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TreeNote

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Farmer experiences in farm forestry

Edgar and Tina Hawter, Amber Valley Orchard, Balingup

By Debbie Walsh, Bridgetown

Third generation Balingup farmer/orchardist Edgar Hawter began looking seriously at the benefits of blue gums (Eucalyptus globulus) *10 years ago in a move to increase productivity on his farm.*

Edgar and his wife Tina were particularly keen to get better returns on the steeper sections of their 364 ha property which, at the time, were being used to graze cattle.

They also believed commercial tree farming would complement their main farm enterprise – an apple and stone fruit orchard.

After two and a half years of extensive research the Hawters decided to plant and manage their own plantation of blue gums on a steep hill above their homestead.

For the past seven years they have continued planting selected areas of their property with a mix of Tasmanian blue gums (*Eucalyptus globulus*), Sydney blue gum (*E. saligna*), rose gum (*E. grandis*), blackwood (*Acacia melanoxylon*), and pines (*Pinus radiata*).

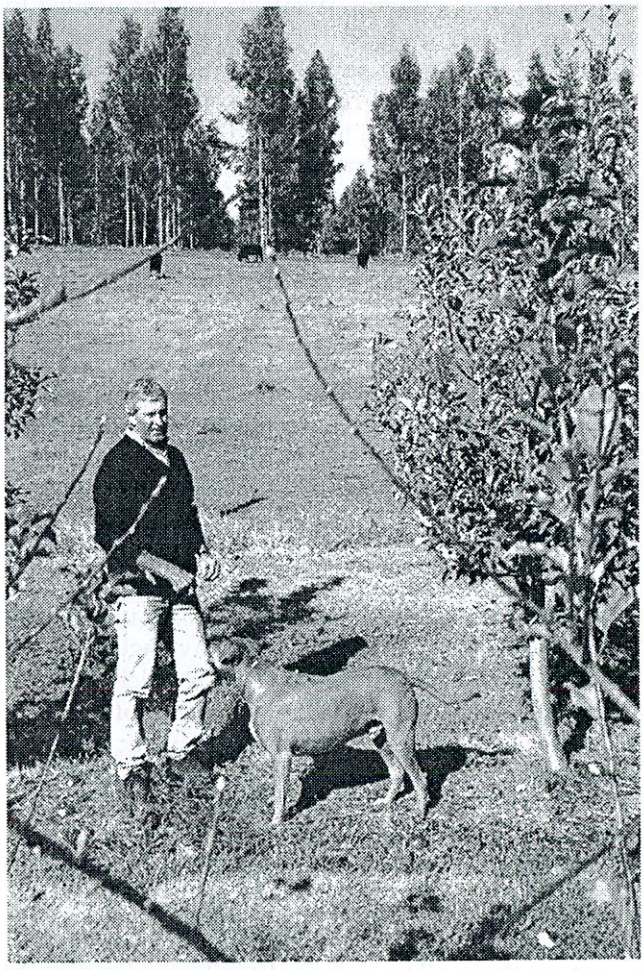
Today the Hawter farm combines an 18 ha orchard producing 25,000 cartons and trays of stone fruit and 400 bins of apples with 78 ha of commercial tree plantations and cattle grazing/hay cropping.

Background

When Edgar and Tina first returned to the 240 ha family farm just off the south-west highway north of Balingup the couple initially planned a sheep/cattle grazing operation. They removed the remains of a stone fruit and apple orchard run by Edgar's father and set about farming stock instead. At the time they ran 300 Hereford/Friesian cross cows to produce baby beef and 1800 merino sheep. In the early 1980s, facing reduced as margins from grazing, the Hawters turned to the feedlotting of baby beef produced on the farm to increase returns. They did this for 10 years.

Developing the orchard

Increasingly disenchanted with returns from the feedlotting enterprise, Edgar decided his land, situated in an 800 mm rainfall area, was best suited to tree growing. He planted a small stone fruit orchard to provide fruit for the Manjimup Canning Factory. He continued planting stone fruit before diversifying into Pink Lady and Fuji apple varieties in the early 1990s



Edgar Hawter in orchard block with (in background) 7-year-old E. globulus *pruned for sawlogs and thinned to 400 stems per hectare in April 2000.*

– taking total orchard plantings to 18 ha. Fruit production slowly replaced stock as the main revenue raiser on the property. Apart from the traditional plums and peaches the Hawters' recent plantings have included white-fleshed varieties of peaches and nectarines based on Zeiger genetics.

Motivation for trees

As the orchard began to consume more time and resources the Hawters began looking at what they considered to be the 'inefficient use' of other areas of their property – in particular a steep hilly section of the farm above their house and orchards. While they didn't have a problem with salt, which is sometimes a motivation for large scale tree plantings on a farm, they did see environmental, aesthetic and economic benefits could be gained by planting trees.

Making decisions about trees

After two years of research Edgar decided that to achieve economic use of all of his available land he needed to take the steeper land out of grazing. This area was difficult to cultivate or renovate for pasture, and weed control was expensive. Time and money were increasingly being apportioned to the orchard and he found it difficult to continue their intensive grazing operation. He decided growing plantation timber for the woodchip market would be an economic alternative use for the steep non arable land on their farm.

Opting to 'go it alone'

After looking at the returns they could achieve on an annuity basis by leasing the land to tree farming companies the Hawters considered they would not attain a sufficiently big enough share of the eventual worth of the crop for it to be worthwhile. They calculated they would only get a return of about 50 per cent of the true worth of the crop. Sharefarming schemes at that time (early 1990s) offered about $120 per ha per year annuity. Working on an average growth rate of 20 cubic metres of timber per hectare per year with an average farm gate price (stumpage) of $20 per tonne for woodchip timber, the Hawters decided they would be better off planting and managing the trees themselves. They calculated the return would be $400 per ha per year. Edgar says those basic assumptions made at the outset of their tree planting enterprise still hold true today.

Flexibility

Edgar and Tina believe by planting and managing their own trees they will have more flexibility in deciding the eventual market for their timber. This was a major consideration in deciding whether to enter a sharefarming scheme or to go it alone. Although initial plantings were made with the woodchip market in mind, Edgar now wishes to manage a portion of his blue gums (*E. globulus*) for sawlogs. He also believes some of the other species he has planted will have potential as sawlogs and wants to have the ability to tailor management practices on the farm to take this into account.

While recognising their decision gives this flexibility, Edgar says he and Tina also realise they carry the total risk should there be a downturn in the industry.

Pines v. blue gums

When Edgar and Tina made the decision to move into tree farming, pine plantations were already established in the area and some of the first commercial blue gum plantations had been planted. The former Bunnings (now SOTICO) had also identified the opportunity and created the critical mass for a woodchip industry. Edgar looked at plantations in Balingup and Mt Barker before making his decision. It was the quicker returns (10-year cycle) offered by a blue gum plantation which influenced the Hawters to choose blue gums for their first commercial tree plantings. Their aim was to harvest 10 to 15 ha of trees every two years to achieve a regular sustainable income from their plantations.

Getting started

In 1993 the Hawters chose a steep south-facing site on which to plant their blue gums. Thirty-five hectares were planted which included wet areas and roads. The planting density was 1200 stems per hectare. The cost was about $1000 a hectare including weed/vermin control, ripping, purchase of trees, planting and fertilisation. Edgar estimates failed weed control and natural deaths reduced plantings to about 900 per hectare over the first three years. With the benefit of hindsight he believes much of the area would not have been considered suitable for trees under today's criteria for site selection. (It is now recommended that soils need to be more than 3 m deep to be suitable for blue gums.) As a result he believes some unsuitable areas were planted because of lack of adequate information. However, on tree growth results so far, Edgar says he is pleased the plantings went ahead.

Increased tree plantings – 1995

In 1995 Edgar planted a further 10 ha of the property with a mix of species after recognising they needed more trees in the ground to maintain an economically viable farm forestry regime. The aim was to use the blue gum component of the plantings to generate income as early as possible in the program, thereby providing resources to manage the long term sawlog component of the plantings. With this in mind, the Hawters expanded the species for their tree growing program on selected areas of the property. Mindful of the aesthetics and general layout of the property and not wanting to hem the area in with large blocks of trees, Edgar and Tina chose a site to the north-west of their first plantation. This time they tested the soil by backhoe to 3 m and engaged two forestry consultancy firms to advise on the site and species selection.

The companies gave different recommendations, with one firm recommending row planting with multi species – which the Hawters decided not to adopt at the time. Instead they planted a 1.5 ha area of wetland to *Acacia*

melanoxylon. Slopes with deeper soils were planted with *E. globulus*, the marginal country with *E. saligna* and rocky outcrops with *Pinus radiata*. The aim was to leave the creeklines and some vistas to maintain the aesthetic value of the property. All areas were planted at 1200 stems per hectare. Total cost per hectare, including consultancy fees, was less than $1000 per hectare.

Commitment to the industry

Concerned that they still didn't have enough trees in the ground to attract a tree harvesting operation, the Hawters went ahead with more tree planting in 1997. This time, instead of going for the marginal and/or steeper sites on the property, they decided to grow trees on the better, flatter sites to make their plantations more viable for harvesting contractors. Edgar says that by then he was satisfied that the selected locations would grow trees, and he knew trees could provide him with a sustainable income and low management requirements when compared to more intensive livestock operations.

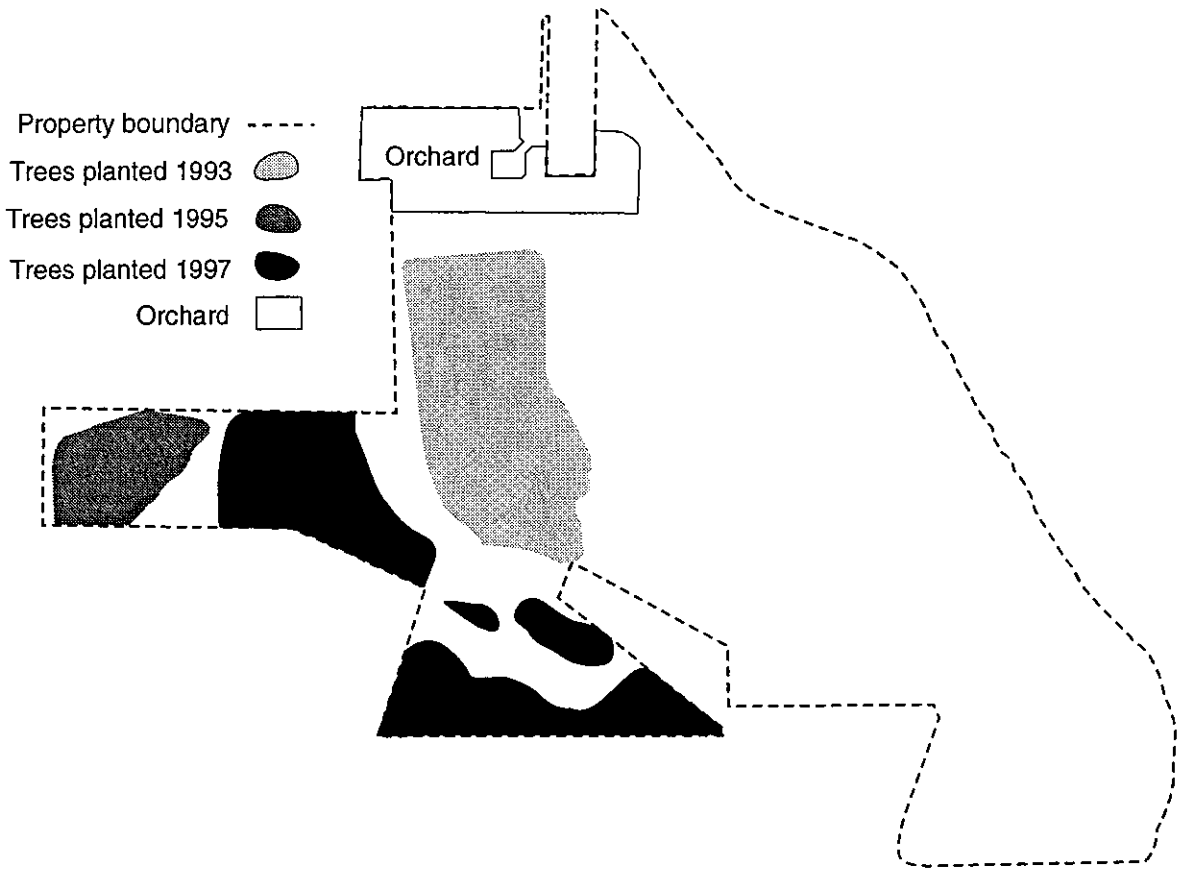
A blue gum focus

In 1997 blue gums dominated the plantings. A 20 ha site primarily for the woodchip market was established but the Hawters decided to keep their options open for management of the blue gums for the sawlog market as well. A 2 ha site featuring deep fertile soil types on the lower slopes was planted with rose gum (*E. grandis)* for sawlogs, a 1 ha site was planted to Tasmanian blackwood (*Acacia melanoxylon)* and smaller sections on the more marginal soils were planted with Sydney blue gum (*E. saligna)* and spotted gum (*Corymbia maculata*). Tree plantings were generally 1200 stems per hectare except for the blackwood stand which was planted at a higher density because of its multiple branching habit. Edgar says there have been mixed results with the blackwood plantings on wet sites with waterlogging taking its toll on tree survival rates. And while he believes the spotted gum will eventually make good sawlogs they have been particularly susceptible to frost in the first year of planting and to insect attacks up to year three.

First thinnings

Thirty per cent of the 7-year-old blue gums planted in 1993 have been thinned for pulpwood in the year 2000 by a contract logging company. As a result tree density has been reduced from 900 to 400 stems per hectare over this section of the plantation, providing the option of growing the trees on for sawlogs instead of for woodchips as initially planned. The trees will be thinned down to 270 stems per hectare over the next three years, hopefully producing sufficient volume for a commercial thinning. If this cannot be achieved, this small patch will be thinned to waste to allow an *E. globulus* sawlog trial to mature.

Tree planting layout for E. and T. Hawter farm



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Making money from thinnings

The 12 ha of blue gums (as above) yielded 919 cubic metres of timber providing an average of 76.5 tonnes per ha. The average stumpage received was $21.80 per tonne or $1668 per ha. Edgar says this is a pleasing return given that the trees are growing on the steepest, least attractive site of all the current plantings. Based on these figures Edgar is confident his initial calculation of a return of $22 per cubic metre ($528 ha per year) is still achievable over plantings on better soil types and less undulating land.

Site selection can make a big difference to returns

Edgar says the steep topography slowed the production rate for the logging company which increases harvest costs per cubic metre. He believes he is lucky to have been given the option to get a third of the plantation thinned as he considers that as the volume of timber produced on flatter, accessible country builds, it will become less attractive for contractors to harvest steeper country. He calculates 80 tonnes per ha is the minimum return needed to make an operation viable for timber harvesters when thinning a plantation. Therefore Edgar cautions farmers about planting steep areas for sawlog regimes, expecting a commercial thinning. He says if people do have this market in mind they may have to be prepared to thin to waste instead of hoping for a commercial thinning.

The economics of growing chip v. sawlogs

Edgar will discuss future options for the plantings on the 1993 site with logging contractors and if thinning is not viable the trees will be clearfelled for woodchips at 10 years of age. The section of the plantation that has already been thinned will be managed for sawlogs. According to Edgar the recent thinning should have removed the risk of drought deaths which has claimed a small number of these trees. Edgar is hoping in 18 months time the section that has been thinned to 400 stems per hectare will produce in excess of 20 cubic metres of clear wood per year. The expected stumpage is between $40 and $60 per cubic metre as opposed to $20 per cubic metre which is the current value of chiplogs.

Prunings in 2000

This year Edgar is pruning the sawlog component of trees planted in 1997. Trees are being pruned to two metres and those with poor form are being thinned to waste.

Efficient use of labour

Edgar and Tina have found that orchards and tree plantations are complementary. Being able to alternate the farm workforce between the orchard and the plantations makes for efficient use of labour. In the autumn and winter months when pruning is underway in the orchard, workers are also kept busy pruning plantation trees.

Learning along the way

While Edgar had plenty of experience in sheep/cattle farming and orchards he admits he went into commercial tree farming with a "lot to learn". As he decided to grow his own trees in preference to taking part in a sharefarming scheme, the learning process has largely been trial and error. Something he has learnt is the cost in both money and time to grow timber for sawlogs as opposed to growing for the woodchip market. He also says site selection is a crucial component in planning a plantation. Small plantations and poor sites, or sites with poor access may be difficult to get harvested in the future. Distance from port could also impact severely on returns.

Rewards for quality assurance

Edgar believes 'quality assurance' will become an increasingly important part of commercial tree growing as is the case in all other farming enterprises. He says it is no longer good enough to just plant a tree in the ground and wait for the returns. He would ultimately like to see a quality assurance system in place for plantation trees so that growers receive a premium for having pruned trees with a maximum amount of clear wood.

Marketing options for smaller producers

For smaller growers with an uncommitted resource there are alternatives for marketing such as Western Timber Cooperative. The company is preparing an inventory of blue gum, pine and other sawlog species with the aim of accumulating sufficient resources to market timber in the future. Edgar is a director of the Western Timber Cooperative, Bridgetown.

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TreeNote Editor: Peter Watt on (08) 9368 3390.

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