of pesticides has reduced

Measuring pesticide volume is not a good indicator of change because it doesn't account for the environmental impact of each different pesticide.

We use Environmental Toxic Load (ETL) to measure environmental impact. Our target is based on the ETL bees for insecticide hazard, and the ETL algae for herbicide hazard. The five-year average ETL for bees and algae has reduced by 91 per cent and 66 per cent respectively from 2004 to 2022. This suggests pesticide hazard and impact has significantly reduced.

OUR GOAL

Pesticide use that supports optimal crop production while having no negative impact on human and environmental health.

SDG ALIGNMENT

SDG 12.4: achieve the environmentally sound management of chemicals... and significantly reduce their release to air, water and soil.

PATHWAY

1. More tools (new technologies, targeted application, new crop protection methods)
2. R&D for better decision-making
3. Extension of tools and decision-making to growers.

KEY FACTS

95% ↓ reduction in volume of insecticides per hectare, from 1994 to 2019

20% ↑ increase in volume of herbicides per hectare, from 1994 to 2019

91% ↓ reduction in five-year average ETL for bees (an insecticide indicator species), from 2004 to 2022

66% ↓ reduction in five-year average ETL for algae (a herbicide indicator species), from 2004 to 2022.