ACACIA WOOD PRODUCTION AND COMMERCIALIZATION SYSTEMS FOR SMALLHOLDER LIVELIHOOD DEVELOPMENT
IN CENTRAL VIETNAM

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INTRODUCTION

• Vietnam wood processing sector shows the significant growth and makes important contribution to national economy, e.g. in 2015, export turnover of wood and wood products was recorded at 6.4 billion USD and around 7 billion USD in 2016.[4]
• Restriction of timber harvests from natural forest in 2014 - domestic material sources for Vietnam forest-based industries mainly come from plantation forests
• Around half of plantation forests is under the management of smallholder households[2]
• Acacia hybrid (Acacia auriculiformis x Acacia mangium) gains popularity due to its multi-purpose use and shorter-rotation compared to other locally important (exotic and indigenous) plantation species (e.g. Pinus)[12]

METHODOLOGY

• Basic theoretical framework: Sustainable livelihood framework[4]
• Data emanated from preliminary research, applying stratified random sampling method, carrying out household survey (n=60) and in-depth household interview (n=15) in Nham Dong district; Thua Thien Hue province, central Vietnam, as well as group discussions and expert interviews.
• Basically, households were classified into 5 income groups: Lowest, Low-middle, Middle, Upper-middle and Upper based on the decision rule on number of family members (n) and TIT of Vietnam Prime Minister. After interviewing, all information about financial status and income of smallholders was cross-checked and grouped with village office.

KEY FINDINGS (CONT.)

a. General characteristics of Acacia hybrid smallholders

Table 1: General characteristics of Acacia hybrid small-scale producers (n=60)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Nham Dong district</th>
<th>Mean</th>
<th>Sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household size (HHS) (years)</td>
<td>3.2</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>HH head’s age (years)</td>
<td>41.9</td>
<td>12.7</td>
<td></td>
</tr>
<tr>
<td>HH total income (VND)</td>
<td>3.3</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>HH main workers (years)</td>
<td>3.8</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>HH family size (schooling years)</td>
<td>4.7</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>Local land holding (ha)</td>
<td>3.9</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Income (VND)</td>
<td>3.2</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Income in Acacia businesses (years)</td>
<td>2.9</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Experience in Acacia business (years)</td>
<td>12.2</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>Distance to plantation areas (minutes)</td>
<td>54.2</td>
<td>50.3</td>
<td></td>
</tr>
</tbody>
</table>

b. Drivers of participation and level of engagement in Acacia hybrid production and commercialization systems

• Motivations driving smallholders into Acacia production activities are mainly related to technical (78.3%), economic conditions (early income) (68.3%) and suitability of such system with local condition (60%) (figure 1).

Even considered as a new land use system, Acacia plantations have been accepted as a stable and long term source of income by smallholders (figure 2)

Fig. 1: Producers’ reasons for their engagement in Acacia business (n=60)

Fig. 2: Involvement level of producers in Acacia business (n=60)

References:

OBJECTIVE

Elucidating the contribution of Acacia hybrid plantations and commercialization systems for smallholders’ livelihood.

Table 2: Acacia area holding by income group (n=60)

<table>
<thead>
<tr>
<th>Income groups</th>
<th>Mean (ha)</th>
<th>Sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest (1)</td>
<td>0.74</td>
<td>0.39</td>
</tr>
<tr>
<td>Low-middle (2)</td>
<td>1.48</td>
<td>0.78</td>
</tr>
<tr>
<td>Middle (3)</td>
<td>2.56</td>
<td>1.32</td>
</tr>
<tr>
<td>Upper-middle (4)</td>
<td>8</td>
<td>5.88</td>
</tr>
</tbody>
</table>

• No household in upper income group involved in Acacia plantations
• Plantation holding areas vary substantially between households and increase with the wealth status of the owners
• Normal production harvest (around 96.67%), and burning field after harvesting (93.3%)
• Cluster analysis demonstrates that general livelihood strategies of producers are identical, as most of them have been following activities related to crop, forestry and livestock production
• Diversity level of livelihood is low as: 1.67% households depend only on Acacia hybrid plantation
• 83.4% and 58.33% producers respectively combine 2 or 3 different income sources and less than 20% of producers engage in 4 or 5 income sources.
• Income from Acacia plantation system accounts for crucial part in smallholders’ income, especially compared to the limited alternative income sources, e.g. salary, trading.

b. Livelihood portfolios of Acacia hybrid small-scale producers

• Better-off households realize higher income from Acacia than lower ones (figure 4), which could be related to their better access to resources and markets.
• ANOVA reveals a statistically significant difference in Acacia hybrid income between households (P=0.03, P<0.000)
• Similarly, the productivity per unit of plantation area increases following the financial status of producers, from 418.79 USD/ha (lowest group) to 676.42 USD/ha (mid-upper group).
• Consistent with common hypothesis in forest-poverty link, relative dependence on Acacia hybrid income is generally decreased from the lower to higher income groups.

Fig. 3: Share of major income sources of Acacia producers (n=60)

• No formal business contract between producers and their customers.
• Far distance + poor infrastructure + low financial status difficult in access to processing company.
• Connection with local traders normally based on social relationships, in some cases through informal loans and advance payment (can lead producers to captive relationships)
• It is rare for smallholders to receive market information from local traders.
• Despite the numbers of rules and regulations, direct effects of government on household’s activities is unclear.

CONCLUSION

• Acacia production and commercialization activities represent an indispensable part of households livelihoods sources by generating considerable income.
• There are various actors involved in Acacia hybrid production and commercialization system, however the interaction between producers and other participants is rather weak if not absent. Result also suggests that in order to achieve the poverty reduction and rural development target, producers’ behaviors should be put in larger context, like value chain analysis, to measure profoundly their characteristics, activities and performances.

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