

Reducing control costs of slangbos (*Seriphium plumosum*) – Herbicides and interactions between growth stage, grass quality, and grazing

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Department:
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REPUBLIC OF SOUTH AFRICA

Research Note

Tebuthiuron residues remain active in soil for at least eight years in a semi-arid grassland, South Africa

JCO du Toit* and KP Sekwadi



What do we want?

- Herbicides:
 - Environmentally safer
 - Economical application
- “Natural” control
 - Fire, grazing, etc

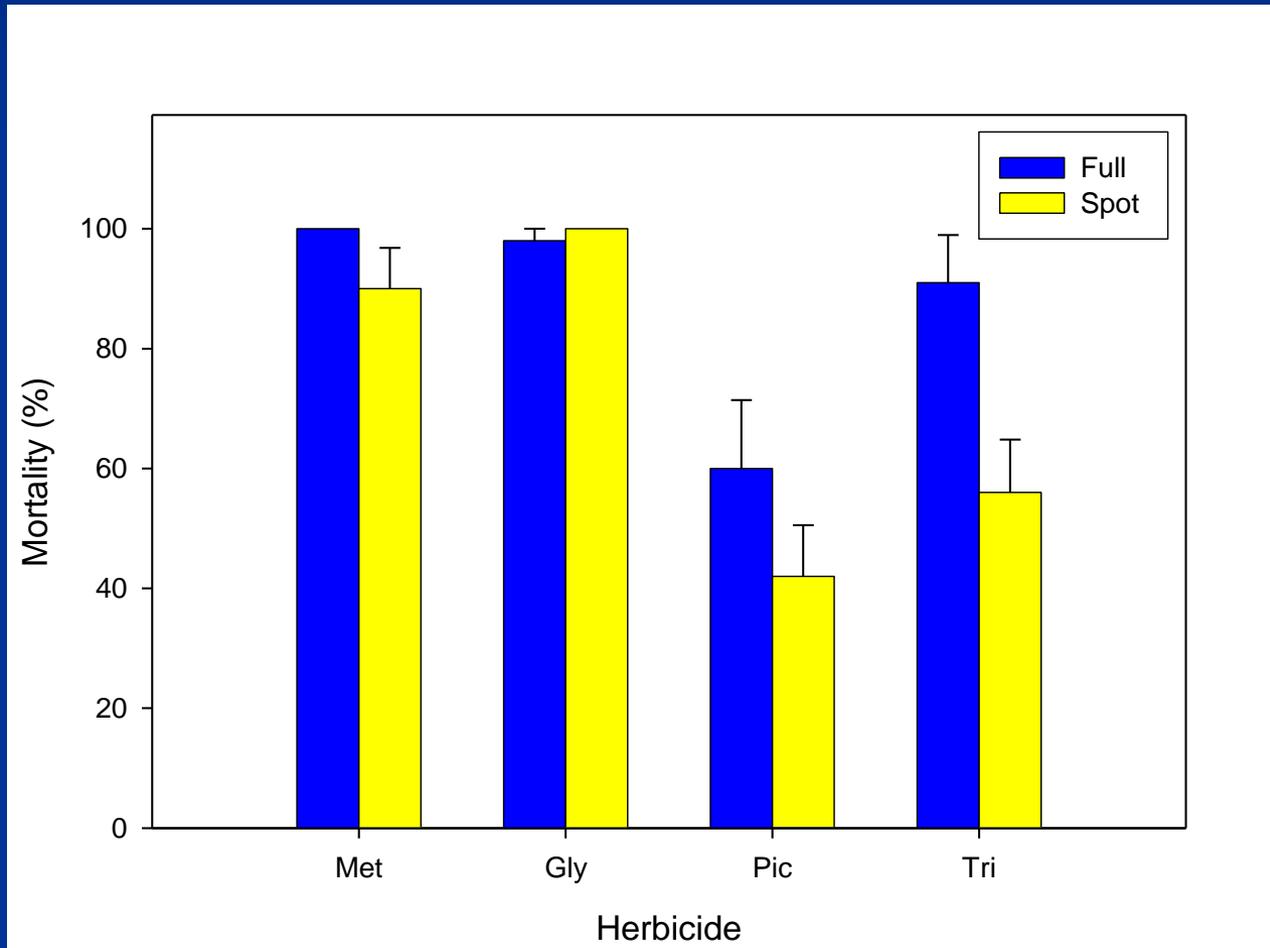




Herbicide trials

- “Safer” herbicides (non-residual &/or selective)
- If, as claimed, herbicides are indeed systemic, then if a small part of the plant can absorb enough herbicide, it should be translocated and kill the plant

Metsulfuron (e.g. Brushhoff), glyphosate (e.g. Roundup), picloram (e.g. Access), triclopyr (e.g. Garlon)



Control through grazing management

Palatability

- Slangbos is unpalatable.
- Why? Toxins? Low quality? Physical defenses?
- Maybe OLD plants are unpalatable
- Get rid of the top part (burn, chop)



Acceptable if not palatable?

- Animals select the best of what's on offer
- Therefore, if slangbos is the best that's available, animals should eat it
- But, probably can't expect animals to exist solely on slangbos
- So: try to graze slangbos when grass quality is low

Will browsing impact slangbos?

- Yes.
- No magic plants
- Removal of photosynthetic material, esp for woody species, cannot benefit them (e.g. fire traps)
- “Survival of the rested”



**TOWARDS LOW-INPUT CONTROL OF SLANGBOS (*SERIPHIMUM PLUMOSUM*) –
QUALITY AND GRAZING INTERACTION HYPOTHESES**

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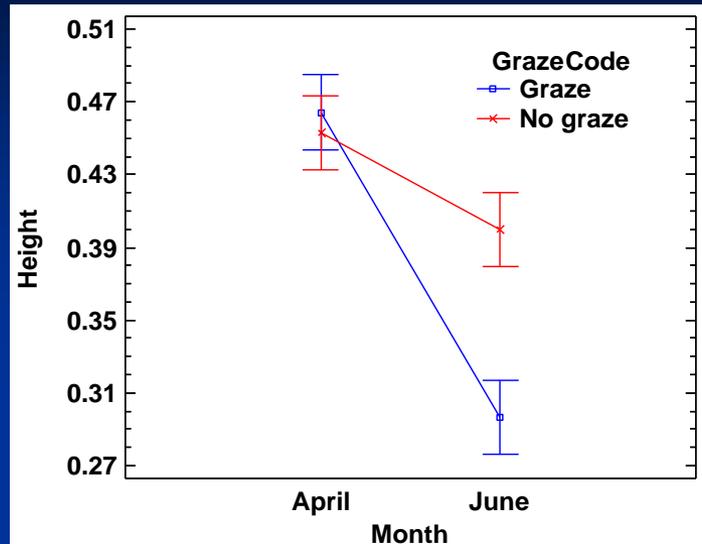
- Our idea:
- Burn or chop slangbos, allow it to regrow, then graze it heavily after the first frosts.
- Burning or chopping makes it more palatable; grazing after the first frosts makes it relatively more attractive.

2 sites near Zastron

- Leeuwfontein
 - Burned 2 years previously
- Boomplaats
 - Chopped 1 year previously



Leeuwfontein



Boomplaats



Boomplaats - before



Boomplaats

- after



A wide-angle photograph of a dry, open landscape. The foreground and middle ground are filled with tall, dry, golden-brown grasses. In the center, there is a large, dark, leafless bush. In the background, there is a low, rounded hill under a clear blue sky. The overall scene suggests a dry, arid environment.

Gone!

(For now)

Can it become a useful food?



Conclusions

- Herbicides:
 - There are friendlier alternatives to soil-applied herbicides, and spot-spraying an interesting development
- Grazing:
 - Cattle and sheep can be enticed to selectively graze slangbos

Thank you

