

Poison Buttercup



Poison Buttercup

Name: Poison Buttercup

Botanical name: *Ranunculus sceleratus*

Description: Poison Buttercup is undeclared but is seen as a problem weed to the university campus. This succulent herb is a fast growing annual which produces a multitude of small yellow flowers and tiny seeds that are easily collected on birds and animals which act as vectors for its spread similarly to water.

It can flower from late winter right through spring and summer to the end of autumn. This weed requires high levels of soil moisture and is semi aquatic; therefore it is a common weed of drainage lines, riverbanks, and moist low lying areas and for this reason it is also spread via water movement.

The plant has a strongly acrid juice and is highly poisonous to livestock and humans. The plant can cause blistering of the skin and allergic reactions in humans as well as a threat to poisoning livestock. This weed reduces available pasture and displaces native species.

Procedures:

Physical

Due to the poisonous nature of this weed and its ability to cause harm to humans the physical removal of this weed should be foregone unless appropriate PPE is available in the form of gloves and goggles. The tiny seeds are easily dislodged and manual or mechanical control or removal will facilitate weed seed spread unless the weed is not in a reproductive state which is mainly over the winter period. Solarisation techniques can work well in the case of isolated infestations using black plastic sheeting as a mulch to kill infestations and should be used where possible in conjunction with chemical controls. However due to the nature of this weed and its preference for infesting river banks, shallow bodies of water, and soils that are water logged solarisation may not be an option and reliance will be on chemical control. Due to the requirement for high soil moisture levels targeting this weed during time of drought may assist in its control.

Chemical

Because of numerous small seeds contributing to a large weed seed bank in the soil there is a high possibility of increased germination once chemical controls have occurred. Therefore follow up applications of herbicides when infestations return is necessary to exhaust the seed banks. Herbicide resistance in this weed must be averted by regularly changing the herbicide group used and hence the mode of action by which the weed is damaged.

Table 1. Herbicides registered for the control of Poison Buttercup (Source: Qld. NRW pest plant fact sheet)

Situation	Herbicide	Rate	Comments
Pastures; non-agricultural, commercial land	glyphosate 360g/L	0.5L/ 100L 75mL/ 15L	Handgun application, high volume foliar spray. Knapsack application, high volume foliar spray. <i>Will also kill pasture</i>
Pastures; non-agricultural, commercial land	picloram + triclopyr (GrazonR)	0.35L/ 100L 0.25L/ 100L	Spot spray Misting
Pastures	dicamba + MCPA (Banvel MR)	60mL/ 15L 0.19-0.27mL/ 100L 2.8-4 L/ ha	Knapsack Handgun application Boom spray
Pastures; non-agricultural, commercial land	metsulfuron methyl (Brush OffR)	15g/ 100L	Handgun application
Aquatic areas; drains, channels, margins of streams, lakes and dams	calcium dodecylbenzene sulphonate (AF – 100)	1 part in 19 parts kerosene	Sprinkle onto free standing plants and lightly in adjacent water surface area just enough to change normal colouring. DO NOT USE WATER for potable consumption
Aquatic areas	Diquat (Vegetrol)	50-100L/ ha or 4L/ 100L	Thoroughly wet all foliage. DO NOT USE WATER for 10 days after application

Biological

Because of the acrid properties of Poison Buttercup, its specific requirement for relatively moist and fertile conditions and the localised nature of infestations in the state, research and development of biological control for this species has not been instigated by Dept. NRM&W at this time.

Monitoring

Should occur at

- 3 weeks after control application
- At regular intervals following that
- A few days to a week after the occurrence of any heavy rain to assess germination of new weed seeds.

At UQG this weed has an association with water and moist fertile soil and therefore infests some of the most productive areas on campus from both an environmental and agricultural perspective. Once control measures have started and the resulting successful weed removal has occurred desired vegetation should be planted in place. Resilient and beneficial species that can prevent weeds returning over a long term period are the best choice. Regular monitoring of the revegetation process should be conducted to prevent weeds from building in numbers again and taking a stronghold.

For more information go to <http://www.nrw.qld.gov.au/pests/weeds/>