



sustainable
grazing
on saline lands

productive and sustainable
ways to use saltland

LandWater & Wool

Shaping the future



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The SGSL PRODUCER NETWORK IN NEW SOUTH WALES

Case Study:

**Livestock prices and dry times
unlikely allies for saltland pastures**

In 2000, the National Land & Water Resources Audit predicted that the area at risk of shallow water tables and salinity in New South Wales will rise substantially.

Due to the extended drought, water tables in some parts of NSW have fallen and salinity appears to have stabilised, especially in Slopes and Tablelands areas where local groundwater flow systems are responsive to rainfall.

However, water tables are expected to rise again when rainfall returns to average. In areas where groundwater flow systems have not reached equilibrium, water tables are likely to go higher than they were before the drought.

It seems inevitable that larger areas of NSW will become salinised in future.

The Sustainable Grazing on Saline Lands (SGSL) Program has attracted considerable interest from NSW livestock producers interested in making productive and profitable use of saline land, while reducing its negative impacts on the environment.

SGSL is building on the knowledge and experience of producers including Lawrence Balcomb (see case study), who are leading the way in developing sustainable grazing systems for saline lands.

Strong livestock prices, three years of dry seasons and a new research project have encouraged farmers in the Cranbury region of Central West NSW to take a fresh look at establishing salt-tolerant pastures on difficult-to-manage areas of their properties affected by dryland salinity.

In one of the few positives to emerge from recent severe drought conditions, areas of land seasonally affected by waterlogging and salinity have dried out sufficiently for local farmers to be able to get machinery into the paddocks to spray out weeds and sow an experimental 'shotgun' mix of productive, perennial and salt-tolerant pasture species.

Two trial sites have now been set up by members of the Cranbury Landcare Group with support from the SGSL initiative to investigate the performance of new pasture varieties and identify the best combination of species for year-round grazing opportunities.

When favourable seasonal conditions return to the district, which in a normal season enjoys 600 millimetres of rainfall spread evenly throughout the year, farmers will be in the driver's seat to profitably and productively manage their saline sites, according to Cranbury Landcare Group chair and local farmer, Lawrence Balcomb.

"Every farm around the region has a little bit of salt tucked away somewhere," he said.

"The SGSL trial aims to show what can be done with saline areas of our farms – whether it is for environmental or production purposes.

"If we can successfully establish a pasture on these areas then treating salinity doesn't become an expensive exercise. Through the trial we aim to get it right the first time and learn from both our mistakes and successes."



Cranbury district farmer Lawrence Balcomb (left) and Department of Infrastructure, Planning and Natural Resources salinity management specialist Andrew Wooldridge (right) inspect early growth of salt-tolerant pastures established as part of a Land, Water & Wool Sustainable Grazing on Saline Lands (SGSL) trial in the Central West region.

Photos courtesy: Land, Water & Wool

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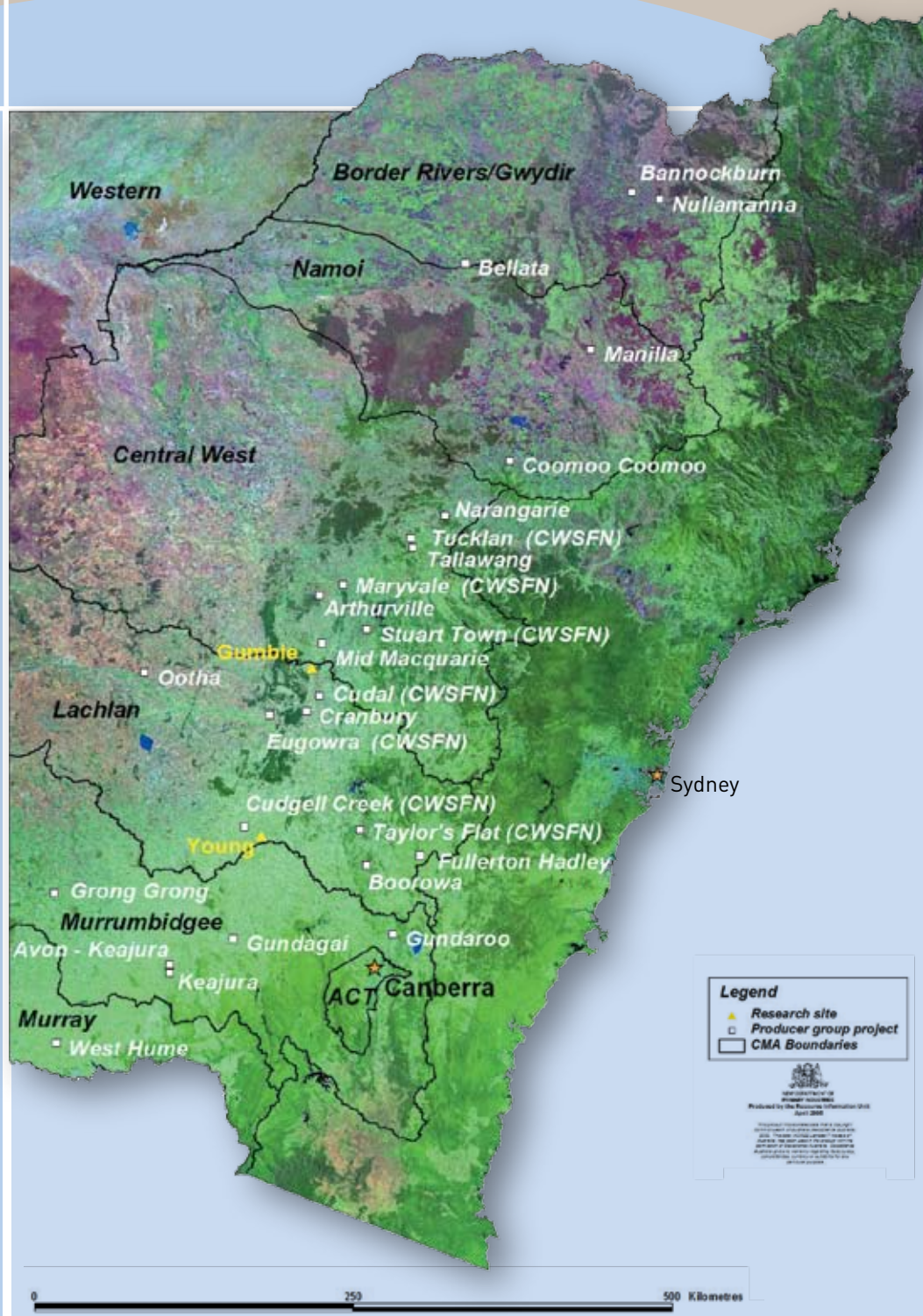
NSW Producer Network – growers getting involved

Prior to SGSL, most producers with saline land had to learn how to manage saline land largely by trial and error, often using only their own funds. To do so profitably and sustainably is an added challenge that becomes even more important as the impact of salinity spreads.

The SGSL Producer Network provides financial and technical support for wool and meat producer groups undertaking on-farm trials into profitable and sustainable use of saline land. The trials are relevant to the groups' particular needs, appropriate for their local conditions, and at a level of sophistication that matches their knowledge and experience.

The Producer Network aims to take the guesswork out of saline land management, including how it might be integrated into whole farm production systems.

The Producer Network projects in New South Wales are improving local knowledge and interest in saline land management, and are part of a national network of more than 120 group-based projects. They are all aiming to improve skills in saline land management and improving the value of saline grazing to the whole-farm business.



CASE STUDY *continued from page 1*

"We know from recent surveys that most farms in our Landcare district have wet areas and salt loads which result in problematic saline sites that range from one up to 10 hectares.

"We can't expect to ever get rid of the salinity, but the idea of making these sites an evergreen paddock through summer that can be grazed for profit, as well as reducing the export of salt into the local Mandagery and Boree Creeks, is a major incentive for change.

"I have no doubt most farmers see a need to make money out of their saline sites, and this project certainly aims to produce meat and wool from saline areas. What we have on the sites now is much better than what was there before - the priority now is to look at which pasture species fits each situation the best and then working out successful establishment and management strategies."

SGSL NSW Producer Network Project Officer Luke Beange said the research involved establishing and then grazing a 'shotgun' mix of grasses and legumes in both highly and moderately saline sites, depending on species suitability. Species being investigated include chicory, perennial ryegrass, Balansa, strawberry and Persian clovers, prairie grass, lucerne, tall wheat grass, puccinellia, phalaris and tall fescue.



Project location	Trial
Bannockburn	Can grazing management rehabilitate a saline site?
Nullamanna	Can grazing management alone reduce salinity on Inverell basalts?
Bellata	Improving grazing efficiencies on sodic saline country
Manilla	Combating salinity with best management Tall Wheat Grass
Coomoo Coomoo	Alley farming and grazing on saline soil
Narangarie	Revegetating extremely salty scalds
Central West SFN Tucklan via Dunedoo	Species trial in Tucklan geology
Tallawang	Pasture cropping and its use in reducing salinity
Central West SFN Maryvale via Wellington	Species trial on formerly highly saline site
Arthurville	Fescue trial and rehabilitation
Central West SFN Stuart Town via Wellington	Species trial on high altitude site
Mid-Macquarie	Saline site establishment
Ootha	Economic benefits of grazing management on severe saline lands
Central West SFN Cudal	Species trial
Cranbury	Identify productive persistent salt-tolerant pastures
Central West SFN Eugowra	Increase pasture diversity in wet saline areas
Central West SFN Cudgell Ck via Young	Increase pasture diversity in wet saline areas
Central West SFN Taylors Flat via Boorowa	Increase pasture diversity in wet areas
Fullerton Hadley	Salt pasture systems for Fullerton
Boorowa	Licking salty wounds
Grong Grong	Options for saline land- saltbush pasture establishment
Gundaroo	Managing salt-affected land for increased productivity
Gundagai	Deep-rooted perennial herbs for salinity control
Avon-Keajura	Addressing saline discharge and flow through
Keajura	Sustainable grazing – addressing dryland salinity
West Hume	Evaluation of vegetatively-established native grasses

The New South Wales Producer Network projects – where are they and what are they doing?

There are 26 Producer Network project sites in New South Wales, located from Inverell in the north of the State to Albury in the south (see map).

The project sites cover a wide range of saline land situations, being located across summer-dominant, uniform and winter dominant rainfall zones and in different landscapes and soil types. Some project sites are in locations that are waterlogged most of the year but are only slightly saline, while others are in locations that are not often waterlogged but are highly saline.

The NSW Producer Network works very closely with the major SGSL research sites at Gumble and Young. Researchers at these sites are investigating not only the productivity of saltland pastures, but also the off-site impacts – particularly the catchment impacts of salt and water movement from saline sites.

The Producer Network projects are addressing priority issues being faced by producer groups in different regions. They are also examining how different livestock types (dry sheep, weaners etc) perform within various saline land management systems.

Collectively, the projects will dramatically improve the availability of knowledge about the establishment, management and performance of saline land grazing systems for the various saline land situations encountered across the State.

Scientists adding to knowledge generated by Producer Network

In addition to supporting on-farm trials by Producer Network groups, SGSL is also funding Core Research by scientists within the Department of Primary Industries and the Department of Infrastructure, Planning and Natural Resources.

The Core Research is focusing on salt and water movement under volunteer and sown pastures on salinised land. It is also contributing to the development of grazing management systems that maximise pasture and animal production, minimise negative environmental impacts and allow sustainable use of salt-affected land.

In New South Wales, there are two Core Research sites (see map) – one at Gumble (near Manildra) and the other at Young. The landscapes in which the research is being conducted are different but the treatments being investigated are the same. This approach enhances the reliability and transferability of research findings.



SGSL - productive and sustainable ways to use saltland

SGSL is aiming to achieve:

- Improved production and profit from grazing saline land;
- Better environmental outcomes from saline land; and
- More pride for producers who have saline land on their properties.

SGSL is looking at management options for saline land, including new pasture mixes and grazing management strategies, to help producers make more informed decisions about their salt-affected land.

Wherever possible, SGSL is working directly with existing groups of livestock producers already participating in local initiatives, such as Central West Sustainable Farmers Network, Landcare, etc. A network committee has been established in NSW made up of local producers with experience in saltland agronomy and a representative from lead agencies.

For further information about the SGSL Producer Network in NSW, and the wider Land, Water & Wool initiative, please refer to the contact section on this information sheet.

SGSL information resources:

There are a number of publications dealing with saline land management in NSW.

The following publications can be ordered through CanPrint on freecall 1800 776 616 by quoting the relevant product code:

- ***Saltland Pastures in Australia: A Practical Guide***.
Barrett-Lennard E (2003)
(\$25 plus \$5 postage).
Product code: PR 030 563
- ***Productive Solutions to Salinity Management* (2003)**.
Product code: PF 030 508
- ***SGSL Insights (case study series)***.
Product code: PK 040 658

The NSW Department of Primary Industries is releasing ***Salinity Glove Box Guides*** covering dryland, irrigation and urban salinity management for southern, northern, central NSW and the Hunter Valley. Further information about the Guides is available from Ms Deb Slinger at the Department of Primary Industries, e-mail: deb.slinger@agric.nsw.gov.au.

The Department of Agriculture Western Australia has released a small booklet describing the long history of saline land management research in that State. It is called ***Golden Pastures: 50 years of saltland agronomy in Western Australia***, and is available from Justin Hardy, SGSL WA Executive Officer, Department of Agriculture Western Australia, Tel (08) 9892 8408.

A two-day **EDGENetwork™** course called ***Profit from Saline Land*** developed by Meat and Livestock Australia and SGSL is becoming available in NSW. For further information about the course, contact EDGENetwork™ on freecall 1800 993 343 or visit the website www.edgenetwork.com.au

Photo courtesy: John Powell

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On-line resources

Land, Water & Wool

www.landwaterwool.gov.au

NSW Department of Primary Industries

www.dpi.nsw.gov.au

NSW Department of Planning, Infrastructure and Natural Resources

www.dipnr.nsw.gov.au

CRC for Plant-based Management of Dryland Salinity

www.crcsalinity.com

Australia's National Dryland Salinity Program

www.ndsp.gov.au

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