



Our country, Our future.



Legume trials

Soil tests and tailored support help provide pasture rundown solutions

Annie and Rob Donoghue lead Barranga Grazing, a family-owned beef cattle operation that runs an aggregation of four properties covering 47,700 hectares throughout the Bauhinia district. Over time, they have noticed a gradual decrease in the condition of their pastures.

The Donoghues completed the Grazing Best Management Practices (Grazing BMP) program in 2015, allowing them to benchmark their enterprise against best practices within the grazing industry. They found it to be very beneficial to their business.

"Grazing BMP is a highly beneficial process to go through to establish where your business is meeting 'best practice' standards in management and where improvements can be made," said Annie. "Within the process, particular areas that provide an identified opportunity for improvement are able to be highlighted and a plan formulated as to how those improvements can be achieved."

Tailored support

As part of Grazing BMP, the Donoghues completed an action plan to improve their enterprise's productivity and sustainability. Through that process, they identified pasture rundown as a significant issue across their properties and their need for help to address it.

With the support of Fitzroy Basin Association Inc. (FBA), Dawson Catchment Coordinating Association (DCCA) and the Queensland Department of Agriculture and Fisheries (DAF) through funding from the Queensland Government, the Donoghues obtained soil testing and tailored support to trial legume treatments.

"Pasture rundown is evident across a broad area of the country in the Bauhinia district," said Annie. "The project area had lost a large proportion of desirable pasture species, with Indian Couch becoming dominant in what had become a grass-only pasture. This led to reduced stocking rates and a reduction in weight gain performance in the paddock."

Previous attempts

Although Rob and Annie had previously tried wet season spelling to improve the paddock's pasture, along with reduced stocking rates, they had not seen a significant change in the pasture's condition. They attended a pasture rundown workshop held by DCCA to see if they could find a solution.

"Learning about pasture rundown confirmed many of the observations we had made ourselves and explained why our country still did not necessarily respond adequately to wet season spelling," said Annie.

"This in turn has led to a journey of discovery of grazing land management options and techniques. FBA and Grazing BMP has been part of this journey, providing many opportunities for learning, sharing of experiences, stimulating management considerations and helping to implement and test positive changes 'on the ground,'" said Annie.



Attending workshops and field days has helped the Donoghues share their experience as well as learn from other graziers and industry representatives.



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New solutions

The Donoghues prepared a paddock for cultivation in 2012, aiming to reduce the Indian Couch seed bank before re-establishing improved pasture species. With advice from DAF Pasture Agronomist Stuart Buck, they planted the paddock with the legume *Progardes desmanthus* in January 2015, and used the soil test results to ensure they met the re-established pasture's nutritional needs.

Following good legume establishment and evidence of it having set seed, the paddock was then grazed periodically from May to November 2015. In early December 2015, they then sowed a mix of Bissett Creeping Bluegrass, Bambatsi Panic and Katambora Rhodes.

The Donoghues also trialed the legume *Caatinga stylo* in a small area, as it was likely to be a valuable pasture species for their enterprise. "The *Progardes desmanthus* legume has been well established in the area cultivated," said Annie. "*Caatinga stylo* is also well established in the small areas it was planted." Establishment of the legume to a suitable grazing stage was possible within a season. In the plan for this project, establishing the grass species was delayed to a second season.

However, poor conditions in the second season have prevented the grasses from establishing adequately. Annie says despite the set-back, the trials were successful and they would investigate alternative techniques to establish grass species in the same season as establishing a legume species.

"We are considering alternative methods to enable grass species to establish within the same season as the legume, while ensuring the grass does not interfere with the establishment of the legume or become dominant in the early stages," said Annie.

Valuable experience

The Donoghues believe the legume trials, tailored support and soil testing was very helpful in addressing their pasture rundown problems.

"Conducting this pasture rundown project has given us invaluable experience in addressing the problem through establishment of improved pasture, with a particular emphasis on legumes suitable for the soil and with longer term survivability," said Annie.

"Furthermore, it has given us confidence to further expand our plans for addressing pasture rundown through suitable improved pasture development."



By addressing their pasture rundown issues with new treatment methods, the Donoghues are helping ensure a sustainable future for Barranga Grazing.

Fitzroy Basin Association Incorporated

PO Box 139, Rockhampton QLD 4700
Phone: (07) 4999 2800
Fax: (07) 4921 2860

www.fba.org.au



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