Direct seeding
Optimising returns
Environmental benefits
Welcome

Once again Private Forests Tasmania (PFT) is proud to be associated with AGFEST as it has been since the inaugural event in 1983.

PFT likes to take the opportunity of having clients coming to our door for a change instead of knocking on theirs. For us it is always a pleasure to meet new friends as well as see our old ones.

This year the theme for the PFT display is back to basics: “How best we can help the private forest owner/grower”.

Our display this year reflects our Mission Statement:

To facilitate the sustainable management of native and plantation forestry on private land in Tasmania. This mission includes:

- Encouraging commercial wood production
- Encouraging the use of trees in land management
- Promoting the environmental benefits of trees and forests
- Promoting opportunities for competitive markets
- Optimising returns for all parties

Come in and see us in our new marquee at No. 334 Third (3rd) Avenue and join us for a cuppa. See you there 1-3 May.

Graham Sargison
Chief Executive Officer

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Direct seeding may suit your circumstances

So, you haven’t had any rain. The soil and the subsurface layers are parched, and you are worried that you won’t be able to plant the trees you have on order from the local nursery.

If you cancel the order the nursery may be stuck with them, for the same reason that others might be in the same situation as yourself and unable to plant. If you go ahead and plant on the promise of rain, it just might not happen, and you’ll have wasted all that time in ground preparation and planting.

If this sounds familiar, but you still like the idea of moving forward and establishing trees on your farm, direct seeding may be the answer. Direct seeding, as the name suggests is the direct placement of seed into prepared ground, with the aim of establishing trees in a quick, efficient, and economical method.

Private Forests Tasmania operates a direct seeding service and has done so for over a decade. The organisation uses a ShelterSeeder, which is a small lightweight unit towed by an all-terrain four-wheel motorbike. Designed originally by Bill Sharpe the principle is that an offset disc scalps the surface, a tickle tyne touches up the base of the scalp line, and seed which is dropped from a hopper is covered by the disturbed tilth and rolled in with a press wheel. All this from a unit no larger than the bike towing it!

The advantages are that seed when ordered, subject to species, can be stored for some time should anticipated seasonal conditions not eventuate. This negates being stuck with pre-ordered plants! Site preparation, species selection, and weed control can all still be carried out, but the final decision as to whether to continue with establishment is flexible, based on the conditions of the season.

The sowing process can be done in any configuration required, from straight wind-row or shelter lines, to contour sowing, or meandering beneath an existing canopy.

Species selection is diverse and can either be of a single, a few or many different species sown at the same time. The mix can be all native, all exotic, or a mixture of both to reflect the outcome required.
Time of sowing is usually around autumn and spring, with frost incidence being a determining factor. Low frost incidence areas have the luxury of using both seasons, but for those areas subject to heavy or late frosts, the window is most often spring.

Just like the planting method of tree establishment, planning is important. The biggest single limiting factor, subject to everything else going smoothly, is competing weed control. If it is anticipated that a large amount of stored weed seed will be present and germinated by disturbance, it may be necessary to carry out several weed eradication operations. These also need to be done over several years to limit the potential for direct competition to the successful outcome of the direct seeding exercise. The secret is to plan ahead.

Soil types are a further contributory factor to success. Sandy, low organic component soils with little moisture-holding capacity have limited ability to sustain seedlings trying to establish during dry spells. This is where the timing of sowing is very important. Soils with higher clay content or good organic matter levels can store and hold moisture for longer periods.

Gravelly soils are great, as seedling roots penetrate quickly to subsurface moisture, and it is surprising sometimes the conditions under which plants will survive.

For further information or site inspection please contact Michael Castley of Private Forests Tasmania, Launceston office, 6336 5304
The symbiosis of forestry and farming

On a warm November day over 40 people gathered to be inspired by one farmer’s innovative journey into integrating farm forestry with his livestock production. Wilmot, in Tasmania’s north-west, is 350 metres above sea level, has an annual rainfall of 1100mm and with the rich predominantly red basalt soils, the spring growth was green and lush. Roger Poltock’s property comprises 105 hectares, with 17ha native forest and 25ha being planted to trees in a mixture of permanent and commercial shelterbelts and woodlots. Most of the plantings have been established on the more ‘difficult’ non-farmable areas on the property, where there are poorer shallower soils, stony slopes, areas prone to weed infestation or waterlogging and around dams and watercourses. The remaining 63ha of prime agricultural land is dedicated to rearing beef cattle.

The Farm Forestry Field Day, organised by Henry Chan (NW Private Forest Advisor), is an annual event where farm foresters, tree growers and processors can network and learn from each other. The inspiration from the day came from learning about the full range of farm forestry options Roger has embraced and there is truly a rich tapestry in design and management techniques adopted across the property (see Plate 1). Six different sites were visited varying in type, condition, tree species, stand management and intended end product outcome. Four sites incorporated Radiata Pine (Pinus radiata) planted for high-value sawlogs and for shelter. Roger maintains his shelterbelts to the same high standard as he does his woodlots and all with the aim of getting a return for the well-managed trees, as well as improving the returns from his livestock production.

Roger explained that “Returns come both in financial benefits from the timber product and also from the environmental services the trees provide to the property and the wider catchment.” Roger further explained what these environmental services include, ie: protection from wind, frost and solar radiation; reducing soil loss where top soil is thin; lowering the water table in waterlogging-prone areas; improving water quality; and increasing biodiversity across the landscape. The trees have brought a direct benefit to his livestock production “I’ve noticed that up to 30-40 metres out from the trees the summer pastures hold their moisture much better; this has really helped with my stocking rates.” Roger said.

One of the Poltocks’ early ventures into farm forestry was the establishment in 1992 of a Leyland Cypress

Plate 1: Classic integration of farm forestry and agriculture, with plantations in the background, and native forest on the left.
(Cupressocyparis leylandii) plantation. The photograph in Plate 2 shows a view through this well-managed site looking across the property. The Cypress were planted with alternate rows of Shining Gum (Eucalyptus nitens), as a nurse, or companion, crop to help the Cypress grow better-formed trunks and smaller branches. A major issue for discussion at this site was the importance of managing a tree crop over its life, in order to maximise the return for the investment. Pruning, thinning, nurse crops, pest control and fertiliser application are all key components, which can make or break a high-value long-term crop. The consensus was that sound planning at the beginning of the enterprise minimises risk and helps ensure that the trees grow to their maximum height and diameter, stay healthy and provide a good return.

The four Radiata Pine sites ranged from an excellent example of Alley Farming, the ‘Agroforestry’ concept promoted widely in the 1980s, to shelterbelts and more recent larger plantations on dry rocky slopes. Discussions at these sites focussed on management techniques, market availability and wastage, especially from thinnings and prunings. Forest Enterprises Australia’s Sven Rand explained that his company’s Finnish Hew Saw is able to produce high-grade sawlogs from small diameter logs for their new product lines Bass Pine™ and EcoAsh™. This allows for thinnings and younger-age trees to be harvested for good commercial returns, opening opportunities for growers in the future.

In 2001 and 2002 Blackwoods (Acacia melanoxylon) were planted in various locations across the Pottock property, with assistance from a Natural Heritage Trust grant program, managed by Private Forests Tasmania. The aim of the Blackwoods was to stabilise some of the more unproductive ‘tricky’ areas on the property such as: weedy and rocky outcrops; riparian areas around dams and watercourses; and sites prone to waterlogging.

Although only 5-6 years old, the Blackwoods are already providing a stabilising benefit to these non-productive sites on the property. In the long term, with proper management, these blackwoods could produce high quality premium logs for decorative veneer, furniture, joinery, moulding, panelling, boat building and other premium timber products.

The field day was considered a success by all who attended and by the host who reflected that farmers usually work alone and it’s easy to lose sight of the bigger picture. “Field days like this help bring it home just what you’re accomplishing.” Roger said, “it’s very rewarding when you get such good feedback from fellow farmers.”

Janice Miller
Project Manager, Grants Program
Private forest growers often manage their trees (native forests and plantations) for wood production as well as numerous other benefits. These may include: increased farm production (forest grazing, shade and shelter), soil erosion and salinity control, water quality, landscape, conservation of native plants and animals, and recreation (fishing and hunting). Most land managers seek to maximise the financial return on their investment and keep costs to a minimum - they seek to optimise returns.

Private Forests Tasmania’s (PFT) aim is to facilitate the sustainable management of native and plantation forestry on private land in Tasmania. One of the five underpinning objectives is to optimise returns for all parties including private forest growers, industry and the community. PFT staff, most of whom are Forest Practices Officers and have worked in industry, can provide private landholders with professional advice when they are either considering, or are engaged in, forestry activities. Key advisory services are shown in the following table.

### Advisory Services

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<td>• Pruned Stand Certification assessment and audits</td>
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In addition, Private Forests Tasmania uses a planning tool, Stand History & Management Advisory System, to monitor plantation growth within individual plantations and to advise participating landholders on management options and actions to help them produce high-quality wood products.

The Farm Forestry Toolbox computer model enables useful economic comparisons to be made between different investments, for example short rotation pulpwood crops versus long rotation sawlog crops. Also, lump sums at final harvest can be compared with more regular income from several thinnings. The financial impact of bringing forward or delaying harvests can be readily determined, as can the impact of investing in pruning or non-commercial thinning.

Private landholders are encouraged to contact one of the three PFT offices for confidential forestry advice. Hobart 6233 7448, Launceston 6336 5300, Burnie 6434 6285.

**Arthur Lyons**
Regional Private Forester, North East
Pruned Stand Certification – the proof of guaranteed clearwood quality

Private landowners and farmers often have small areas of unproductive or unsuitable farming land. Planting up these small areas will enhance financial returns for the whole property.

High quality clearwood regime

Due to the economies of scale, to offset higher harvesting costs for small areas with lower volumes, these small woodlots and plantations should be managed with an intensive-silvicultural pruning and thinning regime. This will enable the production of high quality clearwood logs that will provide the best returns. The chance to market these small pruned stands can be improved dramatically if the growers can provide the assurance of log quality to the log buyers. This proof of log quality can provide the buyers with the confidence to pay a higher premium for the high value logs.

What log quality do “Clearwood Log Buyers” look for?

Clearwood sawmillers and peeler-processors look for logs with high clearwood volume to maximise recovery output. They will want some proof of guaranteed clearwood quality in order to pay an up-front premium price prior to harvesting. The growers will need to provide credible, documented stand measurements and information of the pruned trees. The following is a list of quality measurements and information:

- The assurance that the trees were pruned on time and to the prescribed standards
- The expected range of diameters at breast height (over bark)
- The pruned height of every pruning lift
- The largest diameter over pruned-stubs of the pruning lifts
- The degree of sweep or bend in the pruned section
- The stocking of pruned trees, for estimating total clearwood volume.

Pruned Stand Certification

A well-known system to achieve this quality assurance is the Pruned Stand Certification (PSC) accredited program. This certification system has become more and more acceptable to both domestic and overseas buyers. Originally developed by the New Zealand Forest Research Institute, this PSC program has been adapted and administered throughout Australia by the Australian Forest Growers (AFG), the national association representing and promoting the interests of private commercial and farm tree growers. Private Forests Tasmania (PFT), under consultancy to AFG, has been providing technical assistance and field training for this program.

Training course for the Pruned Stand Certification

AFG’s national trainer (Henry Chan of PFT) conducts one-day PSC training courses for tree growers (landowners and farmers), technical and professional foresters of forest companies, and consultants. The course is developed and structured to enable attendees to carry out the tree measurement and data collection comfortably, by following the guidelines and standards laid down in the PSC Manual (provided at the course). Each course consists of two sessions – a classroom PSC procedure session, followed by a field exercise in tree measurements and data collection in a recently pruned stand.

Upon completion of the course, attendees have the option to be registered as pruned stand certification auditors. Course attendees who elect not to become registered PSC auditors can only carry out each pruning lift’s measurements and
data collection. They then have to contract a registered auditor to complete the remaining PSC process for each pruning lift. The auditors will check the accuracy of the pruned stand boundaries and audit 25% of the measurement plots. They then forward all the completed measurements, maps and all required details for the PSC certificates and fees to AFG for issuing the PSC certificates. AFG will archive the original data and maps, as backup to re-issue any lost certificates, and provide information requested by log buyers prior to harvesting.

If an auditor is contracted to conduct the whole PSC assessment, there is no need for another auditor to audit his work. The national PSC trainer will, periodically, conduct field auditing checks with individual registered auditors to ensure they maintain the required standards and procedures as laid down by AFG.

**How much does it cost?**

AFG currently charges for this PSC service. Private Forests Tasmania has estimated the cost of the PSC process to be about $3 per cubic metre of clearwood at time of harvesting (based on a 10 hectare pruned stand). This minimal cost is easily offset by the much higher premium price for the clearwood logs which is substantiated by the credible PSC certificate.

**Will Pruned Stand Certification make a difference?**

Worldwide, more and more buyers and processors of forest products are seeking quality assurance and certification from growers. They are increasingly recognising the log qualities on the PSC certificates, giving them some sort of guaranteed recovery expectation. This in turn will give them the confidence to buy pruned stands upfront prior to harvesting. In addition, a higher premium can also be negotiated by the growers.

**Further Contacts**

Landowners, farmers, tree growers, technical and professional foresters who are interested in attending the PSC training course and becoming registered auditors can contact:

Nicky Moffat (Phone: 6162 9000)
Australian Forest Growers
PO Box 318
DEAKIN WEST ACT 2600

For further information on Pruned Stand Certification, training, auditing and consultancy contact Private Forests Tasmania’s regional offices in Burnie 6434 7260, Launceston 6336 5300, and Hobart 6233 7448.

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*Measuring pruned tree height – an important component of Pruned Stand Certification*
The Sustainable Farm Forestry Management for Production and Conservation Project (SFF) has provided many and varied opportunities to a wide range of landholders across the north-east of the State, including Flinders Island. The project is drawing to a close after nearly three years of assisting with a broad range of management options which will provide long-term environmental, economic and social benefits to the participants and their communities. This Australian Forest Growers’ project is funded by the National Landcare Program and is delivered by Private Forests Tasmania.

The SFF project was developed to aid landholders in the management of four components of vegetation on farms:

1. Farm forestry plantation development from 2-25ha on cleared agricultural land.
2. Streamside (riparian) bush management and / or revegetation.
3. Native bush management for production and conservation.
4. Native bush conservation (which does not include potential harvest).

Project targets for each of these components will be exceeded, as there has been a strong uptake by landholders from the start. Recent site visits to all participating properties is providing encouraging and valuable information on the success of well managed projects. Despite there having been below average rainfall over most areas for the last two seasons there have been many very successful replanting outcomes.

A number of plans have been implemented to establish belts and riparian plantings of mixed species for long-term amenity and environmental values. High standards of site preparation and a strong commitment by the landowners to maintenance of their plantings are clearly paying off.

PHOTO 1: This multi-row planting around half the perimeter of a large, new centre-pivot irrigator near Dilston includes many native Tasmanian tree, shrub and ground cover species with a small component of *Eucalyptus nitens* to ensure some tall shelter develops quickly. Since planting in September 2006, establishment has been excellent, aided significantly by the owners being prepared to irrigate the belt with the end gun of the pivot to boost soil moisture. Some of the shrub species have responded by flowering already, creating a feed source for many native birds.
PHOTOS 2 & 3: Revegetation along sections of the Pipers River followed on from the removal of willows in a long-term restoration project. The property manager sought assistance from the SFF project to assist with replanting of native species along sections of the river bank and adjacent slopes, on areas where machinery could not readily gain access. Log heaps of willow debris were burned off and subsequently provided ideal replanting sites, creating a patchwork of new vegetation.

Tree guards were used with excellent results to safeguard the seedlings from browsing animals. After just six months, many species are well over the top of the 60 cm guards. With such good early growth the next important task is the removal of many guards to allow plants to bush out. These guards will then be re-used on future plantings on the property. Weed control in these areas remains another high priority.

PHOTO 4: Landholders with a diverse small farm on the West Tamar have seen a very pleasing establishment of a mixed *Eucalyptus nitens* and *Acacia melanoxylon* (Blackwood) planting, intended for management to produce high quality pruned logs. The project also assisted with a small section of fencing to protect a corner of native forest from stock. Other parts of this picturesque property have recently been placed under long-term vegetation management agreements with other funding programmes.
PHOTO 5: A number of crews from Conservation Volunteers Australia have worked on a project at West Pyengana in the north-east highlands, helping with an ambitious development which includes revegetation of farmland with Blackwood and many native shrub species. For this planting, site preparation was successfully achieved with an excavator-based ‘Rotree cultivator’ unit, creating between 600 - 800 planting spots per hectare. Plants had to be protected with tree guards due to expected browsing pressure. The CVA crews experienced all sorts of weather during their 3-5 day working visits.

PHOTO 6: The SFF project has assisted with the establishment of many pine blocks since its start in 2005. On this property in the dry northern midlands, results to date have been very good for this 2006 planting within enlarged pivot corners. This site is across the fence from a trial established by PFT in 2000-2001 as part of a national farm forestry demonstration. The success of Radiata Pine in that trial has encouraged other plantings to be established on these deep sandy soils especially where there is likely to be access to groundwater.
PHOTOS 7 & 8: Assistance with native forest conservation has been a particularly important aspect of the SFF project. On this property the owner is keen to protect remaining remnants of *Eucalyptus pauciflora* (Cabbage Gum) forest, having seen the positive response on other sites fenced-off in the past. Several of the new areas are quite small but are significant and viable as they join neighbouring forest blocks. *Xanthorrhoea sp.* (grass tree) makes a striking addition to the dry woodland understorey.

All fencing for the control of wildlife has been to the highest standard and under the ten-year management agreements it will be regularly maintained in order to be fully effective.

**Gordon McCutchan**  
Farm Forestry Advisor