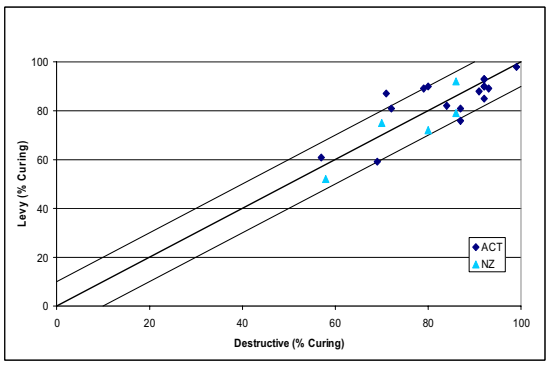
# Development of a field method for assessment of degree of curing in grasslands

Stuart A.J. Anderson
Ensis - Forest Biosecurity and Protection, Scion, Christchurch, New Zealand
Wendy R. Anderson
University of New South Wales, Australian Defence Force Academy, Canberra
K. Leigh Douglas
Ensis - Forest Biosecurity and Protection, CSIRO, Hobart, Tasmania
Jennifer J. Hollis
Department of Conservation and Land Management Western Australia

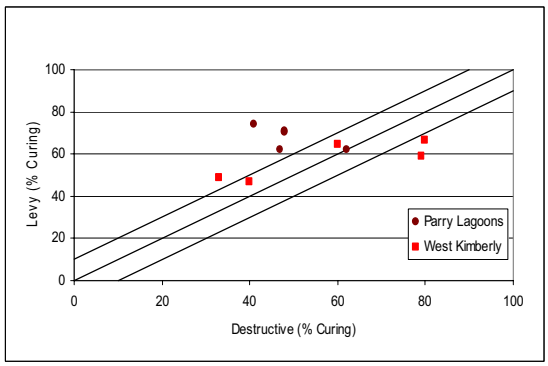
## Background

This project aims to develop improved methods to assess current and predict future levels of curing in grasslands (the proportion of cured/dead material).

Research is investigating the use of remote sensing imagery and pasture/grass growth models for curing assessment and prediction. Field data is being collected across Australia and New Zealand for development and validation of systems.




Good results obtained with Levy Rod method in the ACT and NZ




Less satisfactory results with the Levy Rod in northern Western Australia

## Field Data Collection

Visual assessment of curing is often inaccurate, and in remote areas is difficult and costly to obtain regular observations.
Destructive sampling of grasses is more reliable, but it is time-consuming to collect and process samples.
An alternative method has been developed based on a Levy Rod approach. This involves tallying live and dead touches on a vertical rod. It reduces subjectivity and is quick and easy to carry out.

## Results

The method was trialled in the ACT, NSW and NZ and worked reasonably well. Sampling has been extended to northern Western Australia and Queensland, and the accuracy of the method is not as good in these areas. This is likely due to different grassland types. Grasslands of the SE and NZ were improved pasture grasses of uniform nature, whereas WA and Queensland sites consist of grasses with different structural characteristics.

Lake Lyndon, NZ

Parry Lagoons, East Kimberly, WA

Tidbinbilla, ACT

Silent Grove, West Kimberly, WA

## Conclusion

Whilst the method does appear promising in offering a quick and easy method for field assessment, it not does not appear to be accurate across all grasslands of Australasia. Further data collection and possible modifications are required.

## Acknowledgements

Francis Hines and Adam Fountain (formerly University of New South Wales, Australian Defence Force Academy).
ACT Government.
Queensland Fire and Rescue Service.
Department of Conservation and Land Management Western Australia.
New Zealand: Department of Conservation, NZ Forest Owners Association, Local Government, NZ Defence Force, National Rural Fire Authority.