The AgKI Potential project: unleashing the Island's productivity

Background

At the 2013 Agriculture Kangaroo Island (AgKI) AGM and Conference, Western Australian agronomist Wayne Smith spoke about Kangaroo Island's potential to double its cropping productivity and to run 40 DSE/ha. This created an enormous amount of interest amongst local farmers. Early in 2014 a group of 4 farmers, local agronomy and industry organizations, Kangaroo Island Futures Authority (KIFA) and the Kangaroo Island Natural Resources Management (KINRM) Board put together the AgKI Potential project to trial the methodologies that Wayne presented.

In the grazing systems, key points are liming to correct soil pH, macro and micronutrient levels, introducing perennial pastures to support a rotational grazing system, maximize water use and improve soil structure and health. This system capitalises on summer rainfall and applied nitrogen fertilisers to drive stock feed rather than supplementary feeding.

In cropping systems there is similar emphasis on soil health. Summer and cover crops are introduced to add diversity, lower the water table to reduce winter water logging and to improve soil organic matter, nutrients, structure and biota.

The ultimate aim from both systems is profit but because these are demo paddocks, higher initial establishment costs are incurred to achieve maximum production as quickly as possible.

What was done

The project has established three grazing trial sites and two cropping sites. These are on a variety of soils and under varying rainfall conditions to give an indication of performance at different parts of the island. The program is yet to complete its first 12 months but the grazing sites have all set up their rotational grazing systems. Soil pH and nutrients have been addressed and supplementary or indeed establishment of perennial grasses completed. The varying maturity of perennial systems at the three sites will provide for interesting comparisons over the five year life of the project. All of the grazing sites are above average stocking rates for the property but not yet to the predicted levels.

The program will be running a series of farm walks as it progresses so that landowners can see the on-ground results and hear from the participants about the impacts on their bottom line.

FIGURE 1: **Kikuyu paddock at A&T Heinrich.**

FIGURE 2: **Bean crop at Bellavista.**

Results

Changes in pasture composition, groundcover, stocking rate and stock condition are being monitored at each grazing site. Soil moisture is being measured at one pasture site (to 1.2m) and one cropping site (to 1.6m). Water quality will be monitored at one pasture site opportunistically depending on flow. Photo points were established and soil pH and nutrient testing was undertaken at all sites.

The cropping sites have had mixed results so far, with beans and corn in the Cygnet River valley working well, while on the north coast the winter canola was hit by the beet western yellow virus, which has set the program back. However, running the trials over five years will demonstrate how these systems cope with the factors that affect production over the longer term.

Baseline data has been collected at all sites and a second round of sampling will occur in 2015.

Funding/Sponsors

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For further information contact

Grant Flanagan, Natural Resources Kangaroo Island on 85534440 or email grant.flanagan@sa.gov.au