Above—Tony & Janet Gall at 'Wilson's Creek'.

Background—'Wilson's Creek' stud ewes.

Wool production & biodiversity

Testimonial

working together for

Tony & Janet Gall

'Wilson's Creek'

Location

8 km west of Uralla, New England Tablelands NSW, Gwydir catchment

Property size & paddocks

1900 ha (4700 acres), 47 paddocks

Average annual rainfall

813 mm (32 inches)

Main enterprises

Superfine Merino wool (17-18 micron) and beef cattle

Stock numbers

9600 Merino sheep
500-600 cattle

Stocking rate

6.5 DSE/ha (2.6 DSE/acre, combined sheep and cattle)

Main soil types

Meta-sedimentary (55%) and fine granite (40%) soils, with a small amount of basalt (5%)

Vegetation types

Formerly stringybark, yellow box, Blakely's red gum and rough-barked apple grassy woodland. Mostly cleared to remnant mature trees and small stands of timber and sown to pasture, apart from one 40-ha area of little-grazed stringybark-mountain gum open forest.

Elevation

950-1070 m above sea level

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Introduction

'Wilson's Creek' has been managed by Tony and Janet Gall since 1981, and was purchased by Tony's father in 1949.

Tony and Janet's aim is to conduct a profitable wool enterprise whilst caring for and improving their native environment for the future. "We appreciate our natural resources and want to add to and improve them," says Tony.

This is not always easy—the duplex soils derived from the granite and meta-sedimentary parent materials are of low to moderate fertility, naturally acid, and prone to erosion. The pasture improvement era in the 1950s-1970s saw the widespread decline and death of scattered native trees and small stands of timber in developed parts of the region, a process of 'dieback' that continues today.

This testimonial describes Tony and Janet's passion for their land and the commonsense, practical approach they have adopted in developing a profitable, respected, modern superfine wool business. Since the land sustains their business, they in turn strive to improve their farm environment and nurture the natural resource base.

Enterprises

'Wilson's Creek' wool

The 'Wilson's Creek' wool clip has built a reputation for its heavy cutting ability, style and soft handling attributes. It has been sought after by the world's most fastidious processors over many years and has led to many successes in local and national fleece competitions including the prestigious *Ermenegildo Zegna Awards*.

Below—'Wilson's Creek' wool.

The sheep enterprise runs approximately 10 000 Merinos, including a small stud of 360 ewes and 3700 Merino breeders. Lambing averages above 90%. In 2004, 9200 sheep cut 38 tonnes of wool averaging 4.1 kg/head.

The 'Wilson's Creek' stud sources genetics from predominantly Merryville, Hillcreston and selected Saxon bloodlines. Tony's sheep breeding and animal selection is based on the four 'F's: feed, feet, fertility and frame. Once the animal's constitution is determined, the finer wool attributes are valued. The ram selection index (EBV) includes wool attributes as well as a faecal egg count factor. Wool qualities at 'Wilson's Creek' aim for high quality, high-crimping, traditional style spinners wools.

Tony aims for maximum profit through concentrating on the key profit drivers for superfine wool: a healthy animal, yielding profitable returns of fine wool from fertile, natural and introduced pastures.

Wool clip preparation and marketing

'Wilson's Creek' wool averages 17.4 micron and is grown for the Italian spinners as well as Asian markets. Micron testing of the maiden ewes is undertaken by laserscan in March-April each year, prior to joining at 18 months of age. The broader 10% are

Annual program

Shearing	Aug-Sep
Lambing3	Sep-Oct
Lamb marking	Nov
Sheep classing	Jan
On-farm sheep sale	Feb
Joining, artificial insemination	Apr
Pregnancy scanning	Jul

Above—Stud ewes at 'Wilson's Creek'.

normally sold the following summer after running as dry sheep, as numbers permit.

Tony and Janet understand the importance of proper preparation of a quality product to gain maximum returns at auction: "Preparation, presentation and reputation bring expectation."

Beef cattle

Tony and Janet also run a Poll Hereford herd of 180-200 breeders, aiming to sell 400-500 kg steers at 18 months to the feedlot market. They run about an 80:20 ratio of sheep to cattle, with the cattle and wethers being their drought buffer. In severe drought, they can still maintain their core breeding stock. If seasons permit, some trading of steers takes place, and assists with grazing management for the sheep enterprise.

Quality assurance

'Wilson's Creek' has Flockcare and Cattlecare accreditation, which Tony and Janet view as marketing tools for commodities that are produced to the highest standards.

'Wilson's Creek' is a member of the Australian Superfine Wool Growers Association, a much respected, national grower body. The ASWGA demands the highest quality standards for membership, and excludes use of exotic breeds of sheep (e.g. Awassi, Damara etc.). Tony values being involved in special promotions and projects with top end-processors from Asia, Europe and the UK. He is currently working on supply chain contracts for superfine wools with assistance from Australian Wool Innovation.

"Participation in superfine wool fleece competitions and clip preparation awards is also a way of building a reputation, advertising and marketing your prestigious luxury fibre," says Tony.

Working with natural resources for better production

Pasture resources

Native pastures

Pre-eminent in Tony's thinking is his appreciation of the native pasture species such as *Microlaena*, *Danthonia* and the native legumes that are so well-suited and special to superfine wool production in a balanced pasture.

"These species are the survivors, and they must be nurtured. A lot of the success of our fine wool is due to the native species across the country—*Microlaena* in particular—so you have got to treasure them. The native species are adapted to the cool climate and high altitude.

"Overgrazing and over-fertilising these species creates a risk of reducing their balance. Their ability to grow high tensile-strength, bright, stylish superfine wools in this cooler climate New England region, cannot be underestimated."

In order to nurture the pastures on 'Wilson's Creek', Tony lightly stocks some paddocks, and spells many throughout the year. The pastures over the whole farm are aerially fertilised at the rate of a hundred weight of superphosphate to the acre every couple of years. The seed of introduced legumes and occasionally rye grass is added to the super to maintain a balance and supplement existing pastures.

"It's a balance between what we are told is the ideal by researchers and what works best, in practice," says Tony.

Introduced pastures

"All of this country has had a history of over one and a half tons per acre of superphosphate. In later years, applications have been at maintenance levels."

Introduced species at 'Wilson's Creek', include sub and white clover, fescue, ryegrass, cocksfoot, plantain and chickory. Many of these are sown in a shotgun mix. Paddocks are sprayed out and sown using a triple disc drill.

Tony explains, "I aim to take all undesirable species out when I sow a pasture and I tend to sow the whole paddock. The more established natives tend to return over a few years. I try to maintain small areas of highly productive, introduced species, but I don't get worried if the natives start to come back. I might have 20% of the property under more intensively managed sown pastures at any time, but I have no strict rule on the balance between the native-dominated and introduced pastures. You have to be flexible."

Striking a balance

"Introduced pastures are highly productive and do well in good seasons, but they have their limitations.

"In this part of New England, you have trouble keeping them long-term due to seasonal conditions. They need to be grazed in a time-controlled, conservative manner. If not, they die out and the couch and better volunteer natives come back.

"Pasture scarab grubs are also a problem in our sown pastures, often limiting their persistence.

"As a result, we rejuvenate sown pastures periodically using direct drill methods to avoid erosion problems."

"Acid soils are a problem, and so we add lime prior to establishing a sown pasture.

"Competition from silver grass or rat's tail fescue (*Vulpia*) can be a problem in sown pasture particularly with the stresses on introduced pastures due to unreliable rainfall and lack of persistence. We clean up *Vulpia* with simazine.

*Below—Weeping rice grass (*Microlaena stipoides*), a yearlong green native, beneath a stringybark in the Airstrip paddock at 'Wilson's Creek'.*

"We also make use of satellite maps from commercial sources to identify less productive areas and identify accurate paddock areas, for planning purposes."

Grazing management

In terms of his grazing plan, Tony ideally works his cattle ahead of the sheep. "We aim for limited use of anthelminthics. With some drench resistance present, pasture contamination levels are monitored regularly, with strategic and more regular movement of stock between paddocks.This practice involves running larger mobs of sheep and spelling some paddocks for more extended periods, particularly in the wetter summer months when Barbers Pole worm is present."

The Scrub—a jewel

Tony and Janet cherish their 40-ha remnant of stringybark and mountain gum forest ('the Scrub').

"The Scrub is our jewel," says Tony. "It's a unique and rare natural haven. We appreciate the bit of nature we've got because once it's gone, you've lost it forever.

"The Scrub is valuable for birdlife because it's in its native state with a great variety of species. We exclude stock to maintain the natural state and encourage the wildlife and birds out across the rest of the property."

The micro-environment inside the Scrub is quite different, and was part of Tony's inspiration for protecting it and trying to replicate features of it across the farm. "It can be blowing a gale in winter but if it's a sunny day, you often have to take your jumper off inside the Scrub."

"The only time we might graze the Scrub these days would be in August with sheep off-shears in bad weather for a short time."

Background—Part of the 'Wilson's Creek' landscape.

Below—The Scrub "…our jewel."

Even dead timber in paddocks is valued by the Galls. According to Tony, "Dead timber lying around is not a concern at all. It provides some of the greatest protection for lambing ewes and sheep off-shears. We have low rabbit numbers, so they're not much of an issue with dead timber."

"Where we have left green timber in paddocks for the protection of stock, the pasture eucalypts and semi-natural environment attract lots of birds, and this is important for insect control."

In Tony's view, primary industry has to fit into the natural background of the country. "Don't go and kill off all the natural assets you started with, because you are going to need them."

Tony and Janet have developed a farm plan for dieback and salinity management, based on extending lines of trees and shrubs out from the Scrub paddock. "The Scrub is a pot of gold to work from in terms of its environmental values and native biodiversity. We look at the species in there to see if they will adapt to surrounding areas. The idea is to help the birdlife move across the property to look after insect pests."

Windbreaks & wildlife corridors

Tony explains his rationale for planted windbreaks and wildlife corridors. "The country was covered in timber once, and we would like to return it to a more natural situation. We need to run our stock as well, but you couldn't continue to run stock in New England without corridors of native trees in particular. One of the great things about Landcare is its ability to coordinate corridor networks across the whole district."

Tony and Janet have planted 30 000 trees and shrubs since 1991 in 10 km of 4-row windbreaks as stock shelter and corridors for birdlife. They are positioned strategically along ridgelines to provide maximum shelter, so paddock engineering is important. "We try to ensure that the areas where sheep naturally camp are where we subdivide a paddock and add shelter. Stock take advantage of the shelter as conditions require, provided you have located it in the right place."

Above—Sheep grazing near a planted windbreak. Windbreaks across the property link between 'regeneration areas', remnant timber, the Scrub and similar timbered areas on adjacent farms.

"We introduced about 50 species into our windbreaks or corridors to balance the risk. The natives have generally handled it well, although snow gums established beautifully but after eight years, started dying out and continue to do so.

"Of the other eucalypts, the red gums, stringybarks, white gums and yellow box are surviving well.

"The bird life is prolific in the tree lines, with lots of parrots and small birds such as wrens and honeyeaters. We see the odd koala—they have increased in the area, and we have seen more in the past six years than in the whole time prior to that. It's amazing where you find them.

"The pastures adjacent to tree lines can be stressed through competition with the adjacent trees and shrubs for moisture. **But further out, the pasture is a lot more productive than without the tree lines. So although you might lose 10% in production close to the tree line, you pick up more than that in increased production further away."**

Natural regeneration

The planted windbreaks and corridors are used to link remnant stands of timber or 'regeneration blocks', 2-5 ha in size, where Tony and Janet hope the native vegetation will be able to sustain itself over time.

Encouraging natural recruitment of native plants in the stringybark and yellow box remnants across the farm has been difficult. According to Tony, "Native and introduced grasses have established very thickly in these blocks because of the fertiliser history, dung accumulation and elevated organic matter, creating too much competition."

Above—Silver wattle root-suckering in a windbreak on 'Wilson's Creek'. A dead parent wattle stands behind.

Wattles are an exception. "There's good regeneration of the acacias in the corridors and blocks. They are root suckering inside the tree lines where the stock can't eat them. The suckers could eventually be thicker than the original tree."

The 40-ha Scrub is very different. The Scrub is large, dense and natural enough to be self-sustaining, with a good balance of younger and older trees, a healthy diverse shrub layer, regeneration of shrubs and trees, and a diverse, relatively open ground layer of native grasses and forbs. It does not have a fertiliser history.

Protecting water quality

Tony has fenced out some of the riparian zone along Wilson's Creek (which bisects the property) in order to protect the fragile creekbanks from stock damage and erosion, and improve water quality. Future Landcare projects will protect the springs that feed the creek and the waterholes.

Troughs are preferred over small dams for stock watering. According to Tony, "It's cheaper, and the water is of better quality and more reliable. Small dams become a problem for sheep during dry times due to bogging."

Left—Tony and Janet with Her Excellency, Professor Marie Bashir, Governor of NSW and Count Paolo Zegna, Joint CEO of Gruppo Ermenegildo Zegna, Italy, after winning the 22nd Ermenegildo Zegna Trophy for Extrafine Wool in the Protected Fleece category.

Background—A 15-year old, 3-ha regeneration block with a lack of natural regeneration and dense pasture inhibiting tree and shrub recruitment.

The challenge of sustainability

While attention to detail in the fine wool operation and farm environment are hallmarks of management at 'Wilson's Creek', Tony doesn't lose sight of the challenges ahead. "We must ensure that we are set up to be economically and environmentally sustainable for the future."

"To ensure our economic viability, we first ensure our enterprise suits our country, we plan for droughts, we make use of Farm Management Deposits, we attempt to secure long-term supply chain contracts for our wool, and we take succession planning seriously. We then remain focused on producing top quality products, profitability and marketing to our advantage."

Tony also dedicates a lot of his time to ensuring a bright future for Australian wool. He is active in the industry, having been President of the national body of the Australian Superfine Wool Growers Association from 2001-2004.

Further industry commitments include involvement with several AWI-funded projects, including improved superfine wool preparation, chemical residues in wool, and trials involving alternative mulesing methods. Improved marketing opportunities for superfine wool involving supply chain initiatives are also of keen interest for the future of the industry.

An important message

"My most important message is that we must learn to appreciate our environment. We are so lucky, but we must aim to leave the country in better shape than we inherited it. After all, we are only caretakers, and we can always do better," says Tony.

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native vegetation and biodiversity
improving farm profits through biodiversity

The Native Vegetation and Biodiversity sub-program 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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