

31 May 2006

Companions getting on well together

Profitable livestock enterprises increasingly exercise the minds of farmers, even those who a few years ago turned the shearing shed into a store room and the hay shed into a shelter for the bigger header.

This was the attraction of a forum at Keith presented by the CRC Salinity, Landmark and the SE NRM Board to present the results of research into the emerging opportunities for lucerne in farming systems and for profitable grazing from saline land.

University of Adelaide researcher Dr Bill Bellotti showed the results of trials on York Peninsula where cereal crops were sown into lucerne stands. “Aside from the well known virtues of lucerne, its integration into the cropping phase helps farmers spread their risk. For example, whilst rain around harvest can spell disaster for crops, it is highly beneficial for the lucerne,” said Dr Bellotti.

“Similarly, untimely frosts can devastate a grain crop but have little effect on lucerne.

“Companion cropping is certainly more experimental than phase farming, but it brings to the farming system continuous protection from deep drainage compared with phase farming which effectively turns the protection on and off.

“Lucerne is very competitive with its deep root system that can dry the soil out. Although it fixes nitrogen, it also has a high demand for soil N which is often low under living lucerne.

“So to grow a crop with acceptable grain yield we need to tip the balance in favour of the crop with herbicides to suppress the lucerne at key times in the crop’s development, with fertiliser N at strategic times to meet crop demand, by manipulating lucerne and crop density, and with early sowing times.

“Lucerne does reduce the yield of the companion crop, but the overall system can be very profitable if we get the management right and focus on the whole system productivity rather than just on the grain yield penalty.”

The forum included site visits to see the results of grazing management to improve the production of saline land, and in particular to learn from Andy Craig (SARDI) of latest research findings about the salt tolerance of legumes.

“An important finding has been that balansa clover, often thought of as being at least moderately salt tolerant, has been deceiving us because of its high tolerance for waterlogging that is often associated with salinity,” Mr Craig said.

“Our work suggests balansa often flourishes in the year of sowing but fails to persist into the second year.

“The early flowering Frontier balansa has partly dealt with this problem by setting seed before soil conditions become too salty with the warmer weather in spring,” he said.

“However, more problems are just around the corner, because conditions are often still highly saline in autumn when the season breaks and the clover seed germinates.”

The consolation is that this research has shown that some medics appear to have much greater salt tolerance than has usually been realised.

Further information from

Kevin Graham, Landmark, (07) 3340 2832; kevin.graham@landmark.com.au

Bruce Munday, CRC Salinity (08) 8538 7075; bruce@clearconnections.com.au