Project
Small holder dairy farming in a humid livestock zone

Presentation from Livestock team
Outline

- Profile of dairy system of interest
- Development Goal
- Climate Proof Tool
- Potential Climate Hazards
- Adaptation Options identified

- Concluding Remarks
Profile of dairy system of interest

• Project site: Melrose
• Livestock zone set up in state Land (approximately 40 acres)
• Regroup 10 farmers (10 units)
• 10 cows (locally adapted cross breeds) per unit – confined/cut and carry system
• Each unit 4 acres (0.5 acres for farm building)
• Integrated fodder unit (fodder grasses and legumes) of 3.5 acres per farm
• Target: 1000 litres per day
• Sale: pasteurised milk to middlemen
Development goal

To improve productive efficiency and income
Climate Proofing Tool used

Steps followed:

1. Current and future climate risks assessed

2. Adaptation options identified and

3. Adaption measures selected
Potential Climatic Hazards

1. Extreme high temperature
2. Flash floods
3. Drought
## Potential Impacts

<table>
<thead>
<tr>
<th>Extreme high temperature</th>
<th>Decrease in Milk quantity and quality Animal performance (loss in weight, conception rate, long calving interval)</th>
<th>Increase in mortality rate Damage to infrastructure Decrease in Milk quantity and quality Animal performance Increase in mortality rate</th>
<th>Decrease in income and increase in cost of production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash floods</td>
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<td></td>
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<tr>
<td>Drought</td>
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</table>
Risk Assessment

- After observing the climate hazards, basic vulnerability and potential impacts, the risk rating was medium
Adaptation Options

11 adaptation options identified
## Adaptation Options Identified

<table>
<thead>
<tr>
<th>Adaptation Option</th>
<th>Overall Evaluation (/20)</th>
<th>Mitigation Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good milking practices</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Use of cooling tanks</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>SOP for Quality assurance</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Training of farmers/reskilling</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Use of compost in forage plantation</td>
<td>18</td>
<td>+</td>
</tr>
<tr>
<td>Use of locally adapted cross breeds</td>
<td>17</td>
<td>+</td>
</tr>
</tbody>
</table>
## Adaptation Options Identified

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<tr>
<th>Adaptation Option</th>
<th>Overall Evaluation (/20)</th>
<th>Mitigation Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved AI Service</td>
<td>14</td>
<td>+</td>
</tr>
<tr>
<td>Research on alternative feed ingredients/feed supplements</td>
<td>13</td>
<td>+</td>
</tr>
<tr>
<td>Fodder conservation and germplasm</td>
<td>10</td>
<td>+</td>
</tr>
<tr>
<td>Research on use of climate-resilient fodder varieties</td>
<td>10</td>
<td>+</td>
</tr>
<tr>
<td>Policy measures (compensation, insurance, etc)</td>
<td>8</td>
<td>-</td>
</tr>
</tbody>
</table>
Concluding Remarks

• 5 options have equal rating of 18/20
• Out of these 5 adaptation options only one shows mitigation potential
• Policy measures (compensation) give a low overall rating and –ve mitigation potential
• Out of 11 options, two adoption options have regret measures
• Climate Smart Project (P,R,M)
• Overall, the proposed project with the adaptation measures meet our development goal
Thank You