Stimulating the adoption of AussieGRASS in the Northern Territory

July 2006 – May 2007

Location: Northern Territory through offices in Katherine, Alice Springs and Brisbane

Principal investigator

Dr Robyn Cowley, Northern Territory Department of Primary Industry, Fisheries and Mines (DPIFM)

The need

This project aims to be a catalyst for the involvement of the Northern Territory (NT) in AussieGRASS by demonstrating the value of AussieGRASS products to the pastoral industry, to land administrators and to the NT Government.

DPIFM was a partner in the initial AussieGRASS project, and contributed significantly to the development of datasets used to calibrate the AussieGRASS model for the NT. However, because DPIFM had not subsequently subscribed to AussieGRASS, there had been no opportunity for policy developers, industry personnel and natural resource managers to use this valuable resource to guide decision making.

The participation of the NT in AussieGRASS will allow it to be further calibrated and developed for the territory, providing benefits for national seasonal condition assessments.

How this project fits with MCV objectives

This project is aligned with the goal of increasing adoption of climate risk management by farmers—in this case, NT pastoralists.

Project objectives

1. Increase the adoption of AussieGRASS in the NT as a tool for pasture management and policy development

2. Evaluate the reliability and relevance of AussieGRASS outputs in the NT

3. Evaluate timing and skill of AussieGRASS forecasts in the NT

4. Assess the need for additional AussieGRASS products tailored to the NT

5. Assess the usefulness of integrating data from long-term rangeland monitoring sites into AussieGRASS

Methods

› Subscribe to AussieGRASS for one year as a seeding project for the longer term participation of the NT

› Prepare materials to promote and explain the AussieGRASS concepts

› Incorporate AussieGRASS products into extension courses and seasonal condition reports for natural resource users and policy developers

› Evaluate AussieGRASS use and application in the NT

› Prepare a submission to the NT Government for ongoing subscription to AussieGRASS

Desired outcomes

› Improved understanding by land managers, advisers and policy officers of applications of AussieGRASS products to sustainable management of rangelands in the NT

› Commitment by the NT Government to fund three subsequent years of AussieGRASS participation

Access to AussieGRASS products will facilitate sustainable land management in the NT through better management of natural resources in a variable climate, such as:

› forage budgeting

› regional condition reporting and assessment

› drought and exceptional circumstances assessment and policy development

› fire management and planning

Achievements

› The NT Government has signed a contract to subscribe to AussieGRASS for 2007–08 but, as yet, not for subsequent years.

› Land managers and NT Government staff across the territory are now familiar with AussieGRASS products and their use. We found that people living in the north of the Territory, where land types are less diverse and rainfall more uniform, spatially and temporally, are more supportive of AussieGRASS.

› AussieGRASS outputs have been used in reports to the Pastoral Land Board; by DPIFM to inform staff and pastoral clients; in drought assessment reports; and in one Exceptional Circumstances application. Biodiversity Assessment Officers from NT Dept of Natural Resources, Environment and the Arts use AussieGRASS outputs in scheduling botanical field surveys. NT Bushfires sometimes use AussieGRASS outputs to inform fire mitigation planning, but, because the model is averaged across different land types, they have found it difficult to interpret.

› AussieGRASS outputs were reliable. However, there is room for improvement, including more rainfall data sites for Central Australia. Lake systems and buffel grass pastures are also not well estimated in the model. Mapping to Pastoral District Boundaries is a minor enhancement technically, but important institutionally.

› NT Bushfires would like the model to summarise monthly fuel loads by location by vegetation community, especially for the fire-prone buffel grass areas of Central Australia.

› We have identified useful vegetation, water point and stock number datasets that could be used to improve AussieGRASS predictions. We continue to provide these to the Queensland Department of Natural Resources and Water.