



vegetation condition of the latter, in particular, is poor with low tree density and signs of dieback, few shrubs or mid height vegetation, high cover of exotic species and a lack of tree regeneration.

However, some remnants retain significantly higher levels of native biodiversity. In particular there are several large remnant patches of grassy woodland on 'Makari' that have been fenced off from stock. Vegetation and habitat condition of these areas is quite high although tree regeneration is lacking. They are key biodiversity assets, together with the extensive riverine corridor on 'Ashbury'. These areas are of very high conservation value but given the lack of tree regeneration and abundance of exotic species they require active management to ensure long-term viability. Their value would be enhanced by planting native species along fence lines to connect with extensive areas of woodland on adjacent travelling stock reserves.

In surveys conducted, 'Ashbury' and 'Makari' were found to support a moderate diversity of birds including 10 woodland dependent species three of which are of regional or state-wide conservation concern – the Superb Parrot and Grey-crowned Babbler (listed threatened species under NSW legislation), and the White-browed Woodswallow considered to be declining in the NSW sheep-wheat belt.

Summary

The Cavanagh family run a large and diverse operation on a moderate land area. Their intensification and diversification, with careful attention to planning and communication, and with input from off-farm professionals, has allowed four families to be supported without major additional land purchases.

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Grain & GrazeTM

Profit through knowledge

Intensification and diversification in a mixed farming system

The Cavanagh Family, 'Asbury', Young, NSW

Background

The Cavanagh family has been farming for five generations. They originally settled in the Canberra region where they had a 99-year grain and grazing lease. In 1974, the Canberra property was resumed for housing, so they decided to purchase better farming country elsewhere. They found suitable land at Young and purchased 'Makari' (800 ha), then 'Ashbury' (280 ha) in 1986. An additional block, 'Cleveland' (600 ha), was purchased at West Wyalong in 1995. The three properties are run as a single farm unit.

'Cavanagh Partnership' is a family affair, John and Joyce Cavanagh working with their three sons and their wives, Paul and Linda, Matthew and Loretta, and Stephen and Felicity and their children. A family partnership was formed in 1996, with the parents owning the land, and stock and machinery owned by the partnership which consists of the parents and sons.

Rainfall on the Young property averages 550 mm per annum and is winter dominant. The average at West Wyalong is 450 mm and distribution is non-seasonal.

Economic performance

The family puts considerable effort into its livestock enterprises and has a strong cropping orientation. While cropping is an important enterprise to them, profits are unpredictable and have been low over the last couple of years due to poor seasonal conditions.

Detailed cost and income breakdowns over several years were not available for this study. However, the need for four families to be supported from the property highlights the Cavanagh's attention to profitable operation in all phases of their business.

Key management principles

The key principles for the Cavanagh family's management include:

- **Diversification**

The family runs an intensive operation with a diverse range of enterprises which spreads their production risk. In 1994, these enterprises included wheat, canola, lupins, a breeding herd, cross bred ewes, and a merino flock. The drought of 1994/95 proved to be a turning

Highlights

Four families supported on an average sized property through

- Diverse enterprises on farm, and off-farm contracting
- Intensive management aimed at improving productive capacity
- Attention to planning and communications
- Input from off-farm professionals.

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point in the family's management. Their belief then was that 'you only had to plan to feed stock to get through a drought'. However, they fed stock, the stock lost weight and they still had to sell them, in a poorer condition. They now know that it takes more than just feeding stock to survive a drought. Loans had increased during this period and at the same time assets were depreciating at a faster rate. They sought advice from their bank and started preparing regular budgets.

In 1996 the family attended a Holistic Management® course which prompted them to analyse their enterprises to see which ones were the most profitable. As a result they decided to sell the cattle herd and the cross bred ewes. Attention was then focussed on the profitability of each enterprise and not just production from the property.

The present enterprise mix is based around:

a) Intensive cropping

The Cavanagh family has devised and documented a plan for their cropping enterprises over an 11-year period using eleven blocks, with a rotation of six years of crop and five years of pasture. Crops are sown using minimum tillage/direct drill techniques. The basic rotation involves wheat and canola (if seasonal conditions are suitable), with triticale in the final (sixth) year which is undersown with a mix of lucerne and other species to commence the pasture phase.

They also produce straw bales and conduct a lucerne seed operation.

b) Feedlotting of lambs and cattle

Livestock enterprises currently include a breeding flock of Australian Meat Merino/Soft Rolling Skin (AMM/SRS)



Paul, Matthew and Stephen Cavanagh

ewes at 'Ashbury' and about 330 wethers that are run on the West Wyalong block. About 2500 ewes are joined each year and those found to be empty on scanning are sold. Ewes cut approximately 6 kg of 20 micron wool. Long-term weaning rates average 93%. The stocking rate of 10–13 DSE/ha is well above the district average and pastures are rotationally grazed using a planned grazing approach based on Holistic Management® principles.

The Cavanaghs develop a 12-month plan for their sheep enterprise which includes feedlot finishing of lambs. About 2000 lambs are finished in the feedlot, allowing the ewes more pasture in the paddocks. When their own stock are finished, additional lambs may be purchased to take advantage of high lamb and low feed grain prices.

Cattle are also purchased and finished in a feedlot when favourable

opportunities arise, dependent on grain and cattle prices. They usually feed about 130 head.

c) Contract growing of dairy heifers

The family also has a contract with two coastal dairies to grow out heifers. They receive 100 kg heifers from the dairies which they grow out, mate either by artificial insemination or with a purchased bull, and send back on the point of calving. They contract between 80 and 160 head and are paid on weight gain plus a management fee.

d) Off-farm contract work

In 1999, the family diversified further by establishing a contract windrowing business. They also contract harvest which has allowed them to purchase a new header for use on their own property and to generate off-farm income.





- **Improving soil quality, diversifying pastures and enhancing biodiversity**

On 'Makari' soils are mainly red-brown earths while on 'Ashbury' soils are red-brown earths to grey alluvial earths with light, sandy topsoil. The soils are acid in the surface and lime is applied every 10 years at 2–5 t/ha. Phosphorus levels are low and so it is applied as fertiliser prior to sowing. Soils are tested two years before returning to crop and a fertiliser plan is developed in conjunction with a consultant soil nutritionist.

Through direct drilling and better management of pastures the Cavanaghs feel they have improved the poor structure of their soils. Organic matter has increased with minimum tillage/stubble retention techniques and with the use of pasture mixes rather than a lucerne monoculture in the pasture phase. Phalaris, fescue, clover and chicory have all been sown in addition to lucerne to increase pasture diversity, as well as to increase cover and reduce soil erosion. These improvements in pastures, along with improved grazing management, have underpinned the increased stocking rate that the property now supports.

The family consider that in recent years the biodiversity on their property has been increased through minimum tillage, diverse pastures and planting of trees. The local Landcare group and the Australian Government Envirofund have assisted with the planting and direct seeding of over 3000 trees on the property. These plantings have provided windbreaks while also providing protection and resources for wildlife. An increase in bird species has been noticed. A saltbush trial was planted 12 months ago

above waterlogged areas to further assist with management of their environment.

- **Applying farm business management skills**

The Cavanagh family has developed a high level of farm management skills through the assistance of professional advisors. Attending Holistic Management® has made them aware that each enterprise must be profitable. They also place a lot of emphasis on forward planning and documentation, and they regularly monitor, assess and evaluate their stock, crops and land.

Good communication and relationships within the family are essential if the enterprises are to work together well. Each family member is responsible for an enterprise and with good planning and communications the operation works successfully and regular holidays can occur during quiet times.

Synergies and challenges

With a diverse range of enterprises and the scale of operation many synergies result. Stock benefit the cropping enterprise through weed control and stubble knockdown. Contract harvesting has allowed the Cavanaghs to purchase a new header for use on their own crops and provides necessary off-farm income. The use of feedlots to finish their merino lambs results in more pasture in the paddocks for their ewes. It has also allowed them to better manage drought by getting animals off paddocks and preserving ground cover.

With such a diverse operation there are also plenty of challenges. Budgeting for cropping enterprises has been difficult due to the unpredictable

seasonal conditions of recent years. The timeliness of operations is also critical for the cropping enterprises. The need for large cropping paddocks is at odds with the smaller ones needed for planned grazing in the pasture phase. The Cavanaghs have tried semi-permanent electric fences to meet these needs but with limited success in the recent dry period. The best way to resolve this conflict and minimise the cost of fencing and waters remains an important question. Lucerne seed production has resulted in paddocks being locked up between November and March, limiting the amount of grazing land. Determining the optimum scale of operation for each enterprise on the property is a challenge for the future.

Future aspirations

Future changes may need to be made in the family partnership with the retirement of the parents and the grandchildren commencing high school soon. Consideration will need to be given to financing boarding school fees, as well as the present cost of living for the four families. Further acquisition of land, to increase their scale of operations, is a future goal.

Conservation status

About six per cent of 'Ashbury' and 'Makari' comprises native vegetation in broadly intact condition. The high degree of past clearing is typical of the region and reflects the relatively high productivity of the property which originally supported diverse grassy woodland communities.

Remnant grassy woodland is restricted to a few distinct and isolated patches surrounded by high intensity production paddocks, or is confined to the edge of water courses. The native

