

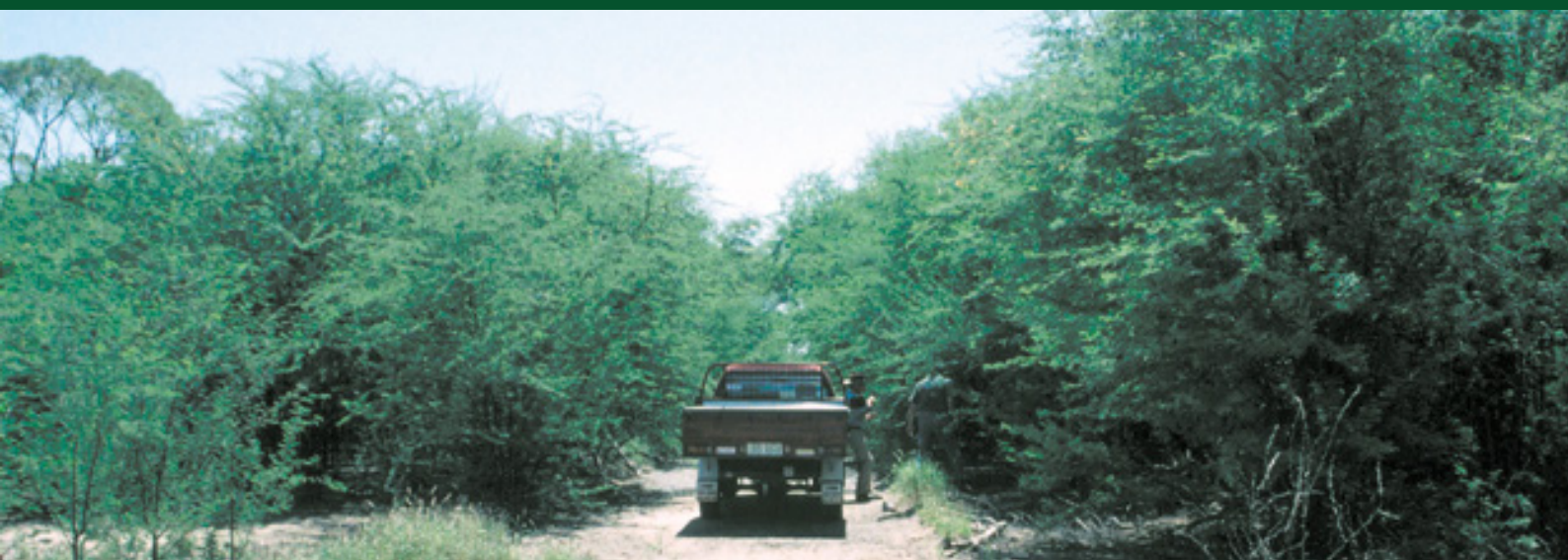
Mesquite (*Prosopis* spp.)

Weed management guide

Weed type
**Tree/
Shrub**

February 2023

www.lls.nsw.gov.au/regions/central-west



In NSW, weeds are regulated by the NSW Biosecurity Act, 2015. All land managers have a General Biosecurity Duty to contain the spread of weeds.

“General Biosecurity Duty means that any person dealing with plant matter must take measures to prevent, minimize or eliminate the biosecurity risk (as far as is reasonably practicable).”

The Regional priority for Mesquite is Eradication. In order to achieve this, Land Managers are asked to: *Mitigate the risk of new weeds being introduced to their land. The plant should be eradicated from the land and the land kept free of the plant. The plant should not be bought, sold, grown, carried or released into the environment.*

For further information, contact your local Biosecurity (Weeds) Officer via Central West Local Land Services or visit NSW WeedWise.

NSW WeedWise



Habit and description

Mesquite are woody legumes which grow either as a single-stemmed tree reaching up to 15 m high or a multi-stemmed shrub reaching up to 5 m. Its branches have a characteristic zigzagging pattern. The bark appears smooth and dark red-green in young stems, turning rough and grey as it matures. The leaves are twice divided (bi-pinnate), occurring as 1-4 pairs of primary leaflets with 7-21 pairs of small opposite secondary leaflets. Up to two thorns are present at the base of the leaves. The greenish cream-yellow flowers of this plant appear cylindrical and grow to 80 mm in length. Fruit are legumes (pods) that grow to 20 cm long. Pods turn from green when young to yellow, purple, or yellow with purple streaks and patches when ripe.

Mesquite species are adapted to hot climates. It can also tolerate extremes in climate and soil conditions (drought, waterlogging, low nutrient soil, saline or alkaline soil). This plant prefers semi-arid to arid rangelands. Weeds with similar appearance are Mimosa Bush, Parkinsonia, and Prickly Acacia.



Photo: © Colin G. Wilson | NSW DPI



Photo: © John Hasking | NSW DPI



Photo: © Colin G. Wilson | NSW DPI



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Reproduction and spread

Mesquite species reproduce through seeds and its seed pods can carry up to 20 seeds. Each plant has the potential to produce hundreds of thousands of seeds over the course of its life. Seed are dormant but are activated by damaging the covering of the seedpods. Animals are enticed by the sweet pulp surrounding the seeds and in turn help spread it. Flooding can also carry the seed pods away from the parent tree/shrub.

Impacts

Agriculture



- As Mesquite produces large thorns, it can hinder livestock from accessing watering holes once it forms dense thickets.
- Detached thorns can damage animal hooves and puncture tires. These can also cause injury to people.
- Its presence in grasslands also shade pasture grasses lowering the land's productivity and competing with water resources.

Native vegetation



- Mesquite is a Weed of National Significance (WoNS) in Australia (NSW DPI, 2017)
- Mesquite outcompetes native plants and causes land degradation by siphoning off moisture from the soil.
- It can potentially harbor feral animals like pigs and cats.

Management

Chemical



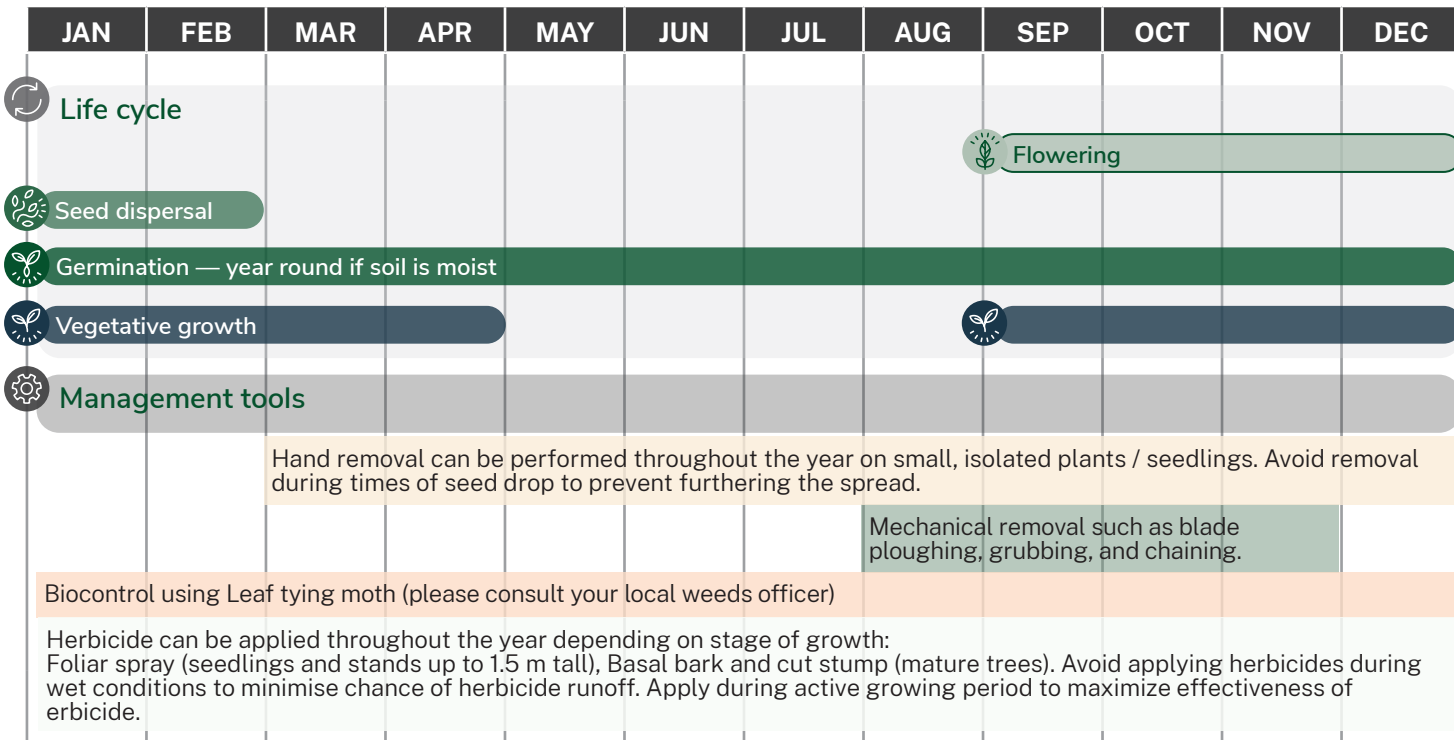
- Herbicide application methods depend on the size of the plant being targeted. Foliar spraying is ideal against seedlings and actively growing and dense stands up to 1.5 m high. Basal bark and cut-stump is preferred for control of mature trees.
- Seek the guidance of an experienced Weeds Officer for expert advice on herbicide use.
- Visit www.apvma.gov.au for a list of registered products, product labels and permit requirements.
- NSW DPI (2018) provides a list of recommended herbicides for the control of Mesquite at <https://weeds.dpi.nsw.gov.au/Weeds/Mesquite>

Non-chemical



- Blade ploughing, grubbing and chaining are some of the mechanical controls recommended. The goal in all these methods is the removal of the whole plants including the roots down to a depth of 300 mm.
- Fire can be employed against a particular species of Mesquite, *P. pallida* (Algaroba). Chaining may be employed before burning to provide enough fuel to generate heat required to kill Mesquite. This also kills seeds lying on the soil surface. Most of the other Mesquite species are heat resistant.
- Out of 4 species released as biological control agents for Mesquite, a leaf tying moth (*Evippe* sp. #1) is the most promising. It has established itself and has a substantial impact on seed production and growth rates.

Management calendar



Optimal control options may vary depending on your location and climate. Consult an experienced Weeds Officer based in your local government area for control methods suited to your conditions.

All herbicides must be used in accordance with the herbicide label and permit requirements.

NSW WeedWise

Further information

For more information on your general biosecurity duties, visit www.dpi.nsw.gov.au/biosecurity.

For the best guidance on how to meet this duty on your property, contact your expert Weeds Officer at your local council or via Local Land Services www.ils.nsw.gov.au/regions/central-west.



References

NSW DPI. (2022). *NSW WeedWise: Mesquite (Prosopis species)*. <https://weeds.dpi.nsw.gov.au/Weeds/Mesquite>

NSW DPI. (2017). *Weed categories*. New South Wales Government. <https://www.dpi.nsw.gov.au/biosecurity/weeds/weed-categories#Weed-of-National-Significance>



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