

Giant buttercup

The facts

Giant buttercup, one of 14 weedy *Ranunculus* species occurring in New Zealand, is unpalatable to dairy cows due to its production of the toxin, protoanemonin. Because of its unpalatability, it spreads through dairy pasture, reducing pasture quality and dry matter yield. Affected areas include South Auckland, Hawkes Bay, Taranaki, South Wairarapa, Horowhenua, Golden Bay, West Coast and Southland.

This fact sheet will help you identify and manage this plant.

Description

- The leaf is deeply divided, hairy, on a long hairy petiole, and is highly variable in size (up to 150mm across) and shape.
- It is distinguishable from creeping buttercup and hairy buttercup (also known as annual buttercup) which have leaves divided into three stalked leaflets.
- It is a tall-growing perennial with an underground stem (rhizome).
- Reproduction occurs by seeds, rhizomes and layering (via buds on fallen flower stems).
- Pugging promotes its establishment and spread.
- Seeds disperse in hay, floodwater and by attaching to the coats of animals.
- The plant can be poisonous to livestock if eaten.
- Dairy cattle avoid it due to bitter foliage, which allows the plants to spread freely.
- Loss in utilisable pasture is directly proportional to % of paddock occupied by the weed.



Giant buttercup



Creeping buttercup



Hairy buttercup

Control

The herbicide aminopyralid (T-MAX) is very effective and can be used in pastures including those containing plantain. Clovers are removed but can be re-sown after 6-12 months.

Other herbicides registered for use against giant buttercup (flumetsulam, thifensulfuron methyl, MCPA, MCPB, bentazone) are less effective than aminopyralid.

Pasture grasses will replace giant buttercup plants removed by these herbicides.

Best practice

- Apply herbicide in mid-spring.
- Avoid herbicide resistance (known to evolve in giant buttercup in New Zealand) by rotating between herbicide mode-of-action groups.

The mode of action of an herbicide is the way in which it controls a susceptible plant. It describes the biological process or enzyme in the plant that the herbicide disrupts. Resistance occurs when mutations in the gene(s) regulating the process or enzyme result in an inability of the herbicide to disrupt the process or enzyme. Herbicides from different chemical families can be grouped according to their mode of action. The codes (labels) assigned to these groups for all herbicides available in New Zealand are given at <https://nzpps.org/>.

In the table below we give the Mode-of-Action group codes for the herbicide active ingredients available in NZ with a label claim for giant buttercup. Product names are given at the website below.

Herbicide	Mode-of-action group	Clover damage?	Evolved resistance cases
Aminopyralid	O3	Yes	No
Aminopyralid + triclopyr	O3	Yes	No
Bentazone + MCPB	C3/01	No	No
MCPA	O1	Yes	Yes
MCPB	O1	No	Yes
Thifensulfuron-methyl	B	Yes	Yes
Flumetsulam	B	No	Yes

For further information visit dairynz.co.nz/buttercup

