Baseline analysis of cocoa production in the Center and Southwest Regions of Cameroon

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2016 Next Generation Cocoa Research Symposium
Baseline study on cocoa in Cameroon

• 2014 (Ayos & Konye) & 2016 (Ngomedzap & Muyuka)
• 667 interviews in total, 578 cocoa farmers
• Questions on
  ➢ respondents
  ➢ household level
  ➢ cocoa farming
  ➢ other income activities (livestock, …)
  ➢ pests and diseases
  ➢ climate change
• 120 fields visited (30 each location) with farmers previously interviewed

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Average yield (kg/ha)

<table>
<thead>
<tr>
<th></th>
<th>2011/12</th>
<th>2012/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayos</td>
<td>354</td>
<td>387</td>
</tr>
<tr>
<td>Ngomedzap</td>
<td>422</td>
<td>438</td>
</tr>
<tr>
<td>Konye</td>
<td>301</td>
<td>500</td>
</tr>
<tr>
<td>Muyuka</td>
<td>756</td>
<td>871</td>
</tr>
</tbody>
</table>

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Cocoa farmers

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Typical cocoa farmer in Cameroon

- male (88 %)
- married (73 %)
- household head (94 %)
- average 50 years old (Muyuka 46 yrs)
- has finalized primary (52%) or secondary education (33%)
- can read basic texts (64%) or higher (11%)
- has on average 5.7 ha cocoa farms, 4.4 ha mature, 1.3 ha young
- cocoa farming is the major source of income (70%)
Where the respondents born and raised in the communities or immigrants?

- Ayos: 76.3% born in the community, 9.9% immigrant
- Ngomedzap: 78.3% born in the community, 5.0% immigrant
- Konye: 64.1% born in the community, 14.1% immigrant
- Muyuka: 57.1% born in the community, 11.3% immigrant

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How many people depend on this household?

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Household Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayos</td>
<td>13.0</td>
</tr>
<tr>
<td>Ngomédzap</td>
<td>9.0</td>
</tr>
<tr>
<td>Konye</td>
<td>9.9</td>
</tr>
<tr>
<td>Muyuka</td>
<td>6.6</td>
</tr>
</tbody>
</table>
Cocoa farms
### Average sizes of cocoa farms (ha)

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Size (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayos</td>
<td>5.43</td>
</tr>
<tr>
<td>Ngomedzap</td>
<td>3.90</td>
</tr>
<tr>
<td>Konye</td>
<td>8.65</td>
</tr>
<tr>
<td>Muyuka</td>
<td>4.59</td>
</tr>
<tr>
<td><strong>Overall average</strong></td>
<td><strong>5.70</strong></td>
</tr>
</tbody>
</table>

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Farm sizes grouped

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- Ayos: 61.4% <5 ha, 26.6% 5 - 10 ha, 0.8% 15 - 20 ha, 4.7% 10 - 15 ha, 6.3% <5 ha
- Ngomedzap: 81.3% <5 ha, 17.2% 5 - 10 ha, 6.5% 15 - 20 ha, 3.2% 10 - 15 ha, 2.5% <5 ha
- Konye: 74.1% <5 ha, 47.1% 5 - 10 ha, 10.3% 15 - 20 ha, 3.2% 10 - 15 ha, 2.5% <5 ha
- Muyuka: 20.3% <5 ha, 20.3% 5 - 10 ha, 2.5% 15 - 20 ha, 2.5% 10 - 15 ha, 6.5% <5 ha
Yield per cocoa farm size group

<table>
<thead>
<tr>
<th>Farm Size Group</th>
<th>Yield (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5 ha farms</td>
<td>624</td>
</tr>
<tr>
<td>5 - 10 ha farms</td>
<td>437</td>
</tr>
<tr>
<td>10 - 15 ha farms</td>
<td>427</td>
</tr>
<tr>
<td>15 - 20 ha farms</td>
<td>297</td>
</tr>
<tr>
<td>&gt; 20 ha farms</td>
<td>429</td>
</tr>
</tbody>
</table>

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Proportion of income from cocoa per farm size group

<table>
<thead>
<tr>
<th>Farm Size Group</th>
<th>2016 Next Generation Cocoa Research Symposium</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5 ha farms</td>
<td>68.5%</td>
</tr>
<tr>
<td>5 - 10 ha farms</td>
<td>73.1%</td>
</tr>
<tr>
<td>10 - 15 ha farms</td>
<td>69.7%</td>
</tr>
<tr>
<td>15 - 20 ha farms</td>
<td>70.7%</td>
</tr>
<tr>
<td>&gt; 20 ha farms</td>
<td>78.0%</td>
</tr>
</tbody>
</table>
Fertilizer use

- Ayos: 78.0% fertilizer, 22.0% no fertilization
- Ngomedzap: 73.2% fertilizer, 26.8% no fertilization
- Konye: 91.0% fertilizer, 9.0% no fertilization
- Muyuka: 82.3% fertilizer, 17.7% no fertilization
- Total: 41.9% fertilizer, 58.1% no fertilization

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Training

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Have you participated in FFS or in any other agricultural training?

- **Ayos**: 34.2% no training, 21.7% FFS and other agricultural training, 13.0% other agricultural training in the last 2 years, 42.8% participated in FFS
- **Ngomedsap**: 78.9% no training, 3.7% FFS and other agricultural training, 4.3% other agricultural training in the last 2 years, 22.8% participated in FFS
- **Konve**: 48.9% no training, 22.8% FFS and other agricultural training, 5.4% other agricultural training in the last 2 years, 22.0% participated in FFS
- **Muyuka**: 56.0% no training, 19.6% FFS and other agricultural training, 2.4% other agricultural training in the last 2 years, 22.0% participated in FFS

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Intergenerational aspects

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Do you want your children to become cocoa farmers?

<table>
<thead>
<tr>
<th>Option</th>
<th>Ayos</th>
<th>Ngom edzap</th>
<th>Kon ye</th>
<th>Muyuka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some children will become farmers, others will work in offices</td>
<td>5.5%</td>
<td>5.5%</td>
<td>5.5%</td>
<td>7.0%</td>
</tr>
<tr>
<td>An important activity of the country</td>
<td>7.3%</td>
<td>14.5%</td>
<td>23.3%</td>
<td>16.2%</td>
</tr>
<tr>
<td>Yes, because I educate my children in cocoa farming</td>
<td>2.1%</td>
<td>2.1%</td>
<td>7.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Return to the village after retirement and do cocoa farming</td>
<td>4.3%</td>
<td>4.3%</td>
<td>45.9%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Cocoa farming gives an a more reliable income</td>
<td>12.9%</td>
<td>12.9%</td>
<td>40.8%</td>
<td>40.8%</td>
</tr>
<tr>
<td>Even if the child has another occupation, (s)he could still have a cocoa farm</td>
<td>22.6%</td>
<td>22.6%</td>
<td>4.3%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Children should decide on their own</td>
<td>33.3%</td>
<td>33.3%</td>
<td>9.9%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Tedious and gives little money</td>
<td>17.3%</td>
<td>17.3%</td>
<td>33.3%</td>
<td>33.3%</td>
</tr>
<tr>
<td>School is a priority, cocoa farming only when no other options</td>
<td>3.4%</td>
<td>3.4%</td>
<td>2.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Yes, cocoa is profitable or will become profitable</td>
<td>10.3%</td>
<td>10.3%</td>
<td>7.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Yes, to continue the heritage</td>
<td>7.7%</td>
<td>7.7%</td>
<td>7.7%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

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Pests and diseases

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Which pests and diseases do you suffer from on your cocoa farms?

- **Blackpod**: 86.3%
- **Dieback**: 29.5%
- **Leaf spot**: 18.2%
- **Capsids / mirids**: 17.2%
- **Mealy bugs**: 24.9%
- **Mistletoe**: 19.2%
- **Stem borers**: 4.9%
- **Stem canker**: 24.1%
- **Termites**: 43.1%
- **Rodents**: 13.3%
- **Others**: 0%

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What is the severity level of capsids / mirids?

- **Ayos**: 17.7% (1 - very low), 20.4% (2 - low), 25.7% (3 - average), 17.7% (4 - high), 0.8% (5 - very high)
- **Ngomedzap**: 22.0% (1 - very low), 27.3% (2 - low), 23.5% (3 - average), 9.0% (4 - high), 0.8% (5 - very high)
- **Konye**: 22.2% (1 - very low), 28.5% (2 - low), 18.1% (3 - average), 22.0% (4 - high), 9.8% (5 - very high)
- **Muyuka**: 57.4% (1 - very low), 26.2% (2 - low), 28.5% (3 - average), 57.4% (4 - high), 1.6% (5 - very high)

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In which months do you suffer from capsids/mirids?

- Ayos
- Ngomedzap
- Konye
- Muyuka

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Which is the severity level of blackpod?

Ayos: 10.6% very low, 30.1% low, 23.9% average, 33.3% high, 2.7% very high

Ngomedzap: 9.8% very low, 19.7% low, 33.3% average, 24.3% high, 1.5% very high

Konye: 4.9% very low, 25.7% low, 27.8% average, 35.2% high, 2.1% very high

Muyuka: 7.4% very low, 33.6% low, 35.2% average, 16.4% high, 1.6% very high

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In which months do you suffer from blackpod?

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swollen scooch / CSSVD

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Climate change

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How have the weather conditions changed?

- **Ayos**: 49.3% unpredictable rain and dry periods, 36.2% fewer rains, 4.6% increased temperature, 1.9% heavy rains and storms.
- **Ngomozap**: 59.6% unpredictable rain and dry periods, 1.9% fewer rains, 0.6% increased temperature, 1.8% heavy rains and storms.
- **Konye**: 14.1% unpredictable rain and dry periods, 38.6% fewer rains, 14.1% increased temperature, 35.1% heavy rains and storms.
- **Muyuka**: 42.3% unpredictable rain and dry periods, 19.6% fewer rains, 19.6% increased temperature, 1.2% heavy rains and storms.

Others:
- it rains a lot
- fewer rains
- heavy rains
- rain in the dry season
- it is cold
- drought
- When it is cold, it is extremely cold, the same for the heat
Conclusions

• Muyuka
  ➢ high yields despite low fertilizer input
  ➢ high prevalence of blackpod & capsides
  ➢ schooling is better than cocoa farming

• Ayos
  ➢ high level of training received
  ➢ though low yields
  ➢ advocate strongly for children to become cocoa farmers

• Ngomedizap
  ➢ low level of training received

⇒ Interventions need to be tailored to the situation and needs

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Next steps

• calculate correlations
• connect interview data with field data
• interviews second round 2017
Thanks to all those who contributed materials for this presentation

Thank you very much for your attention

Merci beaucoup pour votre attention

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