Western Australian Agroforestry Working Group
Meeting
Tuesday 3rd June, 9am-12:15pm, Swan Regions Complex, Como
AGENDA

9:00 – 9:10 **Welcome and Introductions** – *Tim Emmott*

9:10 – 9:25 **Apologies; and election of the new Executive Officer**

9:25 – 9:35 **Revegetation Industry Association – what is it?**
(*Geoff Cockerton,* Land Care Services)

9:35 – 10:05 **Hydrological impacts of integrated oil mallee farming**
(*Peter Taylor,* Department of Agriculture, Manjimup)

10:05 – 10:30 **MORNING TEA**

10:30 – 10:50 **Salt screenings of *E. cladocalyx, E. occidentalis, E. camaldulensis* and a hybrid**
(*Liz Barbour,* Forest Products Commission)

10:50 – 11:10 **FPC Update on Sharefarms**
(*Owen Donowan,* Forest Products Commission, South Guildford)

11:10 – 11:50 **FARM FORESTRY PLANNING**

- **National, State and Regional Planning**
(*Leonie Offer*, Executive Officer, Trees South West and *Richard Moore*, Department of CALM)

- **Regional farm forestry planning in the Northern Agricultural Region**
(*Paul Le Gear*, Department of CALM, Moora)

11:50 – 12:15 **Other announcements**

12:15 **CLOSE**

Please note the venue is the Swan Regions Complex. The building is located just 200m north of the CALM building and west of the CSIRO complex in Como.

WA Agroforestry Working Group Meeting
Notes

Revegetation Industry Association – what is it?

(Geoff Cockerton, Land Care Services*)*

- Potential Clients include; Mining companies
  Local Governments and Shires
  Landcare Groups
  Farmers/Landholders

- The revegetation industry is very cop-operative and competitive.
- RIA aim to improve revegetation techniques by providing better quality, service and satisfaction for the client.
- Examples of people involved; Seed suppliers
  Nurseries
  Universities and Research institutes
  Kings Park

- It's a very new organization and not properly formalized yet. RIA is an industry focused and outcomes based association. Their goals are to be community inclusive and to improve current revegetation standards.
- They understand that they need to develop a code of practice to provide quality and correct seed to clients. Seed collectors, although passionate about their job/bush, are usually under qualified. Therefore RIA has thought to impose a training program to improve the quality and accuracy of seed collection.

Hydrological Impacts of Integrated Oil Mallee Farming

(*Peter Taylor*, Department of Agriculture, Manjimup)

- A RIRDC Project; DW-101A, involving the Department of Agriculture, CALM, the Oil Mallee Company, the local CRC and two PhD students.
- There aim is to improve the design, management and prediction of landscape scale impacts of agricultural systems that incorporate oil mallee's, in terms of productivity and salinity control and low rainfall areas.
- The proportion of oil mallee's required depends largely on rainfall, soil type, evaporation, relief, groundwater table, hardpans and the question of whether or not oil mallee's are profitable?
- There are three field sites. One at Esperance (620mm), Tincurrin (400mm) and Coorow/Goodlands (320mm).
- The characteristics at each site vary according to hydrology.
- What is Involved? ;
    - Drill program in place to examine the soil profile and to implement peizometers.
    - Lab analysis for pH and chloride %.
    - Geophysics survey e.g. radiometrics (surface soil analysis).
    - Flowtube monitoring used to assess the groundwater equilibrium condition and impacts.
    - Groundwater monitoring e.g. depth and salinity levels.
    - Plant productivity e.g. oil mallee alleys, crops and pastures.

- Results (Esperance field site) ;
    - Scenario 1: Oil mallee's had no impact of groundwater
    - Scenario 2: Oil mallee's decreased groundwater but Lucerne increased leakage of recharge.
    - Scenario 3: No impact from Lucerne grown alone.
    - Actual Scenario: Significant oil mallee alleys and Lucerne planted over most of the area, reduced groundwater levels and recharge. Neither can do it alone, unless large areas are planted.

- Coorow field site ;
    - Oil mallee's planted in two row belts on deep yellow sands. There is an extensive silcrete layer across the entire property.

- Goodlands field site ;
    - Oil mallee's planted in two row, 5 km long alleys, on acid wodjil sands. These are already 7 years old. There is also a silcrete layer.

- Future Work ;
    - Tincurrin: integrate surface water management e.g. use excess water for irrigating trees.
    - Silcrete characteristics: consider excavation or remote sensing.
    - Economic analysis: "Imagine' Model (Don Cooper).
    - Options for incorporating carbon sequestration.
    - Possible biodiversity impacts?
    - Final report to RIRDC by Nov. 2006.

Integrated Wood Processing Plant (Narrogin)

(*John Bartle*, CLAM)

- Cost $8M; $3M more than estimated.
- Fluidised beds are used for carbonizing wood chips to produce quality carbon.
- The plant will produce oil, electricity, carbon and renewable energy credits, plus profits for farmers from oil mallee's, therefore improving the feasibility of the plant.

Salt Screenings of E.cladocalyx, E.occidentalis, E.camaldulensis and a Hybrid

(*Liz Barbour*, FPC)

- Seed Technologies aims to cater for the future and present genetic needs of WA Forestry.
- Projects include; Eucalyptus Sawlog Species
  Elite Pine Genetics
  Sandalwood
  Salt Screenings

- Salt Screening using a tank system:
  - In a greenhouse controlled environment to limit variables between treatments.
  - Trees are 2 years at the most.
  - Root systems has no contact with the soil.
  - Statistically controlled.
  - Rapid screening.

- Plant material:
  - 1400 plants used.
  - Nine provenances of E.cladoclayx (from 3 major regions in SA).
  - Compared with controls (2x E.camaldulensis and E.occidentalis seed orchard seedlots, and the Hybrid).

- Four treatments:
  1. Control (flood and drain),
  2. Dry salt (flood and drain),
  3. Waterlogged,
  4. Waterlogged salt.

    - The hybrid (provided by Tim Emmott of Greening Australia), and E.camaldulensis, were the most salt and waterlog tolerant.

- Future Expectations; Die-back screening for P.radiata has already occurred in a tank system, with excellent results.
  The main challenge is to understand how the gene system can be deployed.

FPC Update on Sharefarms

(*David Guille*, FPC, Albany)

- Action Plan for Farming:
  The objective is to provide a framework for coordinated action within specific regions. There are two main principles;
    1. Match tree species with soil type and climate,
    2. Identify future processing centers and market opportunities for timber and fibre products.

- There is already an existing Maritime Pine industry for the medium rainfall zones. It has the most potential because most of the related industries are already established, and there is a large area of soil and climate suited sites.
- FPC wants to improve vigour and form of pines. They are very hardy and can be planted on cheap land e.g. deep sands with little agricultural productivity. There is approximately 16,000ha already planted over the state.

- Sharefarm Package:
  - All maintenance costs are covered,
  - Incentive payment of $50-$500/ha,
  - 40 year term,
  - Crop share,
  - 20% revenue from timber or 15% from timber and 15% from carbon.

- Priority catchments:
  - Future public drinking water sources,
  - High rainfall areas (500mm+),
  - Better soil type areas,
  - Higher agricultural productivity.

- Three primary species;
  1. E.saligna
  2. E.maculata
  3. E.cladocalyx

- Sandalwood:
  - Has attractive economic potential.
  - Uncertainty with long-term markets.
  - Complimentary to P.pinaster plantings.

- Issues: FUNDING!
  - Loss of NAP funding.
  - Second income required to subsidise timber economics to ensure continued viability.
  - Land access has decreased in last two years due to competing industries improving in Agriculture e.g. wool, meat, grain etc.
  - Parrots are a significant threat to sawlogs (control efforts are underway).

- Future FPC launching a new Tree Sharefarming Program on Friday;
  - Increase external investment,
  - Increase recognition and accountability for environmental benefits,
  - Improve community development and involvement,
  - Increase landholder participation.

Bureau of Rural Science

(*Mark Parsons*, Canberra)

- Farm foresters need data for planning, marketing and valuation of Australia's forests.
- Others need data for potential customers, regional networks and state and national coordinators.
- Links with other sectors include;
  - Transport, processing, utilisation and marketing,
  - Regional infrastructure,
  - Government policy,
  - Domestic and international investment,
  - Siviculture and harvesting industries.

Data collected includes;

Species

Planting information

Area (ha)

Geographic location (lat and long)

- Next, they want to be able to obtain height, diameter, basal area and volume data.
- Growers, and all owner types contribute, including public, private, industrial investors, joint venture and farm forestry cooperatives.

Australian Forest Growers (AFG) State Inventory

(*Peter Beatty*, FPC)

- State Inventory;
  - Australian Forest growers (private growers).
  - Private forest in comparison with native forest.
  - Sub-branches of AFG that represent growers.

    - Aim to obtain inventory data from privately owned and native forests.
    - Master Tree Growers Program: Training and accreditation of tree growing and siviculture.
    - Tree Measurement Program: Inventory plots in the SW will provide data from all sites (local managed inventory), and information linked to the area. Obtain performance of tree growth data with the aim of sawlog production.
    - Provide information from original sources for purpose of national data, although currently seeking funds.

National, State and Regional Planning

(*Leonie Offer*, Trees South West)

- All national, state and regional planning done in conjunction.
- Developed the National Action Statement, published at the end of June.
- SW planning process completed. Documents will be published in July.

Regional farm forestry planning in the Northern Agricultural Region

(*Paul le Gear*, CALM, Moora)

- Currently: Projects with landholders, trials, SEARCH project and Broombrush projects.
- Findings;
    - Danmore tree planter is better economically to purchase and has a better success rate.
    - People with younger families are more interested in farm forestry e.g. improving farm for next generation.
    - Planting has been more successful when trees are planted as deeply as possible, therefore it is better to use seedlings that are 200-400mm tall.
    - Parrots are a significant problem and can destroy a metre of growth.
- Established Demonstrations;
    - Develop working examples of farm forestry projects that are in high profile areas, working with innovative farmers, education institutes and other community landcare groups. The aim is to promote farm forestry principles and adoption throughout local communities. Paul has found that they are very effective in increasing interest and participation from farmers when they can actually see what is involved and the eventual outcomes. He uses the sites mainly for places of learning.

- Milling and Marketing;
    - Potential Cray Pot markets using pine.
- SEARCH Project at Watheroo;
    - 18,000 trees from 6 different provenances. C.obesa trial (which grow faster and taller). There are 4, 0.5ha plots.

- Broombrush planted on waterlogged soils for commercial fencing. Pay $33/T over a 4-5 year rotation. Equates to $200-$250/yr/ha, using fairly unproductive land. They do have a certain level of salt tolerance if the trees are planted as established seedlings.
- Paul has a CD available of relevant information of farm forestry (still in progress). He uses this information as references and contains original work, reports and presentations from numerous sources.

Next meeting may be at Narrogin Processing Plant, on the 5th of August. Including tour of plant and may be a half day tour of some trials around Narrogin if people are interested. There will be two seminars before lunch.