

ALT's work at Strathfieldsaye seeks to address these issues and provide solutions for the local farming community.

Strathfieldsaye

Strathfieldsaye Estate in Central Gippsland is a 2100 hectare grazing property founded in the squatting era of the 1840's. William Odell Raymond arrived two years after the area was first seen by Europeans in 1840 who came in a party led by Angus McMillan. In 1842 Raymond established his run on the Avon River at Stratford where he also founded the Shakespeare Hotel. In 1848 he also settled nearby Strathfieldsaye Estate. After Raymond's death, the property change hands, eventually being purchased by the Disher family in 1869. Three generations of Dishers lived at Strathfieldsaye for 107 years. In 1976 Dr H C Disher bequeathed the property with his Strathfieldsaye Institute to the University of Melbourne. In 2003 ALT became responsible for the Disher Will through a Cy Pres order from the Supreme Court of Victoria in which ALT followed the University in the role of discharging responsibilities of the Strathfieldsaye Institute and the management of the property. Dr Disher's vision for the Institute was ahead of its time. He sought to use his resources to provide new knowledge to benefit the local farming community. ALT interpreted this mandate to be pursuit of sustainable primary production.

Strathfieldsaye Estate is heritage listed at the local, state and national levels. It is regarded as having the longest continuous occupation of a farm in Victoria. Its built environment includes a homestead, outbuildings, garden and landscape of a property that reflects over 150 years of European occupation. Care of these resources is shared with volunteers from the community.

Strathfieldsaye Estate's agricultural challenges are typical of farms in the area and provide examples of the environmental and economic issues of the region. Many of those issues involve soil management and landscape function which have been impacted by decades of high input, high intensity agricultural practices, clearing native vegetation (approximately 3% remains on private land, 5% on public land), salinization of the Gippsland Lakes and the erratic climate.

After several years of benefitting from shared observations of leading area farmers, ALT focused attention on biological aspects of soil, addressing soil compaction, soil acidification, invasion of weeds and declining farm productivity; trialing approaches to soil remediation and seeking ways to improve production resilience and economics. The goal was to find a combination of pasture management practices that reduced costs, enhanced production, increased soil moisture, improved pasture plant communities and integrated conservation and production goals to achieve an increasingly functional landscape.

The results of several years of testing and trialing has seen a 200% increase in soil carbon, a 450% increase in carrying capacity for cattle and a 100% reduction in veterinary expenses due to improved health of cattle.

Strathfieldsaye Estate has organic certification in Australia and the US. Strathfieldsaye Estate works in a partnership with a South Gippsland farm with an integrated organic beef business, Cherry Tree Organics operated by the Blundy family. Cows and calves live at Strathfieldsaye while young stock gain weight in South Gippsland. Each property experiences a recurring climatic challenge. Flooding is frequent in South Gippsland. Then stock must be moved off of saturated

pastures until the ground dries sufficiently. Drought is frequent in Central Gippsland. Then young stock cannot obtain sufficient protein from pasture plants to gain weight.

Combining features of the farms, the cows and calves are well served by Strathfieldsaye's relative dry ground while young stock thrive on lush pastures of South Gippsland. Thus both farms bring their advantages to beef production.

As has been demonstrated recently on many farms throughout Australia, biological farming principles in which intensive grazing management is used to enhance the carbon content of soils including humus, water holding capacity, nutrient transfer and moisture, result in production increases and farm resilience. The goal of intensive grazing management is to prevent overgrazing by crash grazing and then rest to allow time for pasture recovery before re-grazing takes place. That regime allows plants to keep some of the carbon they fix through photosynthesis and to 'donate' carbon to the soil food web, which performs directly, or indirectly the benefits listed.

The distinguishing feature for ALT at Strathfieldsaye is the added benefit of documenting pasture changes over time and, as a public good entity, the ability to present publicly the economics of the farm. These data have been collected since 2008, showing the long term changes that have taken place without use of chemical inputs. The key is what remains economically after production costs have been paid. An important measure is not the kilograms of beef produced or the income they brought in but rather the net monetary results. Organic status changes the marketing realities of farms as the organic demand continues to grow at approximately 10% each year.

ALT established conservation covenants over 700 ha of the farm through Trust for Nature. The covenants provide long term protection for two ecological communities at risk and recognized by the Victorian and Australian Governments - the Australian southern native grassland and the forest red gum ecological communities.

The easiest, quickest and economically best way to remove carbon from the atmosphere is through photosynthesis. In the context of primary production, there are only wins from increasing soil carbon. The Australian Government established a farm soil carbon program and there are developing markets for carbon stored in soil. Eventually storage of carbon will become a part of farm income as this global service becomes recognized as an uncontroversial means of addressing climate issues. The chief hurdle to the widespread recognition of soil carbon is the technology of soil carbon measurement.

As measurement techniques become more reliable and affordable, as the concept of soil carbon stored is seen as analogous to interest earned by a bank account, the outlook for primary producers will change. While conservation land is generally around 10% of the landscape and generally not the most productive parts of the landscape, the remaining 90% is in cities or managed by primary producers. The fate of national conservation is strongly affected by their land management practices. As farmers become increasingly aware of the production benefits of increased soil carbon, ALT anticipates a change in the way that society views primary production and an uplift in farmer expectations. Farming is an industry in which farm produce has commanded the same basic price for some thirty-five years. Farm debt is enormous. Conservation along with the farming will be supported through the benefits of increased stores of soil carbon.

For more information visit the Australian Landscape Trust website <http://www.alt.org.au/>