



# **Glyphosate alternatives for caltrop and Afghan melon control**

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#dpirdIndustry2022**



# Trial details



- **Treatments date:** 16 Dec 2021
- **Boom Output:** 96L/ha

## Weather conditions on day of spraying:

- **Application Timing:** 9am to 2pm
- **Temperature:** 24 - 26°C
- **Relative Humidity:** 37 - 39%
- **Wind speed:** 5 - 15km/hr
- **Delta T:** 8.3 - 8.5°C

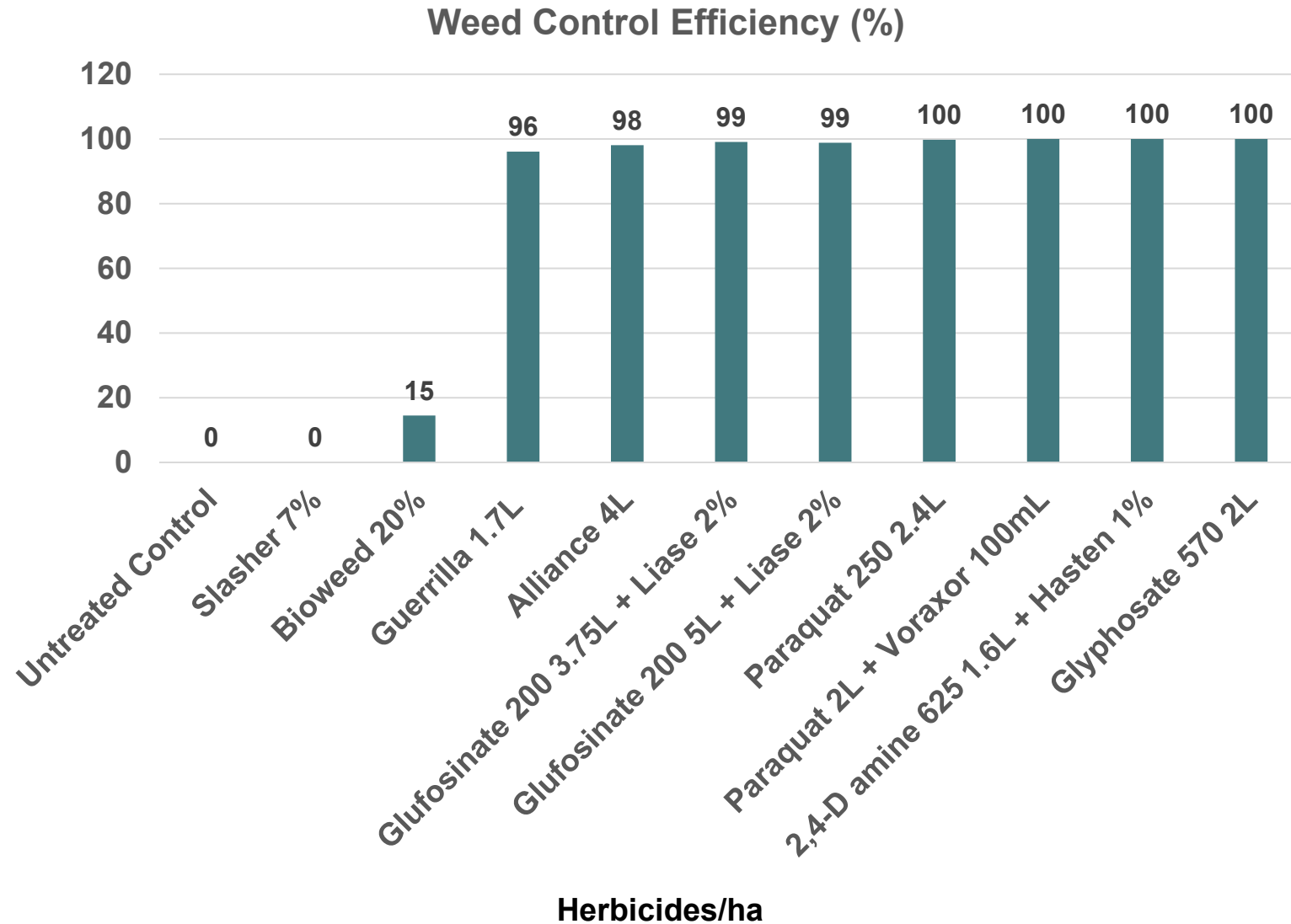
## Weather from 16 Dec 2021 to 19 Jan 2022:

- **Maxi Temp:** 24.6 - 44.4°C
- **Mini Temp:** 10.7 - 26.6°C
- **Rainfall:** 0.4 mm (11 Jan)

**Weed Control Efficiency (%) =  $\frac{\text{Dry weight of weeds in untreated control} - \text{dry weight of weeds in treatment}}{\text{Dry weight of weeds in untreated control}} \times 100$**

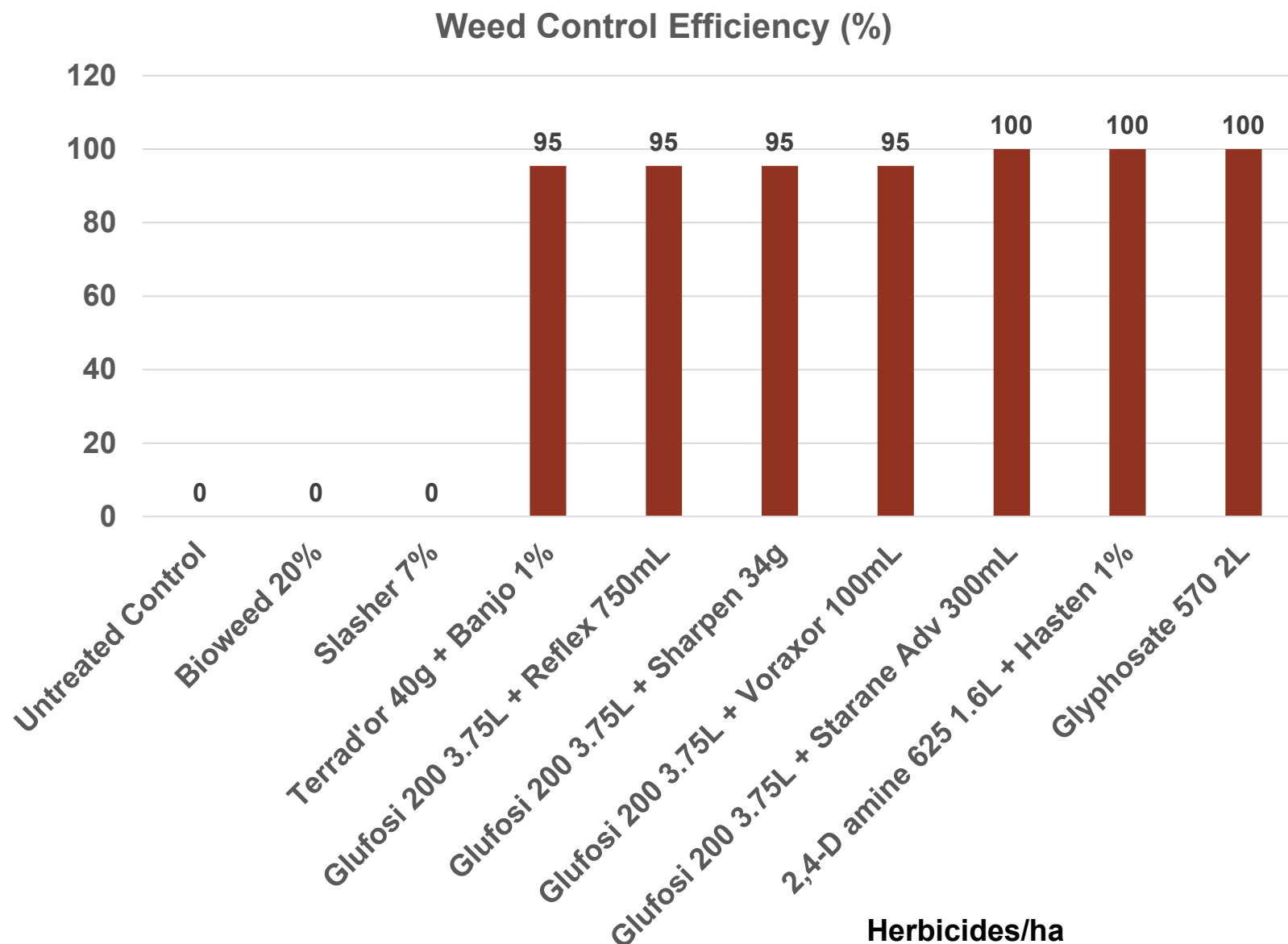


# Glyphosate alternatives for caltrop control



- **Untreated Control**
- **Caltrop density = 10 plants/m<sup>2</sup>**
- **Caltrop dry wt = 22 g/m<sup>2</sup>**
  
- **Bioweed® = Pine oil 136 g/L**
- **Slasher® = Nonanoic acid 525 g/L**
- **Guerrilla® = Paraquat 300 g + Amitrole 12 g/L**
- **Alliance® : Paraquat 125 g + Amitrole 250 g/L**
- **Voraxor® = Saflufenacil 250g + Trifludimoxazin 125g/L**

# Glyphosate alternatives for Afghan melon control



- **Untreated Control**
- **Melon density = 5 plants/m<sup>2</sup>**
- **Melon dry wt = 9.7 g/m<sup>2</sup>**
  
- **Bioweed<sup>®</sup> = Pine oil 136g/L**
- **Slasher<sup>®</sup> = Nonanoic acid 525g/L**
- **Terrad'or<sup>®</sup> = Tiafenacil 700g/L**
- **Reflex<sup>®</sup> = Fomesafen 240g/L**
- **Sharpen<sup>®</sup> = Saflufenacil 700g/L**
- **Voraxor<sup>®</sup> = Saflufenacil 250g + Trifludimoxazin 125g/L**
- **Starane<sup>®</sup> Advanced = Fluroxypyr 333g/L**

# Conclusions

- **A range of registered herbicides/herbicide mixtures could be used for control of caltrop, and Afghan melons with similar weed control efficiency to glyphosate.**
- **Organic herbicides Slasher<sup>®</sup> and Bioweed<sup>®</sup> had very poor weed control efficiency.**

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# Thank you

[dpiird.wa.gov.au](http://dpiird.wa.gov.au)    

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## Important disclaimer

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