INTRODUCTION

- 230 rivers crisscross & 80% of Bangladesh is flood plain [Kamal et al. 2018].
- Sporadic flash floods in wetland areas (Haor) create a submerged situation that lasts 7 to 8 months, limiting agricultural use [Hussain and Salam 2007; Hussain 2014].
- Floating agriculture is a promising climate-smart practice in locations where regular land usage is difficult due to flooding, but it has a low adoption rate [Chowdhury & Moore, 2017].

Objectives of the study

- Our research aims to identify the factors that motivate and barriers that inhibit the adoption of floating agriculture.

METODOLOGY

Study area: Karimganj Upazila (sub-district), Kishoreganj

Population & Sampling: 1200 farmers; 120 farmers (10% of the population); random sampling

Data collection & instrument: February 2020; Focus Group Discussion (FGD); Key Informant Interview (KII);
Survey; Structured & semi-structured interview schedule

Theory: Rogers five stages innovation-decision model [Rogers, 2003]

Focus question: Whether or not farmers practiced floating bed cultivation over the last twelve months

Data analysis: Binary logistic regression and rank order; SPSS-25

FINDINGS

- The adoption rate is unsatisfactory.
- Education, trialability and observability are the demotivating factors.
- Training related to floating agriculture, credit received, communication behavior, and complexity are the motivating factors.
- Climatic and non-climatic factors inhibit the adoption of floating farming.

Factors influencing the motivation to adopt floating agriculture

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of education</td>
<td>-0.15*</td>
<td>0.07</td>
<td>4.44</td>
<td>1</td>
<td>0.03</td>
<td>0.85</td>
</tr>
<tr>
<td>Agricultural training</td>
<td>1.53**</td>
<td>0.61</td>
<td>6.17</td>
<td>1</td>
<td>0.01</td>
<td>4.65</td>
</tr>
<tr>
<td>Credit received</td>
<td>2.26***</td>
<td>0.62</td>
<td>13.20</td>
<td>1</td>
<td>0.000</td>
<td>9.63</td>
</tr>
<tr>
<td>Communication behavior</td>
<td>0.39***</td>
<td>0.10</td>
<td>15.11</td>
<td>1</td>
<td>0.000</td>
<td>1.48</td>
</tr>
<tr>
<td>Trialability and Observability</td>
<td>-0.32*</td>
<td>0.15</td>
<td>4.74</td>
<td>1</td>
<td>0.02</td>
<td>0.72</td>
</tr>
<tr>
<td>Complexity</td>
<td>-0.12**</td>
<td>0.03</td>
<td>9.93</td>
<td>1</td>
<td>0.002</td>
<td>0.88</td>
</tr>
<tr>
<td>Constant</td>
<td>3.11</td>
<td>4.423</td>
<td>0.496</td>
<td>1</td>
<td>0.48</td>
<td>22.49</td>
</tr>
</tbody>
</table>

Cox-Snell R², Nagelkerke R²:

0.482, 0.572

Barriers faced by Haor farmers in adopting floating agriculture:

- Highly infected by insect and infested by diseases, rodents...
- The transportation of construction materials increases production cost
- Low availability of construction materials
- Insufficient demonstration plots
- Strong waves of floodwater and excessive rainfall

KEY MESSAGES

- Characteristics of an innovation important for its adoption
- Farmers with a higher level of education should be prioritized for future development programs
- Communication, training facilities along with financial support need to be arranged
- Support services need to work on mitigating the current challenges

REFERENCES


Bangladesh Agricultural University | Department of Agricultural Extension Education (DAEE) | 2202 Mymensingh | Tel: +88 01710 489114 | kabirag9@bau.edu.bd