

Rice Grass and Fusilade

Fact Sheet



CRADLE COAST
AUTHORITY

Natural Resource Management

- Rice Grass is a threat to the health of the Rubicon estuary. Rice Grass spreads rapidly and limits boat access for fishing, recreation and aquaculture. It destroys habitat for birds and breeding grounds for fish.
- Fusilade Forte, the herbicide used to control Rice Grass (*Spartina anglica*), has a low toxicity to fish and shellfish and will be used on plants at low tide. The chemical is absorbed by the plant and very little ends up in the waterway.
- "In Tasmania, currently the most cost-effective and environmentally least damaging herbicide for *Spartina* control is Fusilade Forte (which does not affect native saltmarsh species or sea-grasses, is rapidly degraded and has very low toxicity to estuarine fauna" (Rice Grass Advisory Group 2002).

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Permits and approvals

The Department of Primary Industries, Parks, Water and Environment (DPIPWE) hold an Authority to use Fusilade Forte under an Australian Government Australian Pesticides and Veterinary Medicines (AVPMA) Authority Permit.

Cradle Coast Authority hold an Authority from DPIPWE to use Fusilade Forte with the following conditions:

- All application of Fusilade Forte 128 EC Herbicide shall be conducted using handheld spray equipment and the application shall be to plant foliage when plants are fully exposed during low tide.
- The timing of Fusilade Forte 128 EC Herbicide application should be such to allow the maximum period of time following spray application before re-immersion.
- The application rate of Fusilade Forte 128 EC Herbicide shall not exceed 1000 litres/hectare of a 1.65% Fusilade solution mixed with fresh water.
- The application of Fusilade Forte 128 EC Herbicide must not occur on days when the prevailing wind speed and direction is likely to create off-site spray drift impacts.
- Prior to spraying, all reasonable measures, must be taken to inform operators of aquaculture businesses, and those with similar interests, in the vicinity of the areas to be sprayed of the intention to spray.

Informing the community with notice of spraying

Notices are placed at boat ramps in the vicinity of spraying during weed control works. CCA only work with weed contractors who have obtained approval from the State Government to use Fusilade Forte in specified locations. Contractors are required to take personal safety precautions and wear Personal Protective Equipment.

Contractors must adhere to product guidelines and are required by CCA to undertake a risk assessment before works to further ensure safety to themselves and the community during spraying operations.

Our conclusions of the literature review are that Fusilade Forte doesn't have long-lasting effects on the environment and controlling Rice Grass in the Rubicon is important to protect the values of the estuary.

Studies have not shown Fusilade Forte is harmful to humans.

A 7-day withholding period from eating shellfish or fish caught for human consumption in the estuary is recommended as a precaution.

Literature review

Impact of Rice Grass (*Spartina anglica*), and the Effect of Treating Rice Grass with the Herbicide Fusilade Forte® on Benthic Macro-invertebrate Communities in a Northern Tasmanian Estuary, 2011, Colin Shephard

The Tasmanian study showed that no residues of the active constituent or any breakdown products of Fusilade Forte® were detectable in oysters or water after one day post spraying, but Fluazifop-P (acid) is detectable in sediments up to 30 days post spraying.

The work showed that spraying Rice Grass with Fusilade Forte® appeared to result in acute toxic impacts to the benthic macro-invertebrate communities but within months these communities appeared to recover with limited detectable long-term impacts. As this work was entirely field-based and no laboratory experiments were specifically conducted on targeted macro-invertebrate taxa, direct toxicity to in situ organisms was not explicitly established. Nevertheless, there is a weight of evidence from the research, to suggest that it is indeed possible.

The FUSILADE FORTE® 128 EC Herbicide Safety Data Sheet

The Chemical Identity of Pure Substance is Fluazifop-P-butyl. Fluazifop-P-butyl is not persistent in soil or water. There is evidence of rapid hydrolysis in water and soil to the parent acid, which also rapidly degrades and is of lower intrinsic toxicity.

The Safety Data Sheet states that Fusilade Forte is slightly toxic to fish *Oncorhynchus mykiss* (Rainbow Trout) LC₅₀* = 20 ppm, 96 hours, based on test results obtained with a similar product.

*LC₅₀ is the "Lethal Concentration" at which 50% of the sampled animals will die.

Long-term ecological consequences of herbicide treatment to control the invasive grass, *Spartina anglica*, in an Australian saltmarsh, 2015, Jeff Shimeta et al

Fusilade Forte ® decomposed rapidly in sediments, with hydrolysis of the active ingredient to the breakdown product occurring within hours of application at low tide, most likely due to moisture retained in sediments.

Waters and Rivers Commission Water notes, Government of Western Australia, April 2001

Fluazifop-P-butyl (Fusilade)

Fluazifop-P-butyl is a selective herbicide, which is designed to kill grasses (members of the Poaceae family), and is safe to use on most other plant species, including rushes and sedges. It has a low toxicity to bees and rats and is practically non-toxic to ducks and mammals (PMEP 1999).

It also has a low toxicity to fish and aquatic organisms (Brain and O'Connor 1988). Fusilade ® has been tested in Western Australia and was found to be highly effective in removing introduced grasses, while having no detectable impact on aquatic invertebrates (Woodcock et al 1993). It is rapidly absorbed by plants and is rainfast within one hour.