

Wool production & biodiversity Contact Working together for Gordon & Jan Edmonds

Above—Gordon and Jan Edmonds.

'Ponds Creek'

Location

'Ponds Creek' & 'Sandy Creek', 46 & 50 km, respectively, east of Armidale, New England Tablelands NSW, Macleay catchment

Property size

'Ponds Creek' 344 ha (850 acres) 'Sandy Creek' 162 ha (400 acres)

Paddocks

35 ('Ponds Creek') 5 ('Sandy Creek')

Average annual rainfall

813 mm (32 inches)

Enterprises

Prime lambs, beef cattle, wool (first-cross ewes)

Stock numbers

750 first-cross ewes (600-1000 depending on season and markets), and 75 cows

Stocking rate

5.9 DSE/ha (2.4 DSE/acre, combined sheep and cattle)

Main soil types

'Ponds Creek': meta-sedimentary (60%), fine granite (35%) and basalt (5%) soils. 'Sandy Creek': coarse granite (85%), light granite (15%).

Vegetation types

Originally stringybark and grey and yellow box on the ridges, red and white gums on the slopes, and New England and narrow-leaved black peppermint on the lower slopes and creeks. Reduced by clearing and dieback to scattered trees and ridgetop stands in poor health.

Elevation

950-1030 m a.s.l. ('Ponds Creek') 1020-1080 m a.s.l. ('Sandy Creek')

Introduction

Gordon Edmonds grew up at 'Ponds Creek' and he and his wife Jan took over management from Gordon's parents in the late 1980s.

The Edmonds have revegetated 15% of 'Ponds Creek' and intend to increase this to 20-25% as part of their farm re-development plan. They have established 34 revegetation sites, planted more than 20 000 seedlings and direct seeded 50 km of trees and shrubs.

This testimonial describes how they restore biodiversity, repair gully erosion, drought-proof their property, subdivide their country for better grazing management, ensure there is adequate shelter and water in each new paddock, and achieve market premiums for their livestock.

Farm history

Gordon Edmonds' grandfather purchased 'Ponds Creek' in 1917 and with his son, cleared and developed the property. Some native timber was left in patches and as paddock trees, but dieback that began in the 1960s and continues today, killed most and left the surviving stringybark in very poor health.

"Every year from the mid 1960s to the mid 1980s, my father would clean up a paddock, sow a beautiful pasture and a crop of turnips, fatten a mob of bullocks, and fertilise every paddock," says Gordon. "The whole place would have been sown to ryegrass, fescue, cocksfoot and clover pastures at least twice."

"The country responded well, year after year," explains Gordon. "Then, in the 1980s, the response leveled off, and fell away.

Enterprises

Because of rainfall seasonality and higher pasture growth rates with warmer temperatures, the Edmonds' livestock enterprises are geared to running higher stock numbers through the summer and selling marketable stock prior to winter or earlier, depending on the season.

Prime lambs

Gordon and Jan maintain a flock of between 600 and 1000 first-cross ewes (western Merino ewes x Border Leicester rams) and Poll Dorset rams for prime lamb production. The ewes are 12-18 years old. "While they still have good teeth, they're fine," says Gordon. "The older ewes are better mothers and have a higher twinning percentage, so the older the better really. We used to pregnancy scan, and will probably do so again when we have to buy in replacement ewes. With a lambing percentage of 138%, I don't see much point in scanning the flock at present."

Wool

The ewes cut a 4.5 kg fleece and return about \$12/head for the 28 μ m wool. The early lambs are sold in the wool but the tail end is shorn in autumn prior to sale.

Beef cattle

The Edmonds produce vealers for autumn paddock sale at around age 8-10 months. Like the ewes, Gordon and Jan keep all their cows until they fail to conceive or decline due to poor teeth. Some heifers were purchased in 1989 and are still part of the herd.



Right-'Ponds Creek' cross-bred ewes.

Shelter—the essential ingredient

The principal reason for planting shelter is to be able to lamb and calve in mid winter and have stock ready for market early, in case premium prices are being paid.

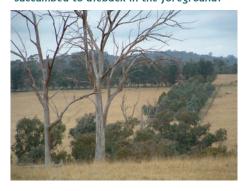
According to Gordon, "If you are going to lamb in the middle of winter, you can't do it without shelter. Now we have the trees, we can get away with it and have early lambs ready for sale by January or February."

"An early calf always does better; it grows better, it adds weight better at the other end of the season, and fetches a better price. If we can brand the calves by September, there are no flies, no infection, no heat or dust. We can only do this because we have the shelter for winter calving."

Below—The 4-acre pine paddock, Gordon and his father's first major revegetation initiative, planted in 1979.



Below—A planted native shelter belt linking to remnant timber and a pine windbreak, with dead trees that succumbed to dieback in the foreground.





Property planning

Gordon and Jan did a property planning course in 1998, and decided to revegetate, repair erosion, subdivide paddocks and install more dams. "We make sure every paddock has shelter and water," says Gordon. "Landcare grants are a big help. I'm sure having trees, vegetation, wildlife and water is going to add a massive amount to the value of the place."

The Edmonds are interested in implementing high-intensity, short-duration grazing. They believe it would provide more flexibility in drought, allow for better utilisation of pasture, and enable better control of weeds and worms. Subdivision will facilitate rotational grazing.

Since the trees grow better on the ridges, the Edmonds concentrate plantings there. They plan to open many of the planted areas up to sheep after 6 years or so, and perhaps eventually to cattle.

Stock water is mainly provided by dams, and several good waterholes in the creek. Dams are also used to repair gully erosion. "We have been able to get 'Dollars for Dirtworks' funding through Southern New England Landcare, to repair gully erosion in several places. If the erosion is bad, we build a dam in the gully, batter down the slopes, respread the topsoil, fertilise, seed with pasture, shrubs and trees, and fence the area off."

Gordon and Jan fertilise all their pastures perhaps 3 years in 4 to encourage the softer grasses. Soil tests are undertaken and consultants prescribe the fertiliser, which is surface-spread. Livestock are rotated to spell pastures.

Pasture diversity is vital: "The pastures that grow in a tough time are not necessarily the big performers in a good year," says Gordon. "There are more tough times than good, these days. We need pasture mixes that can stand up to hard times."

In some of the plantings, Gordon uses a mulch mower between the lines in late summer to maintain the better species for future use by stock.

Left—Dams are used to repair gully erosion at 'Ponds Creek', while the adjacent areas are seeded and planted with native shrubs and trees.

Revegetation

Given the extent of dieback, Gordon and his father realised that revegetation was necessary to alleviate stock exposure.

"There was one memorable October long weekend in the drought of 1982. It rained and snowed and people lost thousands and thousands of sheep around here. We lost 30 Merino ewes shorn in August. We couldn't get them back to shelter because the creek was up," says Gordon.

As Gordon and Jan have learnt more about revegetation, they have stopped asking 'where do we need trees' and now ask 'which areas do we need to leave clear for the good flow of stock around the farm?'

Gordon marks out planned revegetation areas with steel posts often a year or two ahead, and thinks about their position in relation to the country and stock behaviour as he goes about his daily chores, making adjustments from time to time.

Native & introduced trees

Gordon and his father planted 4 acres of radiata pine trees in 1979. The pine paddock is now an excellent refuge for sheep off-shears. Although pines were planted every year until the early 1990s, they now prefer natives as the pines inhibit grass growth beneath them.

"We only plant natives now," says Gordon. "There are grants to plant natives, they are the plants that are meant to be here, and they are best for the animals and birdlife. We see the better, softer grasses in our native timber, like cocksfoot, fescue, microlaena and wallaby grass, whereas summer grasses dominate out in the open."

Between 1994 and 1998, Gordon and Jan experimented with natives by establishing 13 revegetation sites with no funding assistance. "We made plenty of mistakes: the plantings were all linear strips and much too narrow, and the preparation for planting was inadequate," says Gordon.

In 1998, their whole-farm plan highlighted the exposure of the southern part of the property and the bush remnants that needed protection and linking to the Oaky Valley bushland, 2 km to the south-east.

In 1999, Gordon and Jan joined the newly formed Oaky Landcare Group

and were able to access funding assistance for the first time. At this stage, Gordon and Jan were planting around 2000 trees each year.

However, at that rate of tubestock planting, Gordon realised it would take 40 years to achieve their goal—there had to be a better way!

Below—preparation in a ridge-top site in autumn prior to direct seeding in spring-summer.



Below—Advanced growth of young wattles in direct-seeded lines of wattles and eucalypts planted on the contour and mulch-mowed between the rows to maintain quality pasture.



Below—Direct-seeded lines of wattle and eucalypts undersown in a hill-top stringybark remnant ('Gordon's place'). Valuable pasture grasses (cocksfoot, paspalum and Parramatta grass) are freely seeding between the trees.



Direct seeding

Every year since 1999, Gordon and Jan have contracted Armidale Tree Group to direct seed sites on their property. Since then, they have achieved some 50 km of seeding and 10 km of fencing.

To enhance one badly degraded remnant, the Edmonds tried direct seeding and tubestock seedlings. Some years on, Gordon has found that the direct seeding has out-performed the tubestock, as they germinate over a number of years and are more resilient to drought and frost.

Preparation & planting

Site preparation is very important. "The secret to success with direct seeding is working the soil up to a fine tilth," comments Gordon. "I might work the soil ten to fifteen times to achieve this. I also work on the contour to avoid erosion."

Seeding lines are double ripped 12 months prior to spring planting, some being worked with a three-tine agroplough. During winter, the frosts and time break down the soil. The lines are worked with a double disc plough to produce the 1-m wide planting bed. This is then worked with a narrow set of offset disc harrows. The lines are kept weed free for 12 months and if necessary, worked again prior to planting and seeding.

"There's been an increased emphasis on mounding over the years. We were mounding for ten years, but we now try to leave the planting bed level. We didn't see any dramatic benefits, and we are starting to think ahead to when we will be driving or mustering in these areas."

"Coming into spring after good rain, I am ready to seed or plant. October-November is ideal, after the worst of the frosts, but only if there's been sufficient rain—we never water."

"I don't need to worry about the weeds too much after seeding or planting—if the ground preparation has been good, the seedlings seem to get through OK."

"We don't stake and carton tubestock anymore either. We did a comparison once and the unguarded seedlings did far better than the guarded seedlings. Yes, we have rabbits and hares, but our main losses are due to weeds and competition."

Although Gordon and Jan prefer to direct seed their main plantings, they still plant more than 1000 tubestock per year, either because areas are difficult to reach or species are difficult to establish (e.g. *Callistemon* and *Leptospermum*) with the seeder.

"I hope the trees and shrubs might become self-replacing—the wattles certainly are—and that we don't need to plant in the future."

Table 1. The cost of direct seeding and tubestock planting a 2.25-ha fenced block (40 planting rows, 150 m long, 2.5 m between the rows, 1-m wide planting beds).

Direct Seeding		Tubestock Planting	
Fencing 600 m (materials & labour)*	\$2,000	Fencing 600 m (materials & labour)*	\$2,000
Working up planting lines (14 passes) - 56 hours @ \$50 (tractor hire & labour)	\$2,800	Working up planting lines (10 passes) - 40 hours @ \$50 (tractor hire & labour)	\$2,000
Borrow BOZO-Harnham Landcare group direct seeder (transport, maintenance)	\$400	Tubestock seedlings x 3000 (2-m spacing)	\$1,500
Seed**	\$240	Planting (4 days labour)	\$800
Sowing (1 day, tractor hire & labour)	\$200		
Total (2.25 ha)	\$5,640	Total (2.25 ha)	\$6,300
Cost per hectare	\$2,507	Cost per hectare	\$2,800
No. of seedlings (2/m)	12 000	No. of seedlings (83% survival)	2500
Cost per seedling	47 c	Cost per seedling	\$2.52

^{* 7-}wire (1 barb & 6 plain), steel posts, wooden strainers and stays and some wooden battens

** Acacia seed: 200 g/km @ \$150/kg; eucalypt seed: 100 g/km @ \$185/kg; total of \$41/km

The real value of shelter

Having shelter enables Gordon and Jan to split their ewes into two mobs and have one mob lamb as early as July. This can mean better sale prices as early as Christmas-New Year, and only half the number of rams required, since they join the two flocks a couple of months apart.

"For this reason, I estimate that the shelter on our place was worth \$15,000-\$20,000 to us in 2002, when we achieved a premium for turning lambs off early.

"We are starting to open up some of the 6-year old planted areas to sheep now, and they invariably go straight to the softer grasses. They prune the shrubs a bit, but that's OK," says Gordon.

"We are making as much or more profit, too, despite having 15% of 'Ponds Creek' under trees," says Gordon. "Admittedly we are reopening two to three hectares per year to stock but we are still fencing off five to six hectares per year for revegetation."

Wildlife

Gordon and Jan like having native animals around. 'Sandy Creek' has platypus and 'Ponds Creek' has echidnas, sugar gliders, and now a couple of wallaroos.

"Early this year, the first pair of wallaroos appeared," says Gordon. "Now there are two pairs."

The revegetated corridors and enhanced remnants are creating better wildlife habitat.

"By providing corridors and stepping stones, we are tapping into the regional reservoir of wildlife, and bringing animals back on to our property," says Gordon. "We have some beautiful species here we didn't see 15 years ago," adds Jan.

"We are trying to diversify our tree plantings so we have some understorey species blossoming all year round," says Gordon.

"The health of the bigger eucalypts depends on the habitat provided by understorey for the beneficial insects, birds and other wildlife that control the pest insects associated with dieback."

Background-Direct seeded natives.

"We aim for a 33:67 tree:shrub ratio in both our direct seeding and tubestock plantings, for habitat and shelter."

Gordon finds his favourite planted areas good for quiet time and reflection. "If ever I have a bad day, I go and have some time to myself and wander through the wattles. It's like a tonic—good for the soul."

Passion & poetry

Gordon and Jan are passionate about a wide range of community services and social activities including the Oaky Landcare Group. "It's great to be able to share information with like-minded people."

Gordon and Jan still have several years of revegetation work ahead to meet their reforestation target. But given their interest and passion for learning and continuous improvement, they're unlikely to stop. Pasture and grazing management is their next focus and they are on the waiting list for the next locally run course.

Their pioneering role in revegetation and Gordon's love and growing fame in reciting poetry are opening yet more doors.

Above all, they are positive about the future and their own capacity to improve their land and enrich their lives. A favourite poem that Gordon loves to recite reflects this 'can-do' attitude:

The Victor

If you think you are beaten, you are; If you think you dare not, you don't; If you'd like to win, but you think you can't, It's almost a cinch - you won't.

If you think you'll lose, you're lost, For out in the world you find Success begins with a fellow's will; It's all in the state of mind.

> Full many a race is lost Before ever a step is run; And many a coward fails Before his work's begun.

Think big and your deeds will grow, Think small and you'll fall behind; Think that you can and you will; It's all in the state of mind.

If you think you're outclassed, you are -You've got to think high to rise; You have to be sure of yourself, before You'll ever win a prize.

Life's winnings don't always go To the stronger or faster man; But sooner or later the man who wins Is the man who thinks he can.

C. W. Longenecker



The Native Vegetation and Biodiversity subprogram of Land, Water & Wool is working with woolgrowers and demonstrating that biodiversity has a range of values, can add wealth to the farm business and can be managed as part of a productive and profitable commercial wool enterprise.

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The Land, Water & Wool Northern Tablelands Project is led by Associate Professor Nick Reid, University of New England, in collaboration with Southern New England Landcare Ltd and the Centre for Agricultural and Regional Economics.

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