

Internal Project Information Note 26/07- Extended summary
Residue harvesting methods

Summary

This report reviewed literature regarding residue recovery, described and assessed the main methods in terms of their respective advantages and disadvantages and potential application in UK conditions. Case-study synopses for the methods and systems reviewed were presented, as well as methods and working norms for six countries (Sweden, Finland, Italy, France, USA and Canada).



Conclusion and recommendations

| Method and description | Issues in UK conditions | Opportunities in UK conditions | Recommendation for further research |
|------------------------------|---|--|---|
| Terrain Chipping | <ul style="list-style-type: none"> • Poor off-road capability • Little tolerance of residue contamination • Requires demountable storage bin lorry fleet • Requires market for loose chip | <ul style="list-style-type: none"> • Potential for non-commercial thinning and respacing? | <ul style="list-style-type: none"> • Other systems seem more favourable for residue recovery. |
| Chipping at Roadside | <ul style="list-style-type: none"> • Requires bin-lorry transport fleet and lorry mounted chippers • Requires market for loose chip • Hot system¹ – need for close coordination | <ul style="list-style-type: none"> • Can use existing forwarder fleet • Technology well developed and transferable • Most likely to be adaptation of existing Scandinavian setups to UK if suitable forest chip markets develop | <ul style="list-style-type: none"> • Verification of typical UK site outputs |
| Chipping at Terminal | <ul style="list-style-type: none"> • Requires large contiguous forest blocks with sufficient continued harvesting output to support terminals • Requires bin-lorry transport fleet and terminal chippers • Requires off-road/on-road hybrid residue transporters • Requires market for loose chip | <ul style="list-style-type: none"> • Could be used for some of the larger forest blocks to supply their local communities | <ul style="list-style-type: none"> • As with chip at roadside |
| Chipping at Mill | <ul style="list-style-type: none"> • Needs capital investment for bundlers | <ul style="list-style-type: none"> • Bundlers, timber lorries and mill infrastructure already present in some areas • Technology partially developed and still competitive – room to improve | <ul style="list-style-type: none"> • Adaptation of existing Scandinavian working for UK conditions • Verification of typical UK site outputs |
| Landing recovery of residues | <ul style="list-style-type: none"> • Feasible with either chipping or bundling – dominant system and infrastructure must first be established | <ul style="list-style-type: none"> • Potential to improve cable working sites | <ul style="list-style-type: none"> • Residue nature likely to be different in UK sites compared to US or NZ • Working practices would need to be adapted and verified for UK conditions |

¹ hot systems requires synchronisation between one or more steps to maintain productivity e.g. chipping requiring waiting for bin lorries. Cool system organisation is such that work steps can be independent.

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