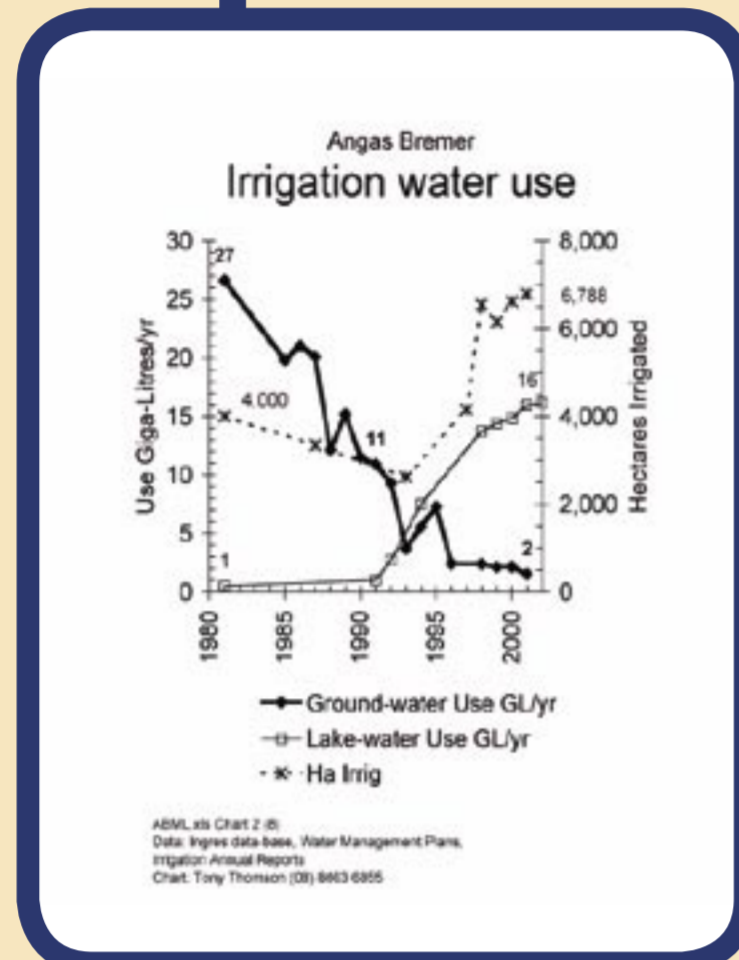


T Thompson¹ K Muller² LJ Jaensch³

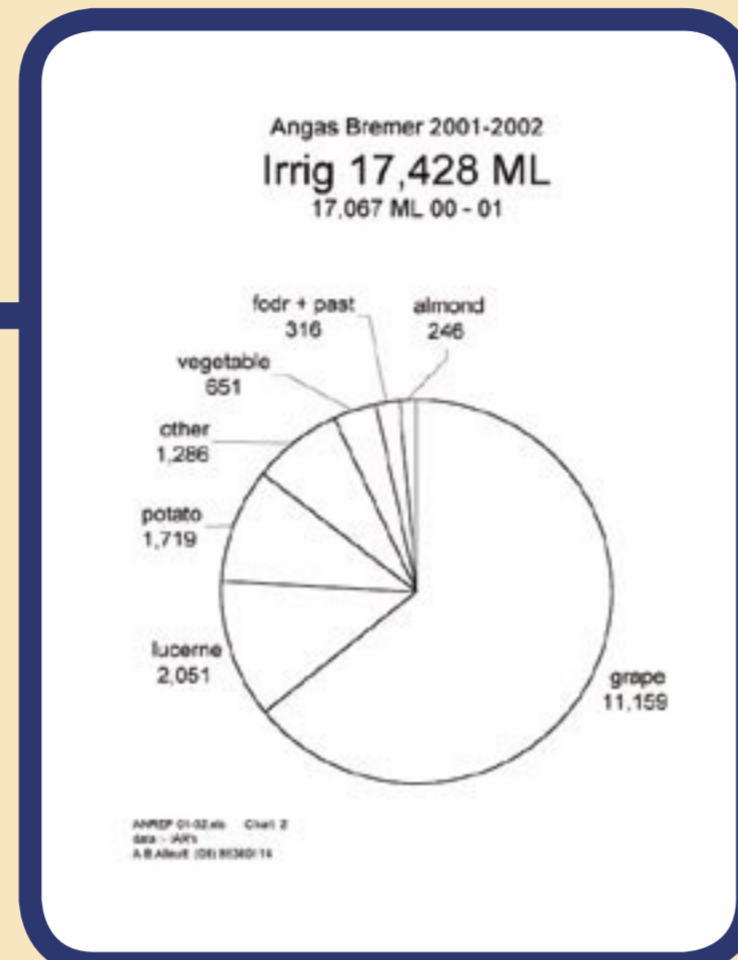
¹SA Department of Water Land & Biodiversity Conservation, Level 1, 25 Grenfell St Adelaide SA 5000. ²River Murray Catchment Water Management Board, Strathalbyn Office, PO Box 4, Strathalbyn SA 5255. ³Langhorne Creek Wine Industry Council, PO Box 78, Langhorne Creek SA 5255. thomson.tony@saugov.sa.gov.au



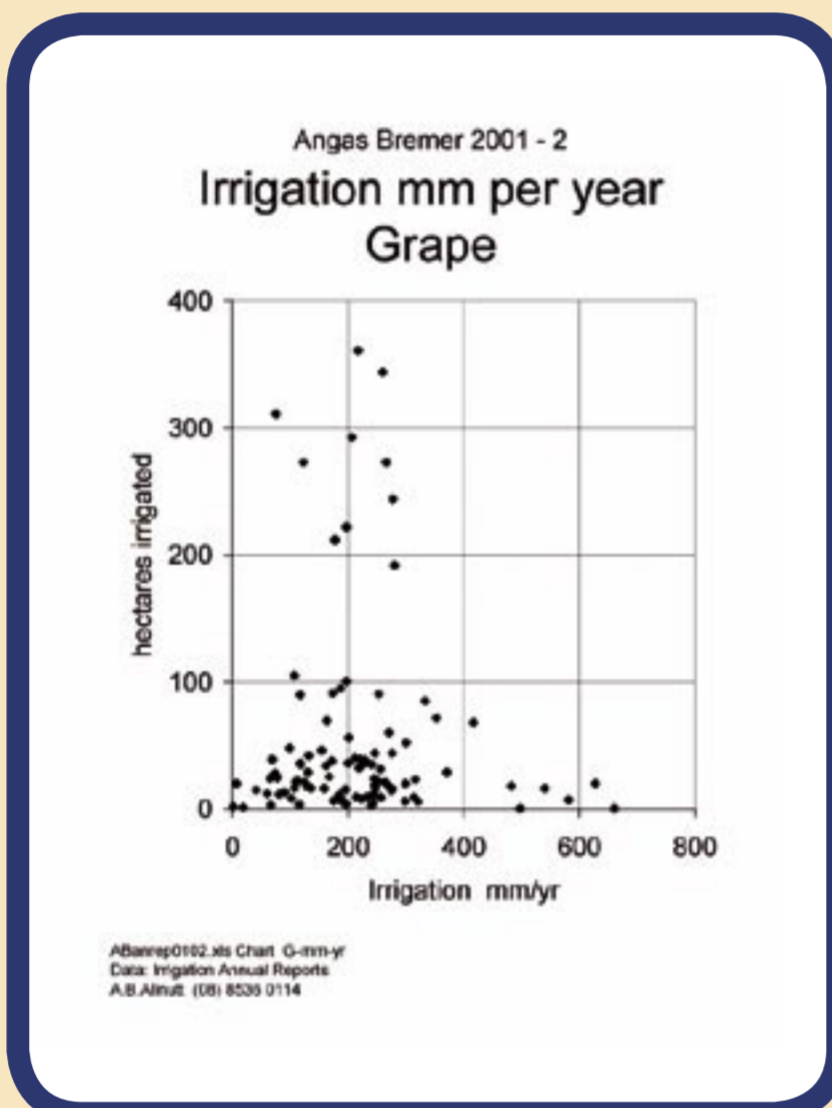
The irrigators of the Langhorne Creek region, under the auspices of the Angas Bremer Water Management Committee, have achieved extraordinary success through strong local leadership and community commitment ensuring sustainable management of their agricultural resources.



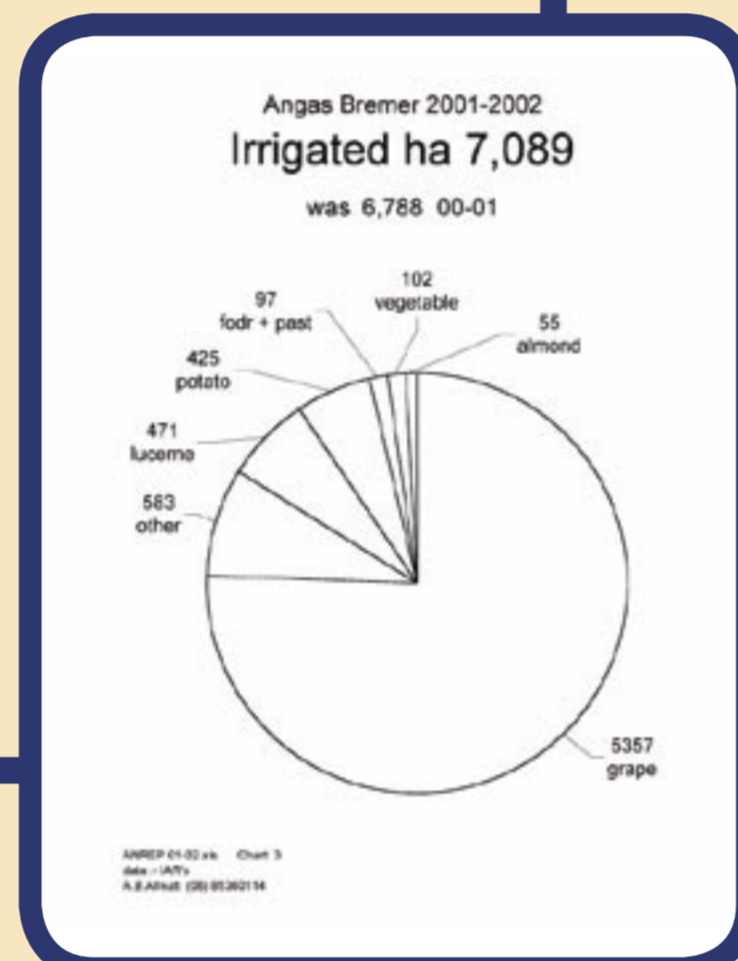
Ground water use has fallen while lake water use and the area irrigated has increased



Most of the irrigation water is used on grapes

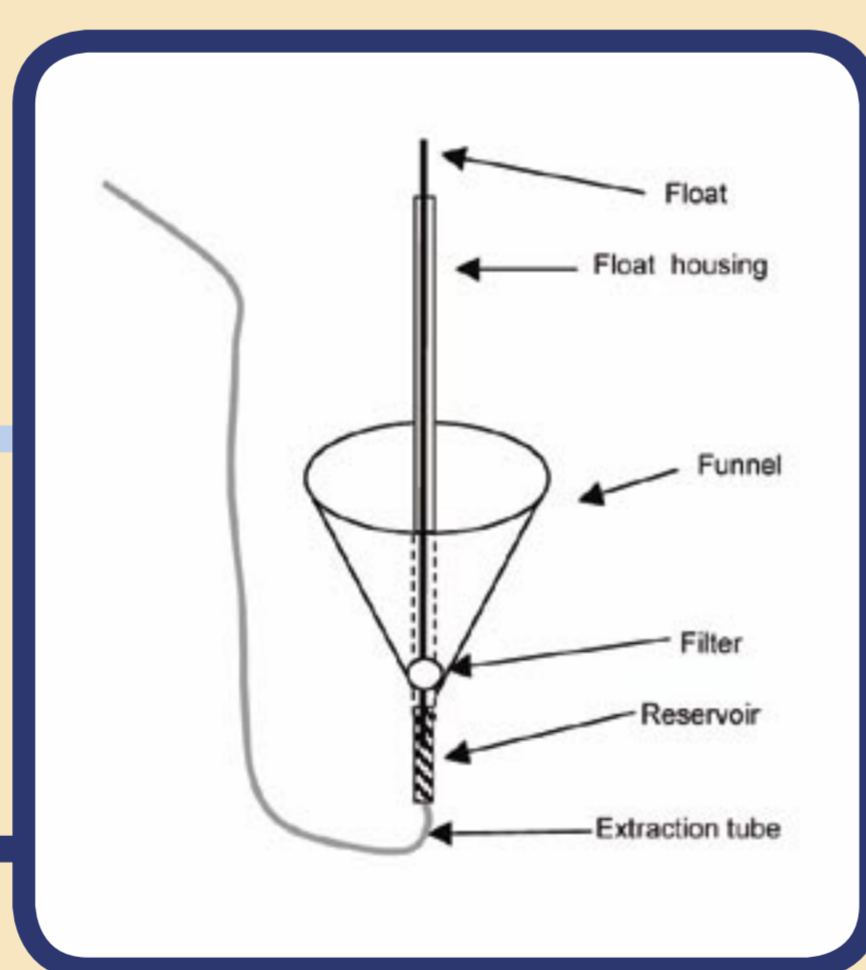


Most grape plantings receive irrigation of between 50 and 350 mm/yr

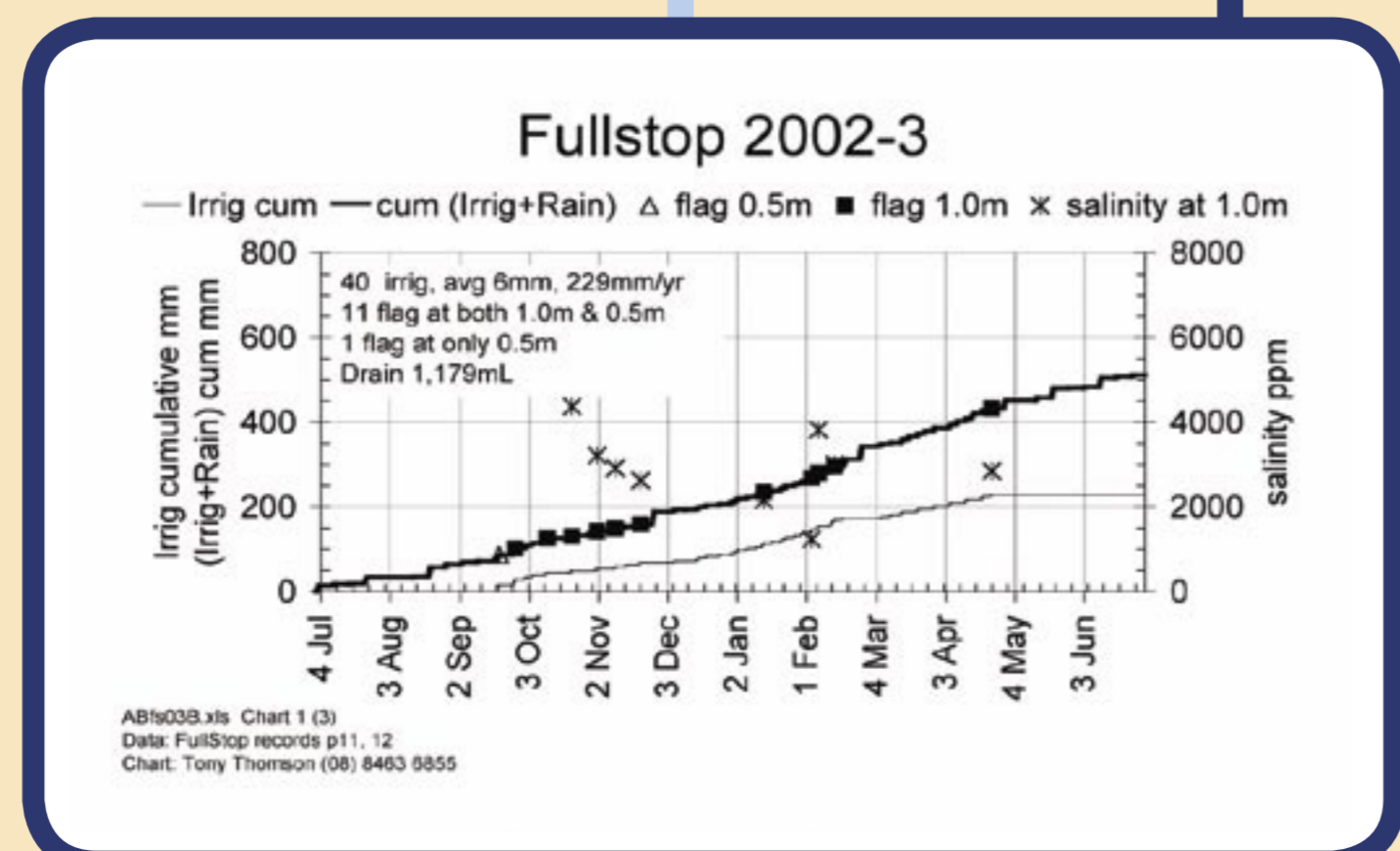


Most of the irrigated land grows grapes

Parts of a FullStop



FullStop responses to irrigation and rainfall



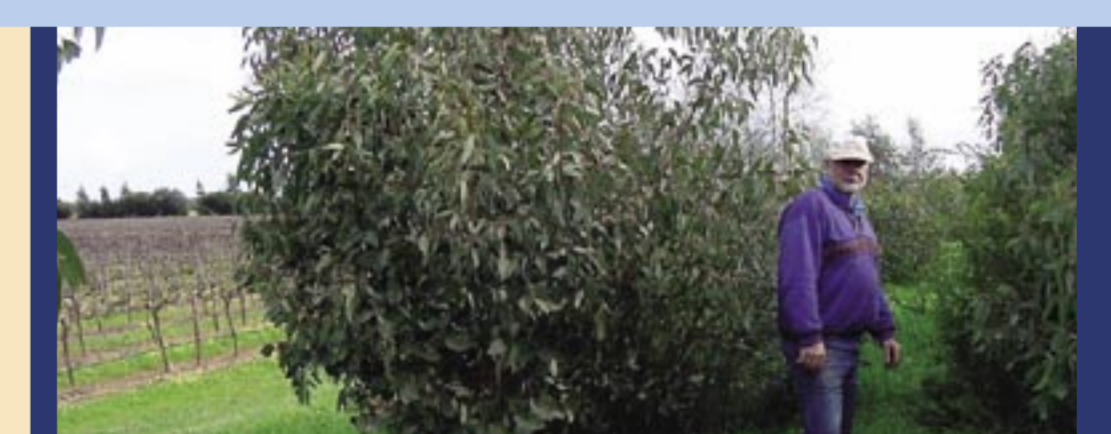
- In 1981, the annual use of groundwater for irrigated agriculture in the Angas Bremer district around Langhorne Creek had reached 27 Gegalitres per year, representing an unsustainable volume four times the annual groundwater recharge.
- 20 years of determined effort by the Angas Bremer irrigators resulted in a reduction in groundwater use of more than 90% to a level of 2 GL/yr by 2001, and saved the previously over-used aquifer.
- Both the farm-gate dollar income and the area of land irrigated have increased while the volume of irrigation water used has decreased.



- Policies encouraged the exchange of groundwater allocations for River Murray allocations requiring the local funding and building of water pipelines to carry water from nearby Lake Alexandrina.
- The Angas Bremer Code of Practice focuses on increasing aquifer storage and recharge, decreasing groundwater irrigation, and reducing irrigation wastage through ground drainage.
- Irrigators are encouraged to adopt efficient irrigation techniques, monitor and report annual water use and drainage, and undertake deep rooted tree planting at a rate of 2 Ha of winter-active vegetation per 100 ML of allocated water.



- Water table height is monitored to avoid waterlogging and salinity problems.
- Drainage is monitored to improve irrigation efficiency using CSIRO developed FullStop devices.
- The funnel device buried at the bottom of the root-zone collects water, with the flag (or float) rising to indicate when the soil profile is "full" and irrigation should be ceased.



- The earliest vineyards in Langhorne Creek were planted on the natural floodplain of the Bremer River.
- A Floodplain Study is being conducted to better understand how the River water-flows affect groundwater levels.

Protecting red gum swamps and increasing area of vegetation to help control height of the water table



Map of Australia showing Langhorne Creek and the Angas Bremer region