

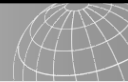


Rapid appraisal of losses in agri- business value chains - Draft tool -

Workshop „Post Harvest Rapid Loss Appraisal tool“

23. February 2015
Accra, Ghana

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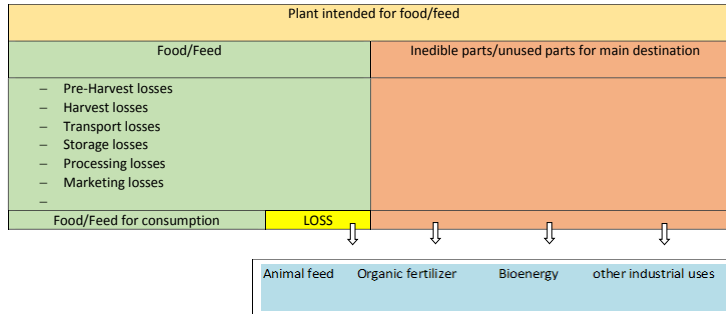


Rationale of the tool

- Need for an easy manageable and sufficiently accurate methodology to identify leverage points in agri-business value chain segments for reduction measures
- Objective is a systematic pre-screening to provide sufficient evidence for conceiving further interventions to reduce losses in value chains
- Potential users:
projects of agri-business value chain promotion
practitioners in value chain development



Scope of the tool - definition of losses



Special case: Aflatoxins

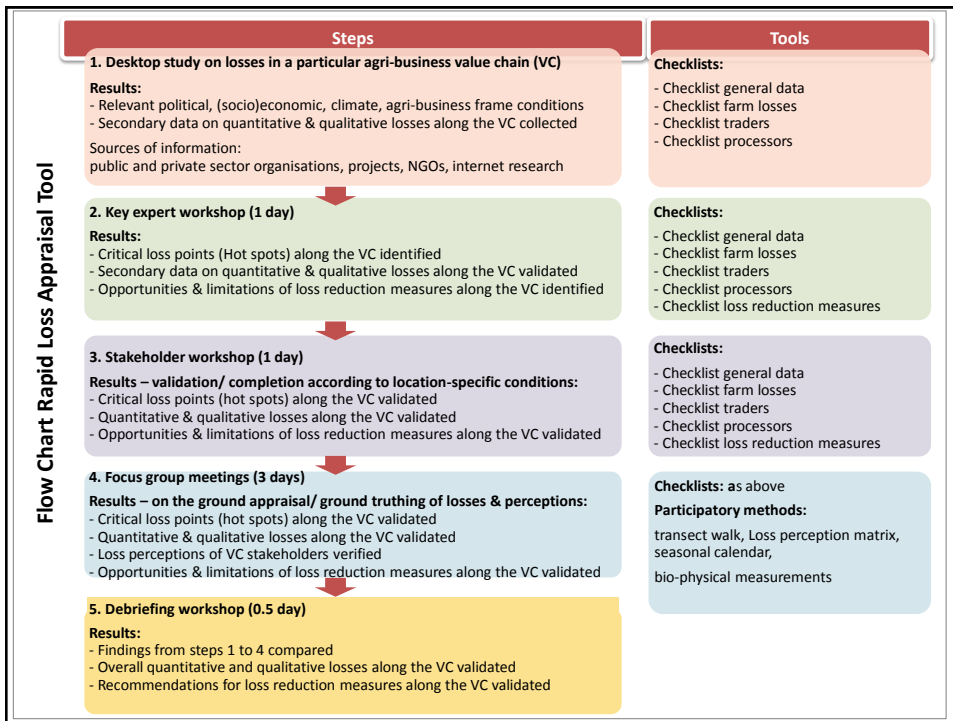
Aflatoxins are recognized as one of the biggest challenge to food and nutrition security, trade and health.

National permissible level in maize in Ghana: 15 µg/kg.

Current research over the past 3 years found 66 out of 202 samples with higher Aflatoxin levels than nationally permissible.


The Rapid Appraisal Tool will serve as a pre-screening method to identify critical Aflatoxin entry points through an integrated risk analysis.

Based on the results of the Rapid Appraisal Tool, further recommendations for practical value chain management and for better surveillance can then be target-orientated and more precise.



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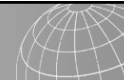
Sampling / key informants



Survey zone	<ul style="list-style-type: none"> • assumed loss problems in VC • relative homogenous climatic and socio-economic conditions
Key-Expert Workshop	<ul style="list-style-type: none"> • 15-20 potential key informants from Government, private sector, research, NGO
Stakeholder Workshop	<ul style="list-style-type: none"> • 25-30 persons, representative mixture of stakeholders along the VC (gender!)
Focus Group Survey	<ul style="list-style-type: none"> • Up to 3 farmer group with 10-15 participants (gender!) • 2-3 individual medium large-scale traders • 2 groups with 4-6 wholesalers at 2 different markets • 2-3 transporters • 3-4 individual medium or large-scale processors • 4-6 street food vendors

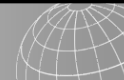
Sector Project „Sustainable Management of Resources in Agriculture“

Page 6



Loss perception categories

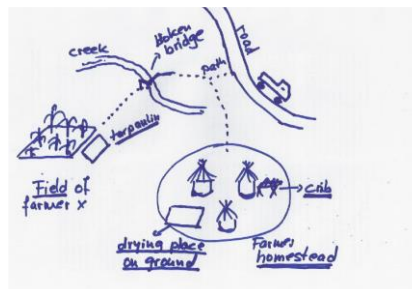
0	none	0	0	0%
1	negligible	Traditional measures	Conversion in kg	To define with focus group's
2	concern	Traditional measures	Conversion in kg	To define with focus group's
3	intolerable	Traditional measures	Conversion in kg	To define with focus group's
4	Total loss	All	kg	100 %

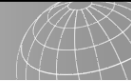


Participatory tools

1. Loss transect

- “mobile interview” with the stakeholders about loss issues and their perception
- direct observation of potential loss points within the value chain in a structured manner
- bio-physical measurements with product samples during the walk





Participatory tools



2. Loss perception matrix

- Illustration of the loss perception of the local informants
- Visualization of the different assumed critical loss points and
- Setting losses into relation

participants use stones, marbels or beans to indicate their loss perception at every level of VC

	Loss categories				
	0 ○○○○	1 ○○○	2 ○○	3 ○	4 ○○○○
harvest					
transport					
drying					
storage					



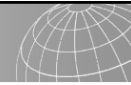
Participatory tools



3. Storage and selling calendar

- Visualization of price levels and correspondent selling quantities to illustrate marketing potentials
- Visualization of produce quantities stored over a certain period and therefore illustrate potential storage risks
- Initialization of a discussion with participants on lost market potential and risk to storage losses due to long storage times





Bio-physical measurements on cobs



Sample

- Identify a farmer/trader/processor for sampling
- Collect 30 cobs randomly from different layers in the store
- Count No of cobs with husk that are damaged externally

Dehusk

- No of cobs that have discolored grains/portions
- No of cobs that will be potentially thrown away

Degrain

- Remove grains from cobs and put on a clean plastic sheet
- Follow procedures for measurements on grains



Bio-physical measurements on grains



Sample

- Select 10 maize bags, draw with your own hands from 1 bag 5 hands full of maize at different levels and different positions
- Collect 1kg of grains, divide it into 3 parts, take one lot and count out 500 grains

Measure On 500 grains

- Count no. of insects after sieving through a household sieve
- Weight frass/debris after sieving through a household sieve
- Count no. of grains that show insect damage
- Count no. of grains that are discolored
- Count no. of grains that are undersized or shriveled
- Determine no. of grains that would be thrown away

Measure instrumentation

- Moisture content with rapid moisture meter
- BGYF (bright green yellow fluorescence) under black light (under long wave UV light 366 nm) for indication of aflatoxin in 2,5kg



Reporting structure



1. Introduction
 - 1.1. Background, concepts and rationale of the tool
 - 1.2. Scope of the tool and definition of losses
2. Institutions and existing data in regard to losses in agri-food value chains
 - 2.1. Ministry of Agriculture
 - 2.2. Ministry of.....
 - 2.3. University of Ghana
 - 2.4. FAO
 - 2.5. Bill & Melinda Gates Foundation
 - 2.6. AGRA (Alliance for a Green Revolution in Africa)
 - 2.7. NGO
 - 2.8. Private Sector
3. Study site
4. General Agronomics
5. Description of the selected value chain
 - 5.1. Structure of the VC
 - 5.2. Products of the VC
 - 5.3. Economics of the VC
 - 5.4. Quality standards



Reporting structure



6. Losses in the VC
 - 6.1. General awareness of losses including Aflatoxins
 - 6.2. Factors influencing losses including Aflatoxins
 - 6.3. Critical loss points
 - 6.4. Causes of losses and reduction measures
 - 6.4.1. Pre-Harvest
 - 6.4.2. Harvest and on-farm post-harvest
 - 6.4.3. Transport
 - 6.4.4. Marketing and off-farm storage
 - 6.4.5. Processing
 - 6.5. The economy of losses
 - 6.5.1. Monetary dimension of losses (quantitative and qualitative)
 - 6.5.2. Non realized market opportunities
 - 6.5.3. Use of by-products
7. Recommendations



Thank you for your attention