

South West Wood Fuels

Biomass Heating The Fuel Supply Issues

Fuel Sources

- **Forestry Residues**
 - **Pre-commercial Thinnings**
 - **“Cleaning” Waste**
 - **Commercial Thinnings**
 - **Final Harvest Residues**
 - **Coppice**
 - **Stumps**



Fuel Sources

- Sawmill Residues
- Reclaimed Wood
- Land Management Residues
- Energy Crops



South West Wood Fuels

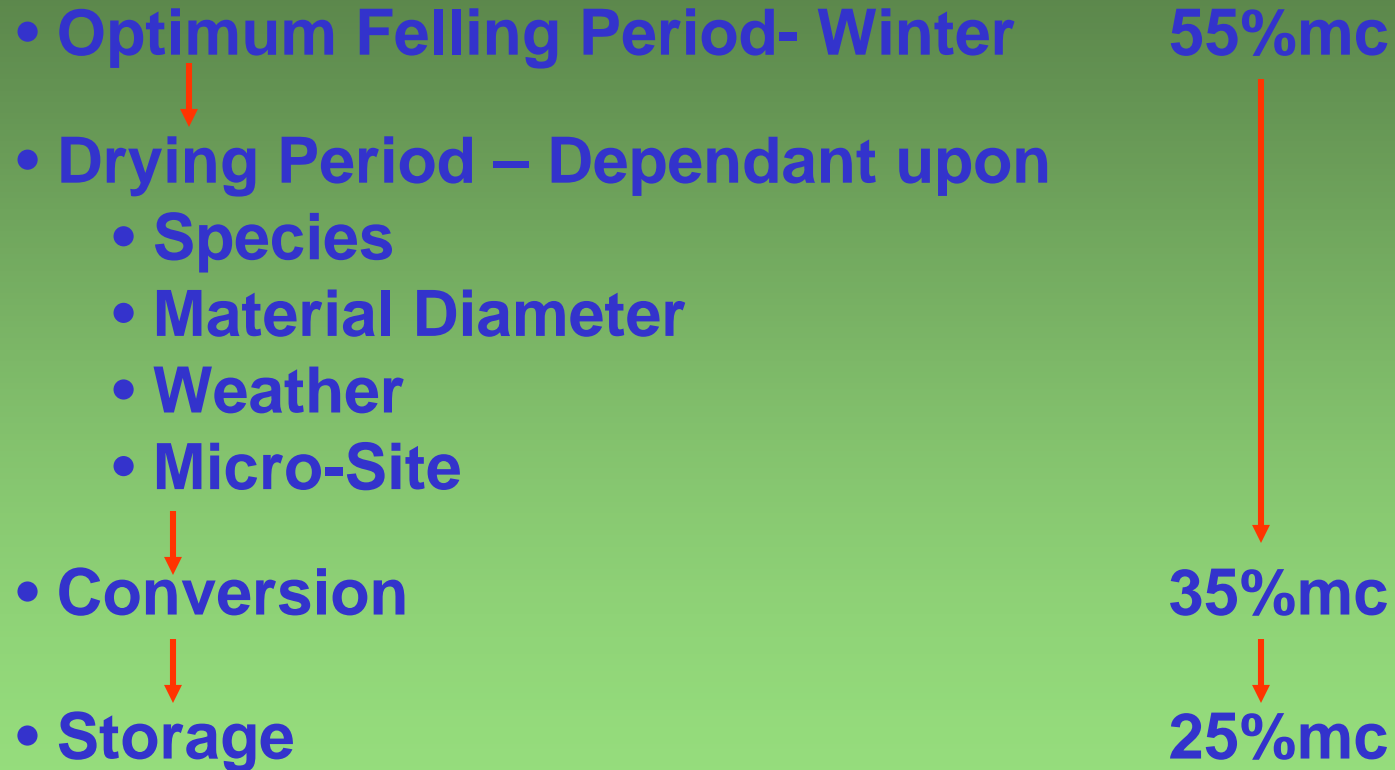
Material Conversion Systems

- Terrain Chipping
- Terminal Chipping
- Chipping at point-of-use

Material Drying Systems

- Pre-Drying in Forest
- Pre-Drying in Stacks
- Post-chipping drying

Chipping Timescales



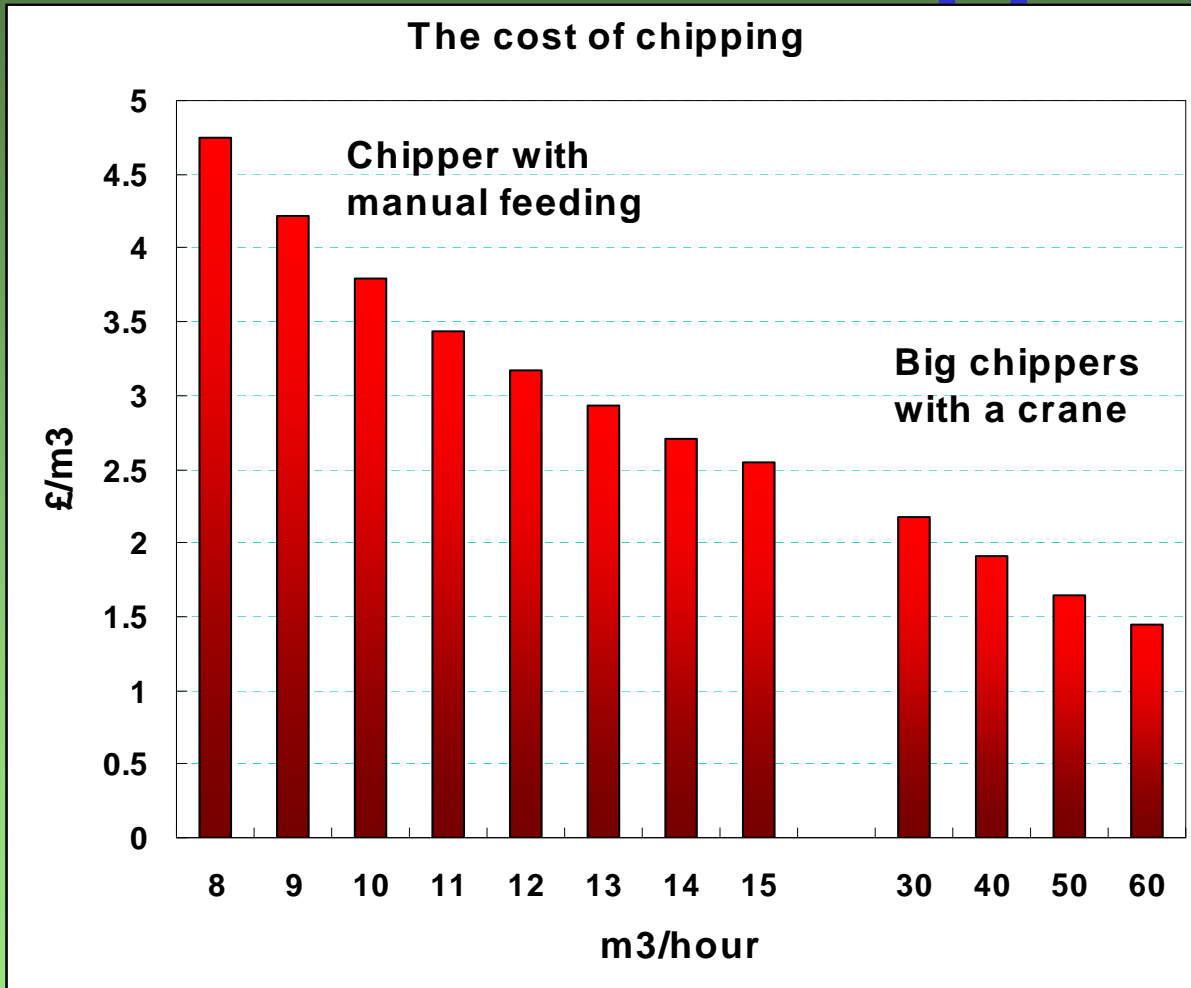
Optimum Moisture Content for Chipping Operations

- **>35%mc Chip will compost**

25%-35%mc Optimum Range for Chipping

- **<25%mc**
 - **High Blade Wear**
 - **Higher Energy Consumption**
 - **Particle Breakdown/Production of dust**

Effects on Chipping Costs



- Chipper size

- Material size

Chip Quality

- **Moisture Content**
- **Particle Size**
- **Contaminants**
- **Wood to Bark/Leaf ratio**

Chip Handling Safety

Hazards

- Dust
 - Explosive
 - Health hazard
- Mould Spores
 - Toxic Hazard

Solutions

- Use of A2 & P3 mask filters
- Moisture Content stabilisation
- Correct maintenance of chipping machinery

Benefits of Biomass Heating

- Added Value to Poor Quality Material
- Rural Employment
- Local Energy Source
- Carbon Neutral/Green Credentials

Investment in a UK Energy Industry