Integrated Control of Water Hyacinth in Kruger National Park

By

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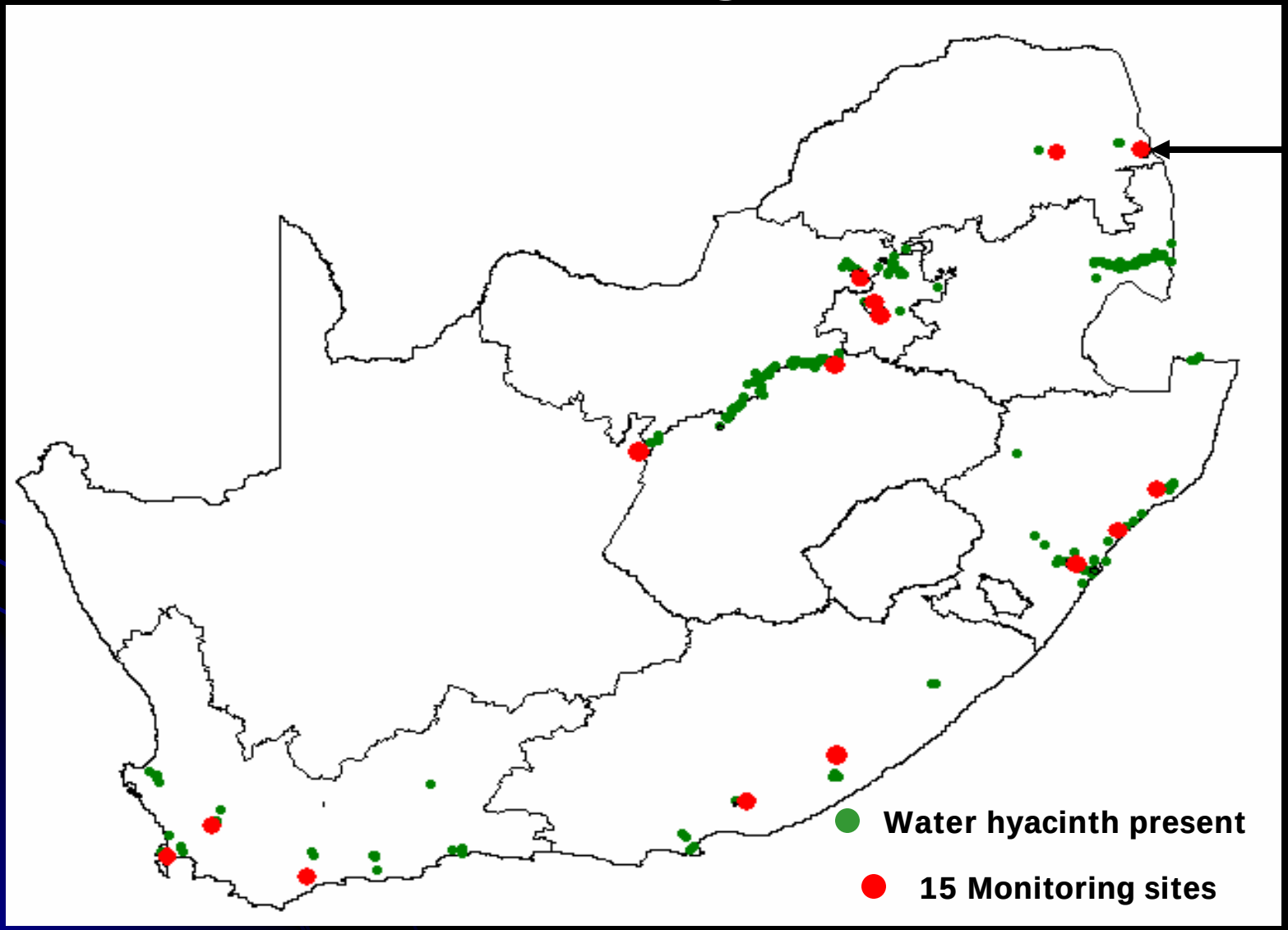
WRC

Worlds worst aquatic weed

Monitoring sites



Water Hyacinth in the Kruger National Park

Successful Biological Control

Lake Victoria

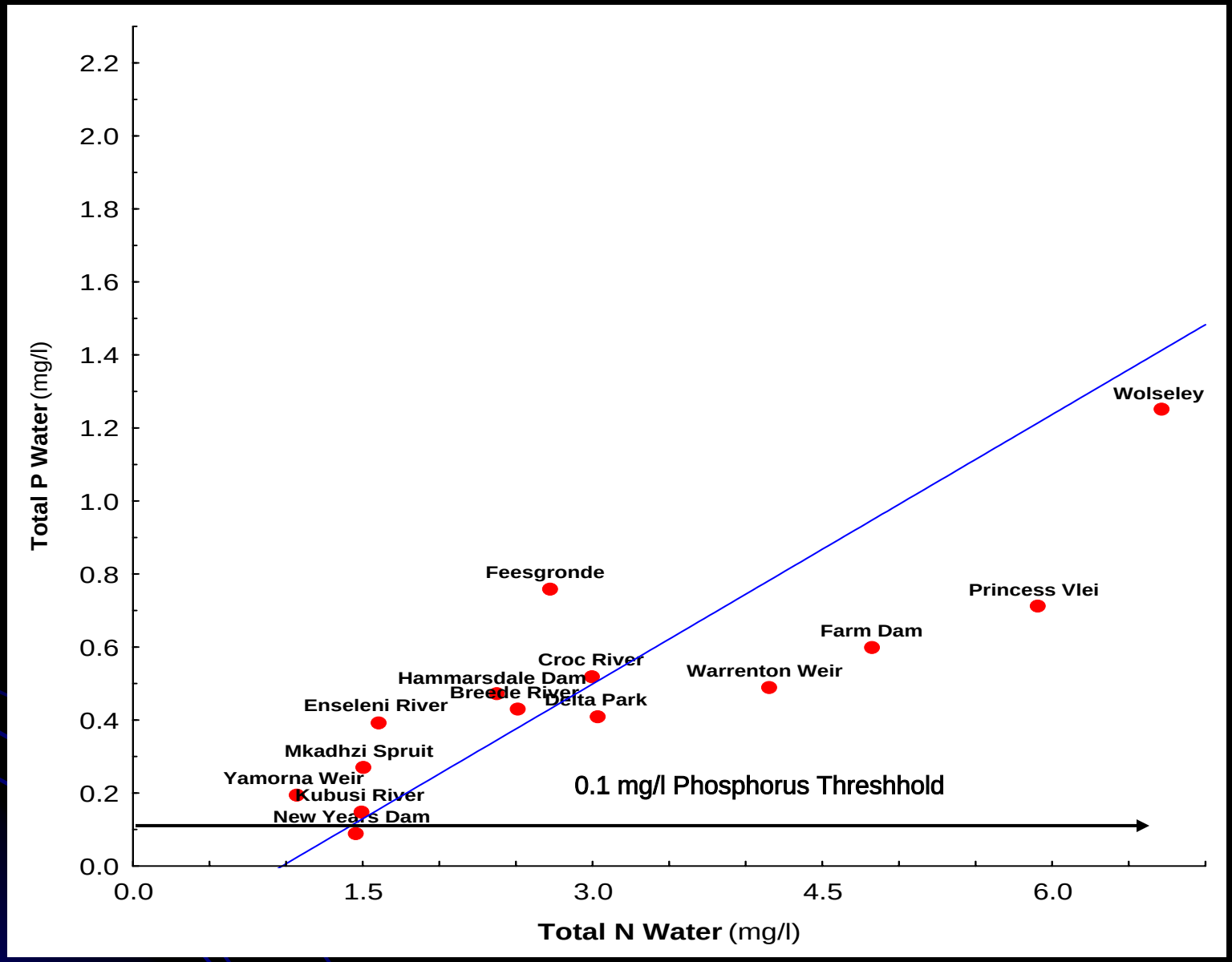
Low Nutrients (Phosphorus <0.1mg/l), thus limiting weed growth

High Temperature

New Years Dam

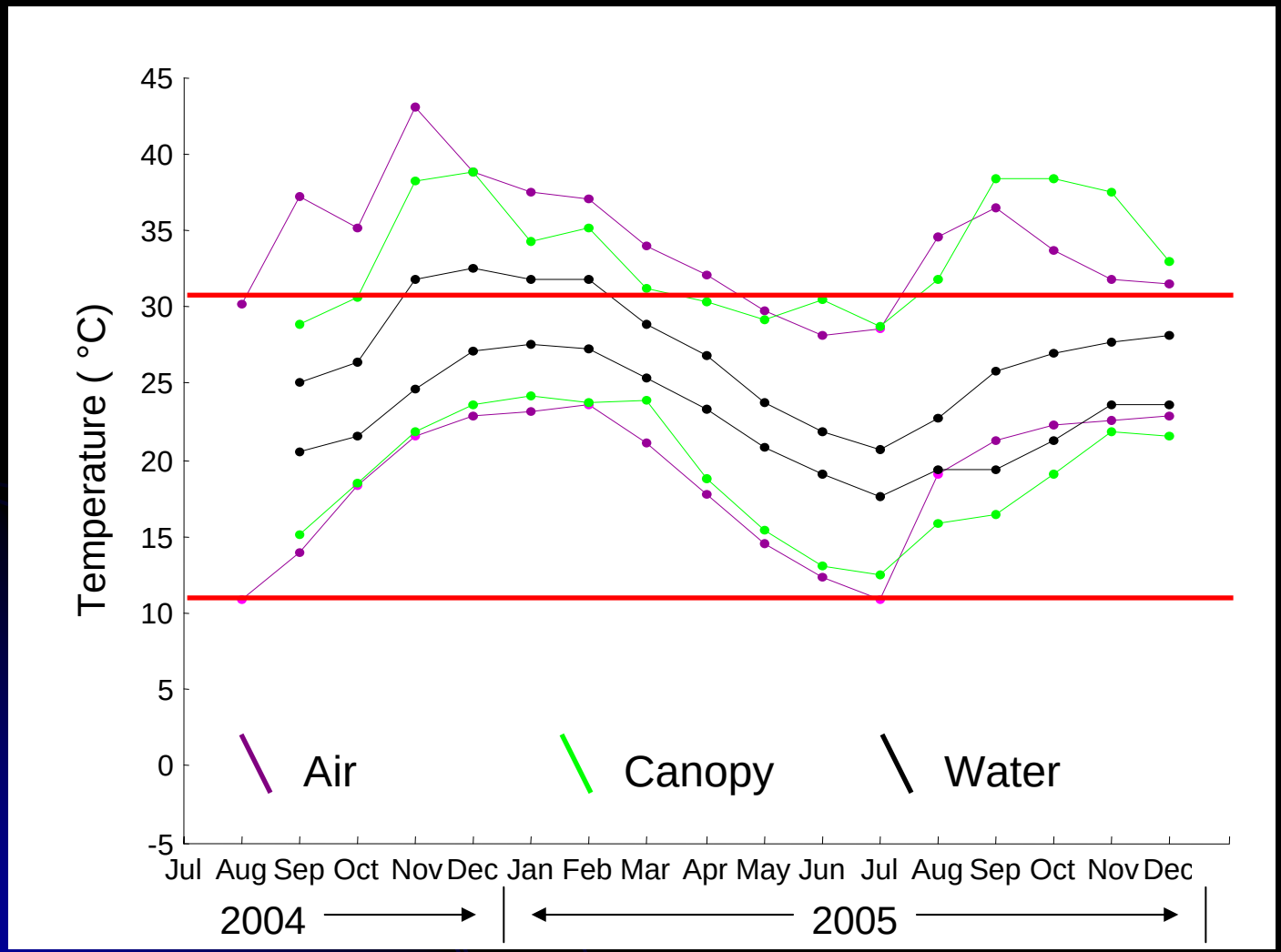
Low Nutrients (Phosphorus <0.1mg/l)

High Temperature



Water Nitrogen and Phosphorus levels of 15 monitoring sites.

Temperature Profile of Mkadhzi Spruit



Optimum

Developmental threshold

Control at Mkadhzi Spruit?

Biological control alone has not been successful in the Kruger National Park.

This can be attributed to:

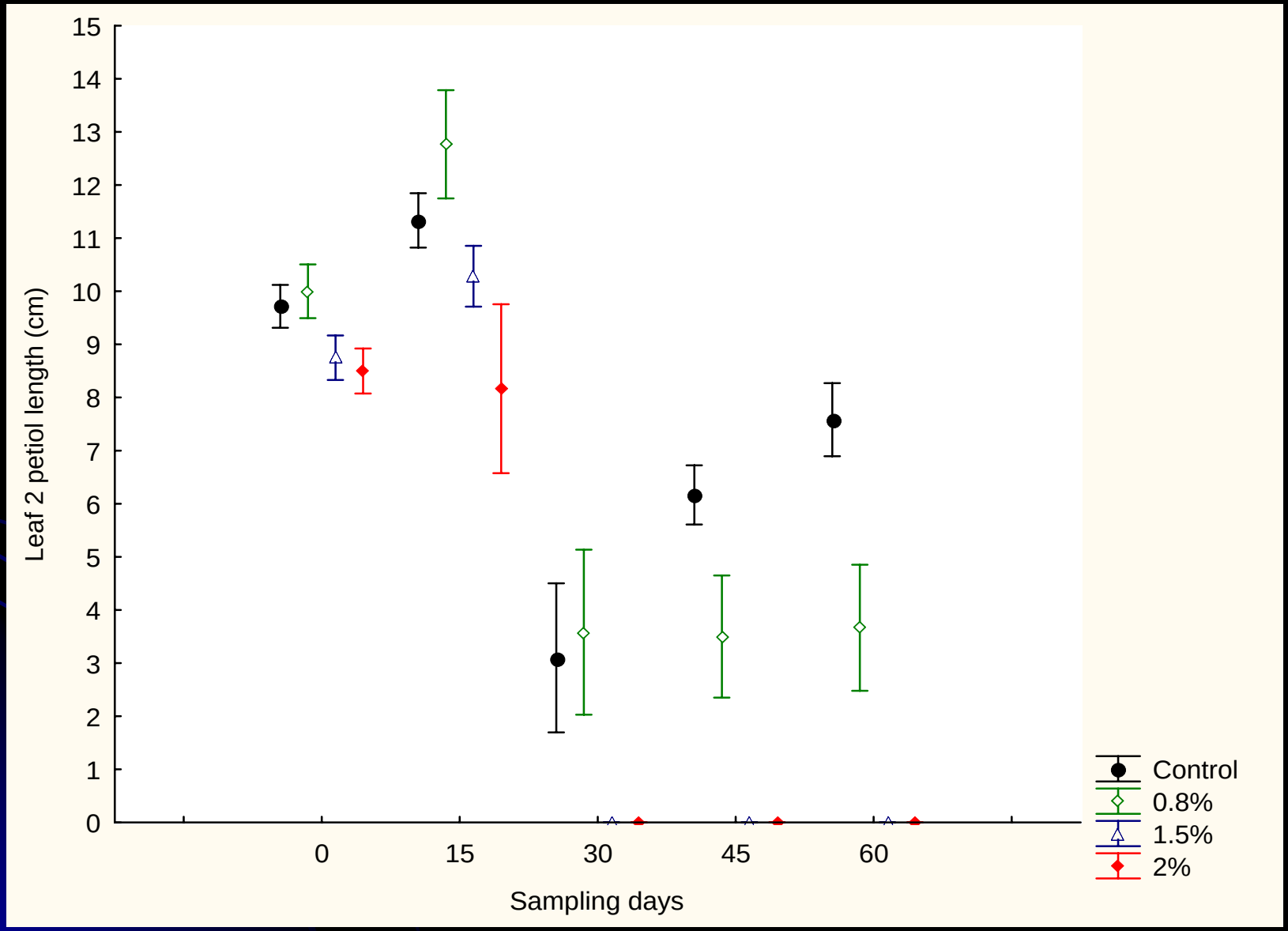
- Medium to High Nutrients

We therefore propose an integrated approach.

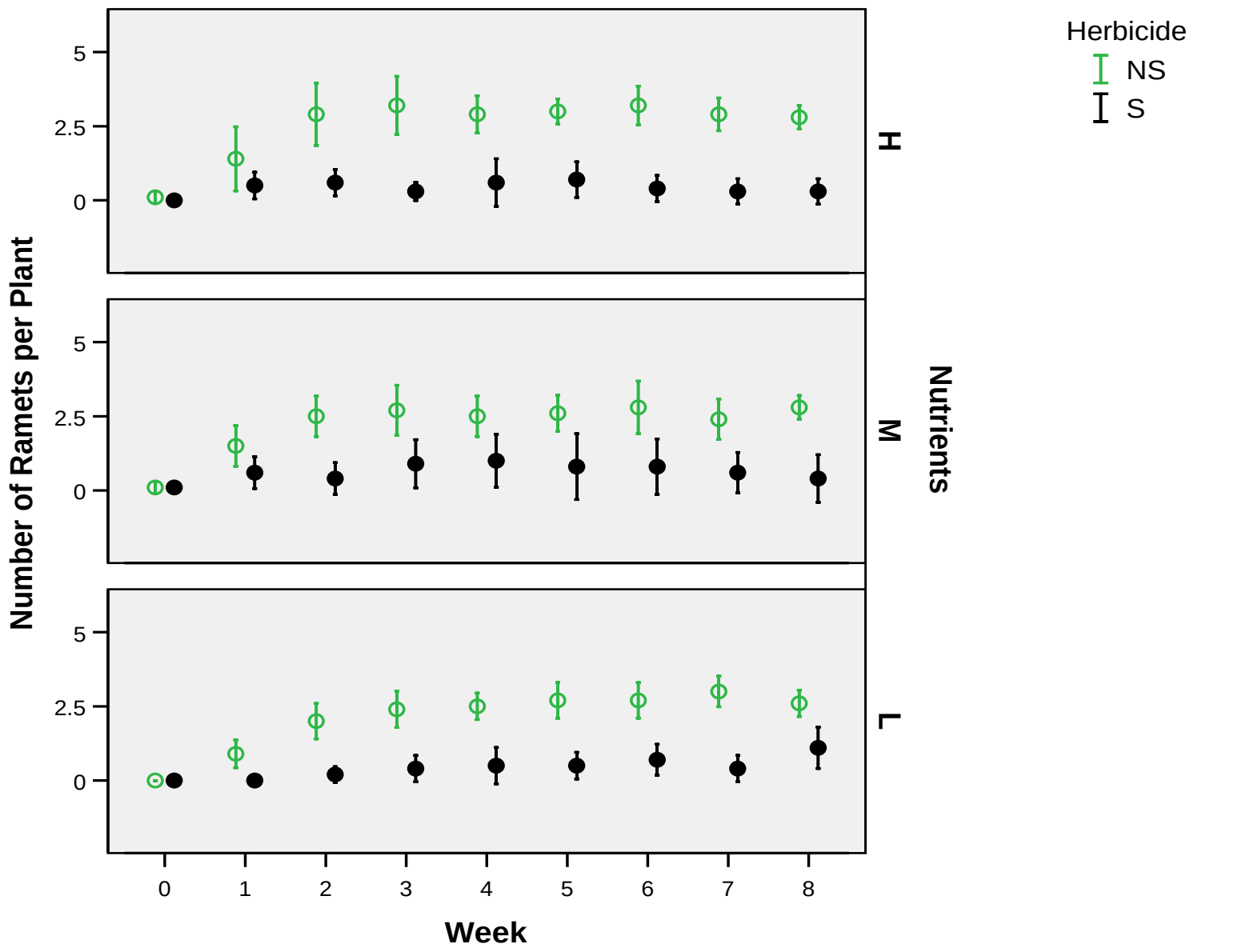
Integrated Approach

- Integrate biological control with a retardant concentration of glyphosate herbicide.
- This concentration limits the growth of the weed without detrimental effects on the biocontrol agents.

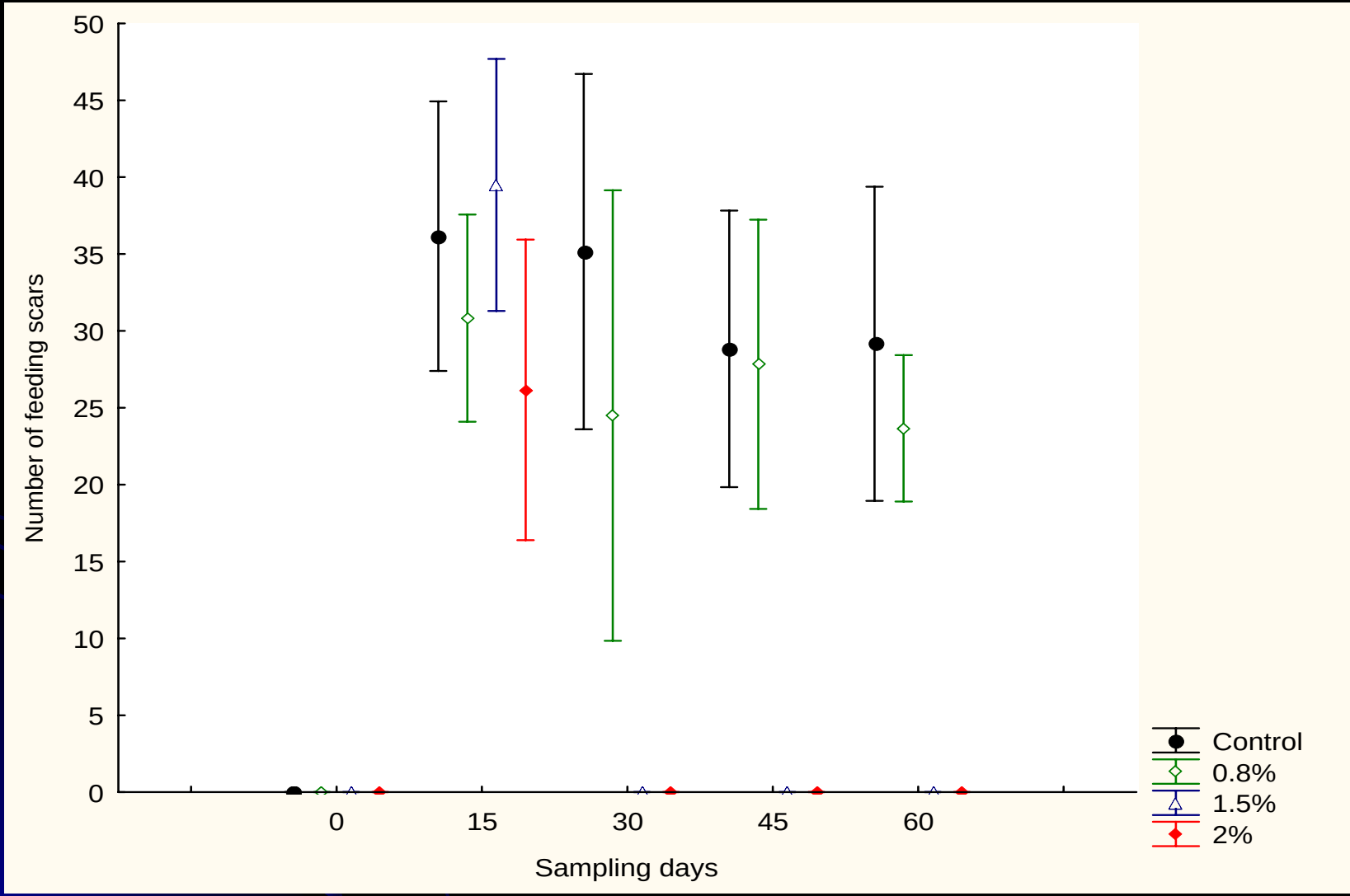
Effect of glyphosate on petiole length



Effect of glyphosate on ramet production



Effect of glyphosate on weevil feeding intensity



Acknowledgments

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