Agroforestry at Dartington

*Broadlears field*
ORFC 2020 - Woodland & agroforestry
Offering new business opportunities for farmers

Jeremy Smith MRICS – Land Agent Perspective

24 January 2020
Land Agent – Who and what

Landlord and Tenant

Woodland & Agroforestry

Diverse Estates

Effects/Wider Impact

Case Study

Issues

Productivity
‘Developing a Farm Woodland & Agroforestry Economy’

A strategy to make farmer led tree planting credible
Tories pledge 30 million trees a year until 2024

Lib Dems aim for 60 million trees a year through to 2045

Labour announces 2 billion more trees by 2040 = 100 million a year
But the reality is only 15 million publicly funded trees over the last 8 years – maybe it’s time for a new strategy?

Farmers as foresters?

<table>
<thead>
<tr>
<th>Woodland Ownership</th>
<th>England (000 ha.)</th>
<th>Scotland (000 ha.)</th>
<th>Wales (000 ha.)</th>
<th>Northern Ireland (000 ha.)</th>
<th>%age of Total Woodland area</th>
<th>TOTAL area (000 ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Woodland</td>
<td>368</td>
<td>560</td>
<td>93</td>
<td>16</td>
<td>33% (45% of all private woodland)</td>
<td>1037</td>
</tr>
<tr>
<td>TOTAL Woodland area</td>
<td>1307</td>
<td>1445</td>
<td>308</td>
<td>113</td>
<td></td>
<td>3173</td>
</tr>
</tbody>
</table>
Benefits from trees

1. Public benefits = public money
2. Farm benefits = increased farm enterprise revenue

Farm benefits

Indirect
- from the interaction between trees and the agricultural system e.g. nutrient provision for crops or shelter benefits for livestock
- farm management benefits e.g. water management

Direct – substitution or market opportunities for the tree outputs e.g. timber, fuel, food

Strategy = more focus on the direct farm enterprise benefits of trees
Timber from trees?

➢ For on farm fencing demand and farm buildings?

➢ For sale to timber markets
Fuel from trees?

➢ For on farm heat demand and/or local use
Food from trees?

➢ Hard & soft fruit
➢ Nuts
➢ Cider/Perry/Juice
Contract growing opportunities?

- Cobnuts
- Cricket Bat Willow
- Poplar
- Cider/Perry
Income from capital grants

➢ Is tree planting & maintenance really that difficult?

➢ Transferable skills...
Farm fencing requirements – for trees and livestock

➢ Grown on the farm, erected by farmers?
Dealing with scale

➢ Mobile equipment

➢ Machinery rings

➢ Cooperatives/Groups
Dealing with scale

➢ Low cost farm machinery adaptations
Making it happen?

➢ Learn from longstanding initiatives – e.g. Coed Cymru, European models
➢ Support for developing capacity/capability in tree management
➢ Rural development support for new business opportunities & supply chain development
The future?

Trees for farmers, managed by farmers...

...with public benefits as well...
foodandforest.co.uk
Alley Cropping
Benefits
3-Point Alley Cropping Incentive Package

1. A specific, one-off, alley cropping grant
2. A forward contract for nut purchase
3. An equity release system to liquify the timber value before harvest.
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Create new woodland</th>
<th>Create new woodland to improve water quality or reduce flood risk</th>
<th>Restock after a tree health issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum agreement size</td>
<td>3ha</td>
<td>1ha</td>
<td>0.25ha</td>
</tr>
<tr>
<td>Minimum block size</td>
<td>0.5ha</td>
<td>0.1ha</td>
<td>0.1ha</td>
</tr>
<tr>
<td>Minimum width</td>
<td>20m</td>
<td>10m</td>
<td>20m</td>
</tr>
<tr>
<td>Minimum stocking density</td>
<td>400 stems per ha (sph)</td>
<td>1,600sph</td>
<td>400sph</td>
</tr>
<tr>
<td>Maximum internal open space</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Maximum individual glade area (after canopy closure)</td>
<td>0.5ha</td>
<td>0.5ha</td>
<td>0.5ha</td>
</tr>
<tr>
<td>Maximum linear open space width (after canopy closure)</td>
<td>20m</td>
<td>20m</td>
<td>20m</td>
</tr>
</tbody>
</table>
Forward Contract
Equity Release System
Alley Cropping Grant Proposal

Ecosystem Services Approach – “public money for public good”

35 tonnes of carbon sequestered per hectare per year (Palma et al, 2007)

Social Cost of Carbon 2019 – central scenario = £13.15 per tonne
35 X 13.15 = £460.25

Social Cost of Carbon 2020 – central scenario = £13.84 per tonne
35 X 13.84 = £484.40

Social Cost of Carbon 2021 – central scenario = £20.54
35 X 20.54 = £718.90

Total = £1663.55 total

References:
Updated Short-Term Traded Carbon Values Used for UK public policy appraisal – accessed 09.07.19

Results from Phase 1 – Jan 19

- All 30 proposals approach the topic at a landscape scale, intending to link land owners in a approach.

- Use of a reverse auction method trialled by Wessex Water for reductions in Nitrogen run off.

http://green.brightblue.org.uk/blog/2017/12/8/paying-for-itself-using-reverse-auctions-for-environmental-improvement