

PESTICIDES

Key points

- Marlborough District Council conducts 4-yearly pesticide sampling at 20 sites & annual sampling at 3 sites
- Pesticides detected in Marlborough's groundwater have been minimal and are not increasing.
- Good management practices help to prevent harmful pesticides getting into groundwater



Marlborough is economically reliant on its primary industries, and pesticides are widely used as part of agricultural production systems. Groundwater is a key source of drinking water for Marlborough residents, however under some circumstances certain pesticides can leach into the groundwater.

Pesticides are used in agricultural activities to prevent, repel or kill pests. The three main classes of pesticide that are used are fungicides (plant disease), herbicides (weeds) and insecticides (insects).

There is an increased awareness that pesticide use needs to be carefully managed to maintain the current high quality of groundwater for drinking purposes. Tools such as the Hortresearch Growsafe Calculator assist in improving pesticide use practices.

Since 1993 the Marlborough District Council has participated in a 4-yearly national pesticide monitoring programme. The last was in November 2010 and included the sampling of wells from 20 Marlborough sites representing various aquifers.

Of all the samples taken in the past 18 years a minimal number of pesticides have been found in extremely low concentrations, well below the drinking water guidelines. There has been no sign of an increase in pesticides being detected over time in Marlborough.

Generally shallow, unconfined aquifers are susceptible to pollution. This is because the pesticide does not have far to travel to the groundwater below, and it is easy for it to travel through the permeable soil.

A good example of a vulnerable aquifer is the Rarangi Shallow Aquifer, with its thin free draining soils (see picture to the left).



PESTICIDES

The pesticides most commonly detected are members of the triazine family of herbicides used for weed control in orchards and vineyards. Triazines are immobile and stay in soil or water for long periods of time before breaking down.

The replacement of traditional crops in Marlborough over the last three decades is likely to mean an increased use of fungicides relative to insecticides, although herbicides probably are the most dominant pesticide in use.

To enhance the pesticide monitoring in Marlborough an annual pesticide programme was established in 2007. Sampling is carried out each spring at three potentially vulnerable sites on the Marlborough plain. Sampling targets those pesticides that pose a potential leaching risk in Marlborough soils based on historical and current land use.



WHAT YOU CAN DO

- Use the Growsafe Calculator to ensure you use the most efficient pesticide & the most effective application of the pesticide on your crop
- Prevent groundwater contamination by mixing and storing pesticides away from your wellhead and waterways
- Prepare pesticides on a concrete pad so potential spills do not end up in the soil and groundwater