

AUSTRALIAN SANDALWOOD CO-OPERATIVE LTD NEWSLETTER

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FROM THE CHAIR – DEAN BUTLER

Happy new year Australian Sandalwood Co-operative Ltd (ASC) members. The last year was a busy year for ASC board members in many ways. We held our first field day, first AGM, continued marketing research and been working on influencing the application of the Biodiversity Conservation Act 2016 and the Biodiversity Conservation Regulations 2018 for the benefit of all sandalwood growers. The regulatory environment has identified as a major issue as members attempt to work within the compliance framework.

I must make special mention of board member Andrew Robinson who did a lot of groundwork in making our first field day in October 2019 a great success. Anecdotally I have received feedback indicating that some members felt that it was the best sandalwood field day they had ever attended. Thanks to all other board members who also contributed in behind the scenes work and presenting on the day. We also had contributions from Danny Hettiarachchi on sandalwood oil testing and Malcom Plant presented on compliance with the Biodiversity Conservation Act 2016. A fantastic result all round. I was very disappointed that I was unable to attend due to illness. The AGM was held following the completion of the field day and provided a forum for members to ask questions of the board and provide advice.

We had planned to conduct an online auction with sandalwood timber lots on display at the Field day. However, we did not receive any nominations to participate in the auction due to lack of available timber and the regulatory requirements. While it was a little disappointing not being able to proceed with an auction the ASC has learnt much about what is required in using the auction method to sell wood, both within regulatory compliance and the process involved.

The board has played an active role in consultation with the DBCA and the minister for Environment, Disability Services and Electoral Affairs on the application of the Biodiversity Conservation Act and regulations regarding plantation sandalwood. It has become apparent to the ASC that there are significant problems with the way the department of Biodiversity, Conservation and Attractions (DBCA) are applying the requirements of the Act and regulations. There are problems with numerous forms and licences required for the pruning, harvesting, transporting, holding, selling and exporting sandalwood timber. There are also significant time delays in receiving forms from the DBCA and restrictions of which days of the week that sandalwood can be transported.

We were grateful that Malcom Plant attended the field day and provided a presentation but we consider our members don't need a big stick approach as they are very keen to comply with the Act. It is others which work outside the rules that need to be under scrutiny using the new provisions.

ASC board member Geoff Woodall, with the help of other plantation sandalwood growers, hosted officers of the DBCA on a tour of plantations throughout the Wheatbelt in November 2019. This tour provided a forum for established growers to air their grievances and to demonstrate what various management regimes, harvesting and processing are required in the management of sandalwood plantations. The DBCA staff were also provided examples efforts wheatbelt communities have gone to in order to conserve sandalwood in the wheatbelt.

We are currently waiting on a response from the DBCA regarding changes that they will recommend. Once we have this the ASC will meet with the minister and provide our recommendations. There has been quite a bit of noise from the industry about these issues as cautions and infringements have been handed out to members and others in the industry. Can I encourage members to add to that noise by contacting the minister with your support of the ASC in opposition to the current regulatory environment at, Minister.Dawson@dpc.wa.gov.au. We would hope that the processes will become less onerous for ASC members and that the DBCA will take the stance of providing education and support for those affected by the introduction of the new Act and Regulations before moving into a more compliance enforcement role.

In December 2019 I called for harvest estimates for the 2019/2020 nut harvest. On my last conversation with the secretary we had one nomination of 300kg for the current season. From this I can see that it has been a very poor season for nuts over a wide area of the state this year. I hope that this will be improved upon in this coming harvest.

On behalf of the board I have been talking with several buyers who are developing markets for processed nuts who are keen to form long term relationships with the ASC as a source of product. I see this as an area of growth in coming years in volume and prices. Buyers are keen to form relationships with the co-operative that can offer geographic diversity to ensure stable supply. The board will be investigating timber product sales over coming years as our members commence harvesting their plantations.

Board member Andrew Robinson continues his work on developing the Western Australian sandalwood industry timber grading standard. Andrew has devoted much time and resources to this project, and I commend him for his efforts.

Thanks once again to all our board members who have donated hours of their own time, resources, equipment, negotiation skills, fuel and initiative. Without their efforts the great progress that has been made would not have even commenced.

On closing I must thank our members who have provided continued support for the ASC board throughout 2019. While we have diligently been toiling away this year, at times on some mind-numbing detail, I remain excited for the future of our industry. The ASC has become well placed to provide the members a voice in government to refine and improve compliance and drive improved financial returns for growers.

Dean Butler

ASC Chair



Australian Sandalwood Network has 5 'nut wizards' for hire by ASN and ASC members.

The nut wizard takes out much of the back-breaking work involved in collecting sandalwood nuts off the ground.

A refundable deposit of \$100 is required with no charge for the actual hire.

The 2019 Australian Sandalwood Co-operative (ASC) Field Day (Andrew Robinson)

The first ASC Field Day was held on Wednesday the 2nd of October 2019. The Field Day was followed by the ASC first Annual General Meeting. The ASC Board had also hoped initially to hold the ASC's first 'sandalwood auction' during the Field Day, but when Members were asked, too few had sandalwood to sell at that time and so the sandalwood auction was postponed until more Members were ready to put their produce forward.

The theme for the Field Day 'field' activities was "pruning and thinning sandalwood plantations". The two field sessions were held at two plantation locations south of Brookton. The presenters were Grant Pronk and Geoff Woodall, both ASC Board members, both sandalwood growers themselves and both professionals in the area of careers establishing and managing sandalwood plantations.

After the field presentations attendees met back in Brookton's WB Eva Sports Pavilion, where lunch was offered, followed by three specialist speakers: Danny Hettiarachchi from consultancy Phytocognosy spoke on sandalwood oil testing, followed by Malcolm Plant, a Senior Compliance Officer for Department of Biodiversity, Conservation and Attractions (DBCA) who spoke on compliance with the Biodiversity Conservation Act and Regulations and finally Steven Fry, joint proprietor of Santaleuca Sandalwood Products, spoke on the Sandalwood nut market.

Grant Pronk – Sandalwood Pruning and Thinning

The first of the 'field' sessions was given by Grant Pronk in the plantation of Ross and Briar Blagrove in Yornaning (about 50kms south of Brookton). The Plantation was about 12-14 years old and had been established with multiple host varieties in twin rows with five metre inter-rows.

Grant began, speaking to about 25 attendees, on plantation pruning and thinning fundamentals by stating that the best way to end up with a well-structured, productive plantation was to start out with one from the very beginning. Grant went on to re-emphasise appropriate planning for a new plantation and, in particular, the correct

stocking rates for both host and sandalwood trees. In the past we have tended to put in our plantations, perhaps without really considering the rainfall and soil types to the stocking rates. Then forget to (or can't bear to) reduce the number of sandalwood trees per hectare and the number of host trees per sandalwood tree. These plantations tended to do well initially but showed signs of stress as the years progressed. We then contemplate thinning our plantations at about year 10-12 when the plantation is really under some stress, if not already collapsing. Given the unreliable rainfall so common in the wheatbelt now we must be more proactive in reducing overcrowded plantings.

Pruning sandalwood trees is quite easily done. The golden rule for sandalwood trees is prune upward from the bottom of the tree, removing the lower limbs first and cutting the limbs flush to the trunk of the main stem.

Pruning sandalwood trees to improve tree form is necessary to optimise the tree's final form. Straight, clean lengths of sandalwood are required in the international 'carving log' market. Highly valued carving logs can be produced in our plantations by ensuring trees are pruned in a timely and correct manner.

A well pruned plantation is essential for good access. Access is important for a number of reasons including plantation inspections, to administer weed control either via spraying or slashing, access to nut harvesting and to reduce the risk of damage by fire.



Pictured - a five-year-old *spicatum* tree pruned to achieve best results as a 'carving log' at age 20+ years (courtesy of Grant Pronk)

Additional notes on Pruning (not provided during Field Day)

The following information is provided from an account of personal experiences and should only be regarded as a suggested guideline.

At the age of around 2 to 3 years Western Australian Sandalwood trees will start producing rough, dark and fibrous bark starting from the base of the tree progressing slowly up the trunk. This rough bark does not appear to be as readily stripped away from the trees by parrots as compared to smooth juvenile bark. For this reason, it is advised to only prune branches that protrude from a rough barked trunk. Pruning branches from a smooth barked trunk will may open the tree parrot stripping. Pruning cuts are to be flush with the trunk i.e. no “coat pegs”. A flush, flat cut will heal over quickly and reduces the size of defects in the final log product.

In many cases trees will have multiple stems and will require a decision of which stem to retain and which to remove. A basic rule of thumb is to leave the straightest and longest stem and remove all others. The stem that is left must have the greatest potential to become a long, clear and straight log. Trees that are left with multiple stems will distribute growth over the stems, therefore diameter growth is likely to be restricted as compared to single stemmed trees. Reduced diameter growth may not see the tree make the specification of a carving log over the life of the plantation.

If pruning is performed with the development of the fibrous rough bark, then most of the pruning should be completed during the first 4 to 10 years of the plantation’s life.

A number of tools can be used to prune a sandalwood tree. Small limbs up to 20mm in diameter are best pruned with a pair of sharp secateurs. A sharp hand pruning saw is ideal for limbs from 20mm to around 50 mm. Larger branches are best removed with a small pruning chainsaw, but be sure all the appropriate personal protection equipment is worn.

The pruned branches will most likely consist of mainly sapwood and, in today’s market, this product has little to no commercial value. However, if heart wood is showing then there may be some value in retaining the cuttings, but do not expect this timber to attract much value. It is likely that the costs associated with pruning, debarking and further processing for the market will outweigh the possible return.

Cut branches are best left in the plantation and incorporated in the plantation’s general management system i.e. placed strategically in the plantation to be collected at a later date when the bark has aged and fallen off. These branches may be added to the plantation’s produce at final harvest. The removal of the cut branches at time of pruning will obviously improve general access to trees and reduce the fire risk within the plantation.

Heavy pruning can be stressful to a tree therefore it is important to prune the tree when it is thriving. Pruning during the heat and dry of summer is likely to cause additional stress to a tree and may restrict growth or even cause tree death in more severe cases.

Pruning is an essential part of a commercial sandalwood plantation. Pruning provides the grower with the ability to produce high grade products that are in high demand, growers that prune their trees will have greater options when the time to harvest and selling arrives.

Geoff Woodall’s – Sandalwood Pulling and Debarking

Geoff Woodall and Ross Blagrove demonstrated the pulling of a 12-year-old sandalwood tree using Ross’s mobile loader fitted with a boom. A chain was wrapped around the base of the tree and attached to the loader’s boom. After the tree was pulled Geoff Woodall demonstrated the use of a high-pressure water spray unit (capable of pressures over 3000 pounds per square inch - PSI) in debarking and/or ring-barking trees.

Geoff explained that as well as using the high pressure spray unit to effectively debark sandalwood trees that have been harvested (pulled out), the spray unit was also a very effective way to ring-bark host and sandalwood

trees that are surplus to needs. A sandalwood or other tree that is surplus to requirements can be ring-barked in seconds using the spray unit. The ring-barked tree will gradually die over 1-2 years. Using the water spray unit to ring-bark a tree is much faster and safer than using a saw or shears and removes the chance that an unwanted tree will coppice following a base cut.

When harvesting sandalwood trees, it is best to remove the bark within 48 hours of the harvest event as the bark tends to harden on the wood with time and become much more difficult to remove.

It's worth mentioning at this stage that a licence to 'take' sandalwood was requested and received by the Blagrove's before the Field Day from the DBCA. This licence entitled the Blagrove's to harvest and prune plantation sandalwood for a period of three years and store the harvested timber if need be at either of two farm locations – cost \$75.

Using a high-pressure water spray unit to debark trees is a very effective method for small scale plantations such as most of the ASC members. The high-pressure spray units can be purchased for as little as a \$1000 and are quite portable (e.g. trailer mounted or even ute back) and the relative speed (in debarking) at around 10-20 minutes per tree suits most plantation growers who prefer to harvest and sell small batches of trees rather than largescale clearing.

The Field Day attendees then moved to a second property belonging to Wynand Breytenbach eight kilometres south of the first field presentation. Wynand thinned and pruned his plantation about 18 months ago and has seen a significant improvement in tree health since. The thinning/pruning exercise has opened the plantation up so sheep can easily graze below the trees, reducing his need for weed spraying and other controls and significantly improving access to the nut drop at the base of the trees.

Wynand spent time managing the number of sandalwood-per-hectare and host-to-sandalwood ratio in the plantations and explained that this activity has yielded real results in terms of sandalwood trees broadening their stems and being more resilient in the dryer seasons.

Danny Hettiarachchi – Sandalwood Oil Testing

Danny has undertaken research and written widely on all facets of sandalwood oil and sandalwood nut oil, both in academic and industry publications. Danny's message was -

Quality of a sandalwood trees depends upon three factors:

1. The percentage of heartwood;
2. Content of essential oil in the heartwood; and
3. The chemical composition of the essential oil.

Sandalwood timber and its essential oil show a vast variation based on several 'intrinsic' and 'extrinsic' factors. Past studies have found that certain provenances, geographical location and host trees affect the quality of the tree.

Growers should plan the plantations beforehand, first by selecting suitable mother trees and selecting suitable host trees. Existing plantations can test the trees for quality in anticipation of developing a profitable harvest.

Malcolm Plant - Compliance with Biodiversity Conservation Act

Malcolm Plant, Manager, Compliance for the Department of Biodiversity, Conservation and Attractions (DBCA) spoke on compliance within the new *Biodiversity Conservation Act 2016* and the associated *Biodiversity Conservation Regulations 2018*. There was a focus on penalties for non-compliance which, if not stuck to, provide severe and harsh penalties. The invitation was for Mr Plant to focus instead on explaining how growers could ensure their compliance in their day to day operations with their sandalwood. For example, any pruning or harvesting (pulling) of plantation sandalwood requires the grower to have a sandalwood 'taking' licence and on that licence list the locations the grower wants to store the harvested sandalwood. Applications for all licences must be made to the DBCA so talk with the DBCA Licensing Branch to ensure you have all of the licences required under the legislation. Transporting sandalwood requires the carter to have a DBCA Sandalwood Tracking Form (STF) approved before the transport occurs. The STF must be approved at least one day ahead of the transport event for Plantation sandalwood and three days for wild sandalwood.

Be aware that obtaining a sandalwood licence from DBCA can take a while. I applied for a sandalwood 'taking' licence on my plantation property over three months ago and still have not received the licence.

Steven Fry - The Sandalwood Nut Market

Steven Fry is a joint proprietor of Santaleuca Sandalwood products with his wife Michelle. Steve spoke about the Sandalwood nut industry, particularly where the nuts are prepared and sold as a food. Businesses selling sandalwood nuts as a food are very interested in the size and freshness of nuts and have a need to ensure that the nuts do not contain excessive levels of the chemicals Cyanide and Arsenic and that bacterial infestation such as E.coli are not present. These health and safety requirements need to be assessed before the food vendors such as Santaleuca can offer the products for sale. Sandalwood nut vendors look to growers for these assurances before buying the products and growers must be aware of their responsibilities in selling to this market.

Sweet Scent of Sandalwood (Bethan Lloyd)

Recent rains through much of the wheatbelt have revived many plantations that were suffering as the last effective rain we had was in September 2019.

Those trees on water gaining sites were doing ok and many were flowering but now they are pumped up and covered in flower and the heady scent has been hanging around on those humid days, carried on the breeze when the easterlies blow. Those trees on less forgiving soils and free draining soils looked pretty dire before the rain but now they are shooting freely and producing flowers too. The hosts look better and of course the weeds are growing.

It looks like this year could be a good year for seed following 3 years of well below average yields. It will depend on follow up rains and not too many frosts in late winter.

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