FACTS ABOUT SUSTAINABLE AGRICULTURAL PRODUCTION AND LAND MANAGEMENT IN ZAMBIA

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Outline

Introduction

Facts about Sustainable land management and agricultural production.

Conclusion
Introduction

Increasing populations, and associated land pressures will lead to more intensive farming systems to meet growing food demand.

- The ability of soils to naturally regenerate may be compromised if intensification is not accompanied with sustainable land management practices.
- Manly because intensification (increased use of fertilizers, herbicides, and pesticides) adversely affects the provision of environmental goods and services.

Increasing threat of climate change, and declining soil fertility and low macro-nutrients makes calls for practices that help farmers build resilience to these.

- They increase productivity.
- Some practices if integrated with intensification, help restore the carbon balance.
Introduction

- Sustainable agriculture and land management lead to improved agricultural productivity, and have positive effects on the provision of environmental goods and services.
- It helps agricultural systems to be resilient and persistent while contributing to various economic goals.
  - Improves resilience of smallholder farmers to climate change
  - Prevent and reverse land degradation amid growing scarcity from population growth.
  - Meeting food needs without compromising environment or human safety.
GRZ has Recognized this 2\textsuperscript{ND} NAP 2016

- (a) Objective 8: To promote the sustainable management and use of
- natural resources
- (b) Measures:
  - i. Promote sustainable land management technologies
  - (including conservation agriculture, appropriate stock densities);
  - ii. Promote afforestation, community wood lots and agro- forestry;
  - ................
  - .............
GRZ has Recognized this 2ND NAP 2016

(a) Objective 9: To mainstream environment and Climate Change in the agriculture sector
(b) Measures:
  i. Promote and strengthen agricultural production methods that are resilient to Climate Change;
  ii. Promote awareness on Climate Change adaptation;
  iii. Integrate Climate Change adaptation measures in plans and programmes;
  iv. Promote environmentally friendly and climate-smart farming systems;
The technologies for Sustainable production and land management

- Soil erosion control
- Conservation agriculture
  - Crop rotation
  - Crop residue retention
  - Minimum tillage
- Agroforestry
  - Improved tree fallows (e.g. *Sesbania sesban*, *Tephrosia vogelli*, *Faidherbia albida*)
FACTS
Conservation agriculture adoption remains low

Source: RALS 2015
But adoption rates are higher for some specific CA practices

<table>
<thead>
<tr>
<th>Practice</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Households</td>
<td>1,472,886</td>
</tr>
<tr>
<td>Minimum Tillage (%)</td>
<td>10.6</td>
</tr>
<tr>
<td>Planting Basins/potholes (%)</td>
<td>3.8</td>
</tr>
<tr>
<td>Zero tillage (%)</td>
<td>4.1</td>
</tr>
<tr>
<td>Ripping (%)</td>
<td>3.4</td>
</tr>
<tr>
<td>Crop Rotation (%)</td>
<td>49.9</td>
</tr>
<tr>
<td>Crop Residue retention (%)</td>
<td>63.3</td>
</tr>
</tbody>
</table>

Source: RALS 2015
Agroforestry adoption rates remain low.

- Adoption of improved tree fallows is extremely low and mostly among cotton farmers.
- RALS 2015 shows that only 1% of smallholder farmers in Zambia adopted improved tree fallows.
- This is higher in major cotton producing areas and among cotton producers (i.e. Southern, Eastern, Central, and Muchinga provinces). With 2.3% of the smallholder farmers in these provinces adopting improved fallows.
Soil erosion control

- 31% of the 1.5 million smallholders experienced soil erosion on their fields.
- Of the households that experience soil erosion 51.2% control for it.
Some factors that affect adoption IAPRI 2016

- Lack of inputs: 26
- Problem of weeds: 22
- High cost of herbicides: 9
- Lack of training/lack of knowledge: 8
- Attitude/ignorance/laziness: 7
- Traditional beliefs/cultural norms/witchcraft: 6
- Limited land availability for crop rotations: 1
Agroforestry

- Lack of seedlings
- Tree damage from fires.
Conclusion

- We need to invest in understanding ways of increasing adoption of technologies that are sustainable and rewarding to farmers such as CA and Climate Smart Agriculture.
Thank You

For more information see our website at:

http://www.iapri.org.zm/