2013-14 FutureBeef Priority Area #4
Grazing Land Management

Background:
The National Beef Research, Development and Extension Strategy was developed in 2009 in a collaborative effort by representatives from the Australian beef industry, state government agencies, academic institutions and research organisations. The intent is to improve research, development and extension capability, capitalising on the collective critical mass around specialised areas. This focussed RD&E investment is expected to improve efficiencies by reducing the more traditional, fragmented RD&E approach. The national beef strategy emphasises the importance of industry partnerships and co-investment to support strategic research, the delivery of regional development and extension tailored to local needs.

In March 2012, the North Australia Beef Research Council (NABRC) conducted a series of workshops across Queensland to identify RD&E priorities. NABRC is a collaborative forum for industry, funding bodies and RD&E providers to lead research, innovation and technology adoption to benefit the northern beef industry. These RD&E priorities were published in a *NABRC Priorities Prospectus* and can be accessed through the NABRC website. www.nabrc.org.au

Six themes or broad areas of work were identified as being the most important for planning of RD&E priorities:

1. Reproduction
2. **Grazing land management**
3. Nutrition and growth
4. Human capacity and enabling change
5. Animal welfare
6. Information technology; and Precision livestock management

Linkages:
The native, naturalised and sown pastures of northern Australia provide the feedbase for beef cattle production. The ecological condition of these grazing lands is directly related to their carrying capacity, and their ecological condition is dependent on the management of grazing and fire. Under the *'Grazing land management'* theme there are four priority RD&E areas.

2.1 Enhanced grazing management
2.2 Weeds and feral animals
2.3 2.3 Great producer decisions
2.4 Cattle, carbon and catchments

FutureBeef Program for Northern Australia
In May 2012, key industry funder Meat and Livestock Australia and state agency extension services (DAFF Qld, NTDPIF and DAFWA) launched a collaborative extension program designed to focus extension effort and investment into key priorities outlined in the National Beef RD&E Strategy and NABRC's RD&E priorities in the following five areas:

Priority 1 – Weaner management
Priority 2 – Phosphorous supplementation
Priority 3 – Whole of business management
Priority 4 – Grazing land management
Priority 5 – Breeder management

In addition, while other project collaborations and investment from natural resource management groups and catchment groups focus on NRM outcomes, these generally can only be achieved by a whole-of-business enterprise approach. There will also be linkages from these priority areas to the voluntary Grazing Best Management Practice project that is currently being developed and trialled in Queensland. For more information on the above, visit the FutureBeef website www.futurebeef.com.au – a collaborative website by the FutureBeef program partners.

Background – Grazing land management:

Sustainable land management underpins the current and future productivity and profitability of the northern pastoral industry. The key principle is to enable producers to manage their land in a way that allows stocking rates to match carrying capacity.

In recent years there has been a large body of work that has contributed to our understanding of sustainable carrying capacity. The challenge lies in producers first being able to assess their carrying capacity, and then implementing practical management strategies that allow for challenges such as: large paddocks, large mob sizes, increasing costs of production, lack of market opportunities for cull cattle and, in the tropics a growing season that reduces access around the properties, and in the arid zones extreme climatic variability and long periods of drought.

Two main programs for extension of grazing management have existed in the north for over ten years. The Resource Consulting Services (RCS)"Grazing For Profit" schools, which concentrate on rotational grazing system principles and systems in addition to whole of herd and business management, and the MLA EDGEnetwork "Grazing Land Management" (GLM) workshops which were developed by state government departments and MLA based on regionalised information. Maintaining and improving land condition through sustainable grazing management is the key principle of the current GLM workshops. This needs to be achieved through an appropriate stocking rate to match the land's carrying capacity, thus sustaining a balance of land condition, animal nutrition and animal performance.

GLM has been popular, well accepted, and well attended by land managers and associated industry service people in the north. Participants have accepted the principles and language, embraced many of the planning tools and frameworks (such as the ABCD land condition description), but are still getting stuck on how to implement the plans over the whole property when faced with the challenges outlined above. Whilst the objective of maintaining or improving land condition must be retained, it is accepted that this needs to be able to occur in a way that is sustainable in terms of profitability as well. For these reasons, it is recognised that there is an opportunity to update the content and delivery mechanism to capitalise on GLM education to date, focusing on practical whole of property management strategies with an emphasis on profit

The issue of rotational grazing and the role of intensive grazing systems in the north is causing confusion to producers contemplating changes to their grazing practices. Ensuring that messages remain principle-based is important to allow producers to assess their ability to implement any given system, rather than following imported approaches for grazing systems. Wet season spelling is increasingly recognised as a good compromise between continuous grazing and highly intensive grazing systems. Wet season spelling allows producers to provide rest from grazing to the growing plant without substantially increasing their level of capital investment or management intensity.

Regional differences:

- Top End – Increased priority for landholders understanding improved pasture and floodplain management. Problems with understanding that the large body of feed does not necessarily equate to good diet quality and the need to compensate with lower utilisation rates.
- Katherine – Infrastructure development to improve evenness of grazing on native pastures. Increasing interest in improved pastures for special purpose areas and to augment native pastures.
- Barkly – Infrastructure development to improve evenness of grazing on native pastures.

Alice Springs – Mitigating variable climate and sporadic fires a key priority for pasture management Different marketing options exist.

Key messages:

- Match stocking rate to carrying capacity.
- Stocking rate is the primary driver of land condition and animal performance.
- Wet season spelling is a practical way to improve pasture condition.
- The most crucial time to spell to improve land condition is the first six to eight weeks of the growing season. However, full wet season spelling is even better for recovery.
- Some producers spell C condition country for two consecutive growing seasons to maximise recovery.
- Once land condition has improved, conservative stocking rates can keep land in good condition without spelling.
- Higher live weight gains per hectare and faster land condition recovery can be achieved using slightly higher stocking rates in combination with regular wet season spelling compared to using low stocking rates without spelling.
- In areas where the GRASP model has been calibrated, modelling can be used to indicate the optimal frequency and duration of spelling, the most appropriate stocking rates to use in combination with spelling and indicative land condition recovery timespans,
- The poorest live weight gain per hectare and land condition outcomes occur at high stocking rates without spelling.

Keys times for grazing management:

Timeframes will be addressed in the Communication Planner.

FutureBeef activities:

	Maintaining broad industry awareness	**Building knowledge, skills and confidence**	**Supporting adoption and practice change**
DAFF	• GLM EDGEnetwork workshop review webinar (Feb 2013) as part of Extension Review project. • GLM articles and case studies in department beef industry eBulletins (all print newsletters will transition to online versions in 2013) • *Northern Muster* • *CQ Beef* • *BeefTalk* • Links to Stocktake eLearning and other tools (eg pasture monitoring youtube video) posted on FB website and promoted with local articles through 'news' section; Twitter and	• GLM EDGEnetwork workshops conducted on demand throughout state, as stand-alone or separate projects • Roll out of Stocktake eLearning package • Stocktake app launch in April 2013	Projects

	FB facebook site. • FB website can feature local stories with GLM focus Reviewing GLM EDGEnetwork content as part of Extension Review project		
DAFWA			
NTDPIF	Kidman Field Day NGS and CCB talks ARS Conf-Shruburn talks KRR, and BB articles summarising NGS project, annual results from Delamere, Beetaloo and Alexandria demonstration sites on spelling, SR management and burning. ASRR article on long term grazing trial at OMP	Barkly RMC Barkly Herd Management Forum Delamere, Beetaloo and Alexandria paddock walks and field days OMP paddock walk and field days	Barkly GLM follow up Sturt GLM follow up NGS PDS CCB project
MLA			

FutureBeef activity timeline:

Date	Who	Activity
Jan 2012		
Feb 2012		
Mar 2012	MLA	• Feedback article *'Less is more: using moderate stocking rates to maximise returns'* • Feedback article *'Groundwork: managing stocking rates in a variable climate'* • *Feedback article 'Piling on the pounds with leucaena'* • Website producer case study 'David Counsell, Qld – Managing stocking rates'
Apr 2012	MLA	• Feedback and website article *'Climate clever beef'*
May 2012	NTDPIF	ASPIAC paddock walk at OMP
Jun 2012	NTDPIF	KRR & BB articles on Delamere and Alexandria demo site results
Jul 2012	NTDPIF	Delamere demo site paddock walk Beetaloo demo site update/first results
Aug 2012	NTDPIF	Shruburn and CCB projects presented at Kidman Field Day
Sep 2012	NTDPIF	Shruburn results presented at ARS conference KRR and BB articles – wet season spelling ASRR article on OMP grazing trial
Oct 2012	NTDPIF	KRR-Shruburn summary data
Nov 2012		
Dec 2012		KRR and BB articles on forage budgeting (for end of wet season)

Agency Experts:

- MLA – Mick Quirk
- DAFF – Bob Shepherd, Roger Sneath
- NTDPIF – Arthur Cameron, Dionne Walsh, Robyn Cowley, Caroline Pettit, Chris Materne
- DAFWA -

Resources:

All resources available on FutureBeef DVD except those marked with asterisk.

MLA	
DAFF	
NTDPIF	
DAFWA	

Tools

- Could refine GLM forage calculators etc when GLM is updated – for example, a customised excel forage budgeting calculator was developed for Mataranka which might be a useful template.
- Caz's Land condition booklets. Need to do one for central Australia (is partly done, just need Chris to finish it)
- Need to develop some glovebox guides for pasture yield photo standards for each region – need to get past cutting quadrats! Perhaps we should be getting the new Tennant person to do this as one of their first jobs?
- Do we need to revisit Stocktake in the NT?

Grazing management case studies:

- Include the GLM case studies list
- See if you can get permission from NInti One Ltd to use the Desert Knowledge CRC case studies I wrote a few yrs back.
- I will have some case studies and factsheets on spelling, SR management, the NGS demo sites soon that I want put on the FB website.