

NBRUC

NORTHERN BEEF RESEARCH UPDATE CONFERENCE

*"Recipe for Success: NBRUC 2023's
Menu for Northern Beef Research"*






DARWIN, NT
22-25
AUG
2023



**DOUBLE TREE BY
HILTON ESPLANADE**
116 THE ESPLANADE, DARWIN

TUESDAY, 22 AUGUST 2023	
3.00 – 5.00 pm	Conference Registration Ballroom Pre-Function area, Level 1, Double Tree by Hilton, 116 The Esplanade, Darwin
6.00 - 8.00pm	Hord d’Oeuvres a la Top End: The Northern Territory Department of Industry, Trade and Tourism Welcome Reception Foreshore Lawns, opposite the Double Tree by Hilton Esplanade, Darwin
	
WEDNESDAY, 23 AUGUST 2023	
6.30 am	MLA Beef Industry Breakfast – Improving the beef cattle business Hilton Garden Inn, 122 The Esplanade, Darwin
9.00 am	GRAND BALLROOM Entrees and Mains – Chair: Tim Schatz, Dr Tim Schatz, Northern Territory Department of Industry, Trade and Tourism Lifting the lid: Conference Opening – Tim Schatz
9.10 am	Welcome to the 2023 Northern Beef Research Update Conference – Jay Mohr-Bell, Chair, NBRUC Organising Committee
9.20 am	KEYNOTE PRESENTATION: Heather Smyth UQ, QAAFI Flavour – Advancing the sensory quality of Australian beef (30 min)
09.50am	KEYNOTE PRESENTATION: Derek Bailey NMSU, Animal and Range Sciences Lecciones del rancho: Applications of western US beef cattle research to northern Australia. (30 min)
	Q&A
10.20 am	Book Launch – “Design, construction and management of Flood Refuge Mounds” – Ian Braithwaite, Chair, North West Qld Beef Research Committee
10.30 am	Morning tea – Grand Ballroom Foyer (30 min)
Session 1 – Our northern production system ingredients – Grand Ballroom Chair: David Larkin – SPONSORED BY: CRC NA	
	
11:00 am	The recipe for a successful northern beef system? Northern Australia presents many challenges and has a long history of beef production despite seasonal extremes. How can we combine R&D, new investment, extension practices and the environmental, sustainability and governance best practice to take the industry to a new level? <ul style="list-style-type: none"> • Alan Bell; Sally Leigo; Trevor Price
11:45 am	Table talk – Coordinated by CRC for Developing Northern Australia (CRC NA) Moderator: <i>Trudi Oxley</i> . Panel members – <i>Tim Schatz, Rohan Sullivan, Helen Armstrong</i> representatives from the project and co-funders of the Crops for Cattle project - the development and objectives of a cattle/cropping system for northern Australia.
12.15 pm	Summary – Findings of the 2023 Australian Beef Report – Ian McLean, Bush Agribusiness
12.30 pm	Lunch – Grand Ballroom Foyer – SPONSORED BY Northern Territory Cattlemen’s Association. Brief presentation by Will Evans, CEO, NTCA
	

Session 2 – Concurrent sessions – The taste of a sunburnt country

1.15 pm (105 mins)	Ballroom 1 	Ballroom 2 	Litchfield room 
	<p>Cooking with catastrophe as your sous-chefs: Droughts and Flooding rains Chairs: David Phelps & Jaidyn Eastaughffe</p> <ul style="list-style-type: none"> • Likelihood of heat stress in N Australia beef cattle herds. Kieren McCosker 10min • Climatic indices in practices and what it means for cattle. Angela Lees 3min • The temperature humidity index (THI) as a tool for animal management. Elieder Prates Romanzini 3min • Evaluating weather effects on water intake in cattle. Elieder Prates Romanzini 3min • Agreement between interpolated and measured weekly rainfall and temperature humidity index. Gemma Somerset 3min • A data driven heat stress alert system. Sabrina Lomax 10min • Q&A • The Gulf Country floods – comparing extreme events. Timothy Cowan 10min • Variability of minimum rainfall requirements for pasture response in N Australia. Joanne Campbell 3min • Rain ready rangelands paddock challenge: trialling research station strategies on commercial properties. Lakota Taber 3min • Land reclamation using water harvesting techniques in the Desert Uplands Bioregion. Simon Hunt 10min • Faecal seeding, drought, and seed survival in dung. Abby Glasser 3min • Long term performance of different stocking strategies in a variable climate. Peter O'Reagain 10min • Q&A 	<p>Getting in the kitchen - human capacity for a profitable, sustainable and productive northern industry Chairs: Jodie Ward & John Taylor</p> <ul style="list-style-type: none"> • Have we got our extension/adoption models right? Dave Smith 10min • Recognising the people in grazing businesses. Bec Clapperton 10min • Staff retention on northern cattle stations- a survey of station staff. Stacey Holzapfel 3min • Effectiveness of staff informal induction and mentoring programs. Zach Hick 3min • Teamwork makes enviro-dream work. Kerry Goodwin 3min • Promoting sustainable beef production through rangeland management courses. Stacey Holzapfel 3min • Pasture development using the Action Learning Cycle. Kylie Hopkins 3min • Q&A • An integrated approach to extension delivery in the Reef Catchments builds capacity. Megan Willis 3min • Advancing Beef Leaders: leadership, impact and influence Emily Corbett 3min • Working with graziers within a practice framework Megan Willis 10min • Empowering indigenous beef producers. Ian Perkins 10min • "And the winner is..." — The FutureBeef experience. Jodie Ward 3min • FutureBeef website activity remains strong. Jodie Ward 3min • Q&A 	<p>More pastures please– what's new on the feed base menu? Chairs: Peter O'Reagain & Alan Peake</p> <ul style="list-style-type: none"> • Effective management options for pasture dieback. Stuart Buck 3min • Irrigated mosaic agriculture for beef production in WA. Carla Milazzo 3min • Rotational grazing of gamba grass for control and cattle production. Tim Schatz 3min • Crops for cattle- increasing the production efficiency of northern systems to improve dry season weight gain. Trudi Oxley • A new, mixed microbial drench for detoxification of Leucaena cultivars. Ros Gilbert 3min • Can Queensland cattle degrade Leucaena toxins in their rumen? Diane Ouwerkerk 3min • Effects of pasture quality and herd structure on methane intensity. Dean Thomas 10min • Q&A • New methods for mapping and monitoring pasture production, land types and land condition in Australia's N rangelands. Phil Tickle 10min • Grazing land. condition decline in Queensland's N Gulf. Niilo Gobius 3min • Seeing is believing – Barkly Mitchell grass recovery project. Jaidyn Eastaughffe 10min • Impact of pasture utilisation on cattle fertility. Kieren McCosker 10min • Pasture succession planning through improved land condition in the north. Allan Peake 10min • An improved model for animal units and estimating intake in northern rangelands. Ian McLean 3min • Q&A
3.00 pm	Afternoon tea – Grand Ballroom Foyer		

Session 3 — Keeping the pot from boiling over - Climate, carbon and sustainability for Northern Australia? – Grand Ballroom

Chair: Ed Charmley & John Gaughan

Sponsored by: CSIRO Towards net zero program



3.30 pm	<ul style="list-style-type: none"> • Margaret Jewell, Carbon Neutral by 2030 – opportunities for northern producers • Di Mayberry, CSIRO – Taking the north to net zero • Stuart Denman, CSIRO - The journey to developing abatement technologies for Australia’s ruminant livestock • Chelsea Jarvis, The Northern Australia climate program – Measuring and managing the northern climate • TBC – producer perspective to a C neutral target
4.30 pm to 5.00 pm	Ticket to ride – for stewardship or carbon neutrality? <i>Hosted by Geoff Murrell</i> <i>Margaret Jewell, tbc; Chelsea Jarvis, Dean Thomas</i>
6.00 pm	Coach transport – Double Tree Hilton to Mindil Beach Casino
6.30 pm	Conference Dinner and NABRC Medals Awards Night – Mindil Beach Casino Resort Lawns, Darwin Pre-dinner drinks; Presentation of NABRC Medals.

THURSDAY, 24 AUGUST 2023

Session 4: – Rib Fillets and T-Bone – Grand Ballroom




Chair: Tim Schatz




SPONSORED BY: Meat & Livestock Australia



9.00 am	Welcome to Day 2 of the Northern Beef Research Update Conference
9:05 am	KEYNOTE PRESENTATION: - David Beatty, Group Manager – Productivity and Animal Wellbeing, Meat & Livestock Australia. Fewer, bigger, bolder for Northern Australia – Research, development, adoption and sacred cows (30 min)
9.35 am	KEYNOTE PRESENTATION: David Riley, Texas A&M University Getting it right with animal breeding and genetics for challenging environments. (30 MIN)
10.05 am	Q&A (10 min)
10.15 am	Book Launch – Phosphorus Manual – Lindsey Perry, Meat & Livestock Australia
10:20 am	Morning tea – Grand Ballroom Foyer

Session 5 – Concurrent sessions – Camp Oven Cooking – Beef Stew, Damper and Billy Tea

	Ballroom 1 	Ballroom 2 	Litchfield room 
10.45 am to 1.00 pm	<p>First, catch your beast: Livestock performance and management Chairs: Alan Bell & Tony Parker</p> <ul style="list-style-type: none"> Productivity of breeding cattle in N Australia. Alan Bell 10 min Relationship between vegetation index and home range of cattle in northern rangelands. Christie Pearson 10min Detection of maternal behaviours associated with suckling in beef cattle. Kieren McCosker 3min Quantifying the mortality-risk associated with age at first calf in breeding herds. Kieren McCosker 3min Impact of bottle teat score on calf mortality in an extensively managed NT herd. Georgia Glasson 3min Paddock-shade shelters for reducing calf loss in the treeless Barkly Tableland. Kieren McCosker 3min Impacts of paddock watered areas on home range and spatial behaviour in extensive rangelands. Christie Pearson 3min Is Caltrop the Cause? Investigating ‘staggers’ in a Northern Territory breeder herd. Melissa Wooderson 3min Opportunities to increase production and profit from young breeding cattle. Todd Donaldson 3min The effect of nitrogen use efficiency on productivity in tropical beef. Kim Hubbard 3min A comparison of abrupt and fence line weStronaning methods for beef cattle. Sabrina Lomax 3min New diagnostic tools for bovine vibriosis. Ala Tabor 3min The effect of collection method on post-thaw bull semen quality. Eleanor Fordyce 3min Q&A The performance of P deficient mature cows improves with supplementation. Tim Schatz 10min Phosphorus supplementation using water medication or lick-blocks. Jarud Muller 3min Increasing P supplementation in areas that are difficult to access during the wet. Tim Schatz 10min The Easy P – Increasing P supplementation in difficult to reach areas. Annie Bone 3min 	<p>Camp oven or a Thermomix: Technology, data management and applications Chairs: Lindsey Perry & Anita Chang</p> <ul style="list-style-type: none"> Data and alerts from real-time remote water monitoring. Elizabeth Cameron 10min Ceres Tag Pasture Feed Intake (PFI) for grazing time, feed efficiency and emission predictions. David Smith 3min Preferential grazing of cattle on Leucaena pasture utilising GPS data. Melissa Matthews 3min Attendance of animals at walkover weigh and auto drafting units. Gemma Somerset 3min Satellite Assisted Pasture Budgeting Supporting Best Management Practices. Gabrielle Parker 3min No Connectivity? No problem for capturing collar data in N grazing systems. Melissah Dayman 3min Insight to individual breeder performance using paddock-based technology. Tim Emery 3min Navigating on-animal sensor technologies: A guide for graziers. Thomas Williams 3min Assessing pasture dieback with a drone. Polani Shadur 3min Using strategic patch burning to influence cattle landscape preference and improve land condition. Caroline Pettit 3min Q&A “Paddock Power”: a user-friendly tool for planning new pastoral infrastructure. Dionne Walsh 10min Stocktake GLM app assists graziers in SE Qld. Jodie Ward 3min What’s grass got to do with it? Getting the most out of your animal production data sets. Robyn Cowley 10min Are production measures a good indication of pregnancy success? Kieren McCosker 3 min Applying AE ratings to cattle by class and productivity. Ian McLean 10min New generation NIRS calibrations to predict diet quality and animal performance. Hayley Norman 10min Use of ultrasound to determine lung health changes of calves during weaning. Stephanie Sammes 3min Preliminary analysis of immune competence traits in tropically adapted beef breeds. Kirsty Moore 3min The impact of previous lactation and pregnancy status on tail hair isotopes. Karen Eyre 10min 	<p>Serve carefully: Animal welfare and best practice Chairs: Kylie Hopkins & Johann Schroder</p> <ul style="list-style-type: none"> Continuing the search for a tick vaccine Johann Schroder 10min Biomarkers for cattle tick resistance. Ala Tabor 3min The effect of insecticidal fly tags and Bovine Ephemeral Fever infection on cattle liveweight gain. Tim Schatz 3min The effect of worm infestation and treatment on cattle growth on NT floodplain. Tim Schatz 3 min Long term effects of coccidiosis infection and treatment on cattle growth. Tim Schatz 3min The cause of buffalo fly lesions – what have we learned? Peter James 3min Phenotyping cattle for buffalo fly resistance. Peter James 3min The Australian trichomoniasis vaccine. Ala Tabor 10min Q&A Water restriction impact on the performance of late gestation heifers. Luis Silva 3min Animal welfare and ethics principles for managing dingo-cattle conflicts. Ben Allen 10min Objectively monitoring animal welfare across contexts. Sabrina Lomax 10min Cattle behaviour and weight gain following dehorning and castration with and without pain mitigation. Dominique Van der Saag 3min Novel analgesic therapies for improved and lasting pain relief for cattle. Shannon Chatfield 3min Novel wound treatment strategies for dehorning. Sami Rudd 3min Delivery of meloxicam in molasses lick block to surgically castrated calves. Sami Rudd 3min Impact of sinus exposure during dehorning on wound healing, infection and liveweight. Melissa Wooderson 10min Observations on the causes of calf loss in a herd near Katherine, Northern Territory. Georgia Glasson 10min Q&A

	<ul style="list-style-type: none"> Increasing the adoption of P supplementation in N Australia. Annie Bone 3min The impact of prepartum supplementation on the liveweight of cows. Luis Silva 10min Q&A 		
1:00 pm	Lunch – Boulevard Auditorium Foyer		
			
Session 6– Genes and Beans– the G x E northern accompaniments			
	Ballroom 1 	Ballroom 2 	
2.00 pm	Legumes well done in a northern environment Chairs: Robyn Cowley and Gretel Bailey-Preston <ul style="list-style-type: none"> Legume production paddocks increase pasture productivity on red earths and suppressing invasive grasses. Kendrick Cox 10min Adoption of legumes and good agronomy in the Brigalow Belt. Louise Walker 10min Redlands Leucaena for increasing beef productivity in N Queensland. Bron Christensen 10min Adoption, performance and management of leucaena. Craig Lemin 3min Establishing improved pastures on NW Qld downs country. Jane Evans 3min Potential disruptors to early follicular development and embryonic loss in cattle grazing legumes. Jessica Wyse 3min Desmanthus for silage. Ed Charmley 3min Seed production of new cold-tolerant stylos in N Queensland. Kendrick Cox 3min Q&A 	G for genetics in northern production systems Chairs: Andrew Grey and Nigel Perkins <ul style="list-style-type: none"> Recent advances in cattle genome sequencing. Elizabeth Ross 10min Genomic breeding values to improve fertility and productivity of tropical beef cattle. Ben Hayes 10min Using genomics to select non-pedigree cattle for bull fertility traits. Laercio Porto-Neto 3min Genomic selection of commercial bulls – “Is my bull worth keeping?” Kerry Goodwin 3min Genotype by environment interaction in tropically adapted beef cattle. James Copley 3min The genetics of cow temperament at calving. David Riley 3min Stayability trends in a Brahman herd that has been selected for fertility. Melissa Bethel 3min Genetic evaluation tools to identify and breed profitable cattle for WA. Matt Wolcott 3min Balancing selection for polled beef herds using digital twin simulations. Matthew Kelly 10min Q&A 	
3.10 pm	Afternoon tea – Boulevard Auditorium Foyer		
Session 7 – Our northern recipe for success– bringing it all together			
Chair: Thom Williams			
3.30 pm	<ul style="list-style-type: none"> Looking forward – looking back. Ed Charmley 25min A Producer Journey - NABRC or bust. Andrew Grey 10min Celebrating 30 years of NABRC – Geoff Murrell and Libby Homer 20min Farewells from NBRUC2023. Concluding remarks - John Taylor 20min 		
7.00 pm	NABRC 30th birthday celebration - Grand Ballroom Double Tree Hilton, Darwin		
FRIDAY, 25 AUGUST 2023			
7.00 am departure	FIELD TRIPS – a choice of half OR full day field trip Half day: Beef and Barry – Beatrice Hill Research Farm and Humpty Doo Barramundi Farm Full day:- Beef the NT Way – La Belle Downs		