1. Introduction

- Forestry machinery is essential for harvesting grown timber.
- Their acquisition presents a financing problem for contractors worldwide (Liden, 1995).
- There are few affordable financing strategies for small-scale contractors who have just started their business and have little in the way of operating funds or bank credit.
- Mechanization seems to have advanced even among small-scale contractors since the end of the 2000s.

2. Process of mechanization

Mechanization history and methods of financing are shown in Table 2 (the method of financing and the year the type of machinery).
- The contractors introduced log forks or grapples at the beginning of their business.
- They started to use processors or harvesters after three to seven years.
- Five methods of financing are seen among the four contractors.
- The difficulty of financing for small-scale contractors can be seen, especially for the two contractors (A and D) that had to get their funds from consumer loans as personal loans at the beginning of their business.

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4 Conclusion

- Although the four contractors have been certified for subsidies, they have had to use other financing strategies based on the timing of their need for new machinery.
- A disadvantage of subsidy for small-scale contractors is that they still require a loan to cover half the cost of the machinery even when they are subsidized.
- Subsidy is beneficial for introducing expensive machinery such as a processor or harvester.
- This area receives favorable economic terms for forestry compare with other area in Japan.
- Even so, it can be said that small-scale contractors need policy support at the initial stages of becoming independent contractors as well as for further mechanization.

Table 3. Characteristics of contractors.

<table>
<thead>
<tr>
<th>Contractor</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total amount</td>
<td>13,200</td>
<td>4,137</td>
<td>2,790</td>
<td>11,121</td>
</tr>
<tr>
<td>Spending</td>
<td>6,684</td>
<td>4,137</td>
<td>4,570</td>
<td>11,121</td>
</tr>
<tr>
<td>Income</td>
<td>15,980</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subsidy for machinery</td>
<td>11,121</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movable insurance</td>
<td>4,137</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease</td>
<td>4,137</td>
<td></td>
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<tr>
<td>Tables 1 and 2: Show that the four contractors have been certified for subsidies, but their financial strategy was affordable.</td>
<td>11,121</td>
<td></td>
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</tr>
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</table>

References


Acknowledgments

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