ACIAR project

FST/2009/062
Development of advanced veneer and other product from coconut wood to enhance livelihoods in South Pacific communities
Commissioning organisation

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Advanced veneer and other product from coconut wood

Project Objectives

Identify markets

Forestry: stem harvesting

Peeling in S. Pacific

Peeling trials

Assemble and test products

By-product utilisation
Objective 1 – Identify the most promising product options for the veneer from coconut stem

1.1 – Market assessment and product development
1.2 – Value-chain analysis
1.3 – Stakeholder engagement
Objective 1 – Identify Markets
Objective 2 - Develop protocols and capacity for sustainable low-impact coconut wood harvesting, plantation rehabilitation, and log grading, handling and transport

2.1 - Local resource assessment and harvesting
2.2 - Development and training in harvesting and handling protocols
Objective 2 – Forestry

Identify markets → Forestry: stem harvesting → Peeling in S. Pacific → Assemble and test products

Material collected for Objective 4 peeling trials:
- Discs
- Stems
Objective 2 – Forestry

Identify markets → Forestry: stem harvesting → Peeling in S. Pacific → Assemble and test products → By-product utilisation

Material collected for Objective 6 trials of residue uses:
- Below grade stems
- Fronds
Objective 3 – Establish experimental veneer-peeling capacity in the South Pacific

3.1 – Commissioning a spindleless lathe equipment
3.2 – Assessing the potential of a regional trial and demonstration program
Objective 4 – Peeling trials

**Objective 4** – Determine the optimum processing parameters & protocols for peeling coconut stems & the properties of the recovered veneer

4.1 – Assessing veneer processing parameters from cocowood disks

4.2 – Calibrating processing parameters at QDAFF

4.3 – Initial compact experimental peeling trial in Fiji on new lathe

4.4 – Compact commercial peeling trial in Fiji

4.5 – Broad industrial peeling trial in Fiji

4.6 – Properties and recovery assessment
Objectives 3 & 4 - Peeling

- Identify markets
- Forestry: stem harvesting
- Peeling in S. Pacific
- Peeling trials
- Assemble and test products

By-product utilisation

Recovered veneer used to assemble product suite
- Appearance veneer, plywood, laminated veneer lumber etc
Objectives 3 & 4 - Peeling

Identify markets

Forestry: stem harvesting

Peeling in S. Pacific

Peeling trials

Assemble and test products

By-product utilisation

Material collected for residue trials
- Outer material
- Core
- Below grade veneer
Objective 5 – Assemble the product suite and establish its characteristics and in-service performance

5.1 – Experimental product assembly
5.2 – Product characterisation and testing
5.3 – Product assessment in-service
**Objective 6 – By-product utilisation**

**Objective 6** - Determine the costs and benefits of using the residual cortex and soft, central cores for bio-char and other agricultural products

6.1 – Collaboration with agricultural projects
6.2 – Biochar trials
Summary

This is the last year of a four-year, collaborative project with six specific objectives:

1. Identify the most promising product options for the veneer from coconut stem.
2. Develop protocols and capacity for sustainable low-impact coconut wood harvesting, plantation rehabilitation, and log grading, handling and transport.
3. Establish experimental veneer-peeling capacity in the South Pacific.
4. Determine the optimum processing parameters and protocols for peeling coconut stems and the properties of the recovered veneer.
5. Assemble the product suite and establish its characteristics and in-service performance. Characterisation would be to local and export performance standards.
6. Determine the costs and benefits of using the residual cortex and soft, central cores for bio-char and other agricultural products.
• Dr Jon Shanks left his role as UTas lead project officer in December, 2014.
• Dr David Blackburn joined the project as UTas as project and forestry officer in January, 2015.
• Ilikimi Bokadi joined the SPC team.