

Saturated Steam, and its role in a Healthy Landcare and Healthy Landscapes.

By Benjamin Larson

Introduce

Introduce Saturated steam in the context of thermal weed control.

Explain

Provide a brief explanation of the process of using Satusteam™ in weed management programs, with some examples.

Understand

Satusteam™ can be incorporated to existing Landcare programs to improve volunteer engagement and morale, reduce risks, improve weed control outcomes and maintain healthy landscapes



What is Thermal Weed Control?

- ▶ Exposure of weeds to high temperatures causing reduction in growth rate or death of the plant.
- ▶ All plants have a 'temperature / time relationship'
- ▶ Non-systemic, non selective, contact treatment
- ▶ Can be used on exposed foliate and stems as well as rhizomes, tubers, roots and even seedbank.

Thermal Shock vs Lethal Heat



Lethal Heat

- ▶ A result of the time temperature relationship
- ▶ As temperature increases - required exposure time decreases.

Thermal Shock

- ▶ Cells expanding at different rates causes mortality from destruction of membranes etc.
- ▶ In a weed this process is exacerbated when there is high moisture content or air pockets.
- ▶ Or if the moisture in the weed can be raised past boiling point.



What is Satusteam™ ?

Patented technology using superheated water and saturated steam to kill weeds.

Ordinary water is heated beyond its boiling point to ~120°C. The system is pressurised to maintain liquid state and is delivered onto the target weed through a range of specialty applicator heads, complete with a depressurisation chamber.

WHERE AND WHEN TO SATUSTEAM

- ▶ Most appropriately used in socially or environmentally sensitive areas
- ▶ Can be used even when the plant is dormant
- ▶ Much faster than hand weeding
- ▶ No residual
- ▶ Very effective on annuals and small growth stage leafy plants
- ▶ Spike can be used to inject Satusteam™ into the root zone of more established or woody weeds
- ▶ No certification or skills needed to use satusteam™ and low risk - great for volunteer groups
- ▶ Versatile - can be used as a biosecurity washdown unit, sterilising vehicles and equipment



How to Satusteam™ ?

- ▶ Initial treatment
 - ▶ Mechanically remove established or woody weeds
 - ▶ Steam
- ▶ Follow up treatment
 - ▶ Hit emergent
 - ▶ Finish kill on persistent weeds
- ▶ Maintain site using regular treatments



Coochiemudlo Island Coastcare Group – Restoration of a RAMSAR Wetland

Community Sustainability Action Environmental Grant

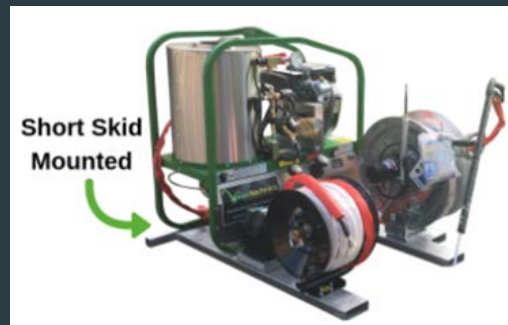
“Promoting sustainable vegetation management and ecosystem
resilience on Coochiemudlo Island”

- ▶ The saturated steamer was used on Mothers of Million, Singapore Daisy and Guinea Grass in a staged operation over several weeks.
- ▶ It was found that Satusteam™ completely eradicated mother of millions and depleted the seedbank in 1 - 3 treatments.
- ▶ The increased productivity has allowed the Coastcare Group to expand their treatment areas and have attributed much of their success in tackling new zones and attaining new grants to the use of Satusteam™.

The Weedtechnics Satusteam™ Range

Machines to suit everything
from the lifestyle property to
large scale agricultural
applications

Australian Made, Owned and
Backed.





- ▶ Sw900 - Steaminator
 - ▶ 10L / Min Output
 - ▶ Rugged frame with a variety of mounting positions
 - ▶ Most suitable for serious work
 - ▶ High end componentry



- ▶ SW500 - Green Ninja
 - ▶ 5L / Min Output
 - ▶ Wheels as standard, can also be mounted to skid or trailer
 - ▶ Entry level machine
 - ▶ Available with quiet 240V motor or versatile petrol motor

Questions ?

Weedtechics
Satusteam™

Weed killer safe
enough to drink!

