Influence of public and private agents in the use of new knowledge and technology among small-scale producers: The case of the Honduran coffee chain

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Research Issue
- Providers of knowledge and technology can influence the way small-scale coffee producers innovate
- Research question: How do interactions with certain agents, separately and cumulatively, influence the use of improved methods in coffee production and marketing?
- Innovation trajectories in which public and private agents influence the producers’ decision to adopt new knowledge and technologies were defined

Methodology
- Three coffee producing communities in Honduras studied
- Tools of social network analysis applied
- Data on interaction between knowledge and technology providers and relationship with other farmers collected
- Producers were asked about different innovation aspects and level of innovativeness was rated (Table 1)

Results
Five options where identified in which producers, through the interaction with public and private agents, can acquire new knowledge and technologies:

a) innovation through local buyers
b) innovation through international buyers and exporters
c) innovation through input suppliers
d) innovation from government and development cooperation and

e) innovation through farmers’ initiatives

The private sector is relevant in most options (Fig. 1 & 3), but development agents, particularly the Honduran Coffee Institute (IHCAFE) are dominant when it comes to information exchange. Farmers associations and cooperatives played an important role in the diffusion of information. The influence of an input provider which did substantial advisory work in Las Crucitas (Fig. 2) was significant.

Table 1: Innovation scores among coffee producers in three communities

<table>
<thead>
<tr>
<th>Community</th>
<th>El Pacón</th>
<th>Las Crucitas</th>
<th>San Marcos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation in agricultural practices (nursery, seedlings, fertilization)</td>
<td>0.621</td>
<td>0.696</td>
<td>0.632</td>
</tr>
<tr>
<td>Innovation in shade within the plantation</td>
<td>0.667</td>
<td>0.568</td>
<td>0.576</td>
</tr>
<tr>
<td>Introduction of improved post management practices</td>
<td>0.671</td>
<td>0.568</td>
<td>0.592</td>
</tr>
<tr>
<td>Introduction of new coffee varieties</td>
<td>0.571</td>
<td>0.608</td>
<td>0.592</td>
</tr>
<tr>
<td>Improvements in post harvest management</td>
<td>0.657</td>
<td>0.508</td>
<td>0.646</td>
</tr>
<tr>
<td>Introduction of improved pest management practices</td>
<td>0.579</td>
<td>0.563</td>
<td>0.689</td>
</tr>
<tr>
<td>Introduction of quality standards</td>
<td>0.550</td>
<td>0.568</td>
<td>0.704</td>
</tr>
<tr>
<td>New certifications – organic, origin, fair trade</td>
<td>0.493</td>
<td>0.552</td>
<td>0.720</td>
</tr>
<tr>
<td>Overall</td>
<td>0.599</td>
<td>0.606</td>
<td>0.634</td>
</tr>
</tbody>
</table>

Conclusion
- Significant differences found in the way providers of knowledge and technology influence the farmers’ behavior towards innovation
- Private buyers exert influence on certification and quality aspects
- Development agents have greater influence on improved agronomic practices
- Farmers who communicate with the extension branch of input providers tend to be more innovative

Fig. 1: Producer-Agent Information Exchange Network in El Pacón
Fig. 2: Producer-Agent Information Exchange Network in Las Crucitas
Fig. 3: Producer-Agent Information Exchange Network in San Marcos

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