

# N<sub>2</sub>Africa – Ethiopia

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A workshop on Awareness Creation on Data  
Tools and Data Refinement

18 – 21 August, 2015, Addis Ababa,  
Ethiopia

# Outline

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- Introduction – main goal of N2Africa
- Bring the workshop into context
  - Data **vis-à-vis** Information; Yield gap
  - Quality data to realize “Benefit the smallholder farmer”, some examples
    - Closing legume yield gap
    - Well functioning input supply and output market (value chain)
- Workshop objectives and expected output

# Main goal: increasing inputs from $N_2$ -fixation



- ❖ Increase the area of land cropped with legumes (targeting of technologies)

Fertilizer

Legumes

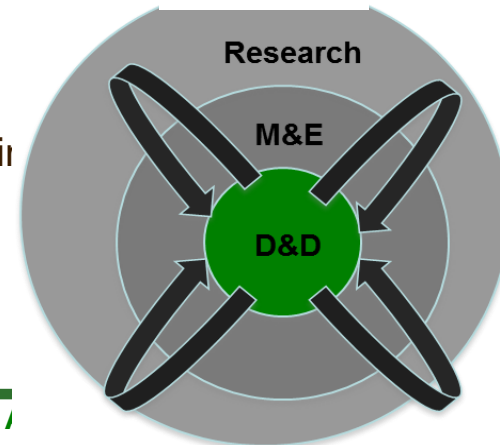
Smallholder farmers

In 2014, planned to reach 5225 (diag., demo, adapt.), achieved 4,008 farmers  
In 2015, targeted for > 28,000 farmers



Link to markets and create new enterprises to increase demand for legumes

R4D Model



Putting nitrogen fixation to work for smallholder farmers in /

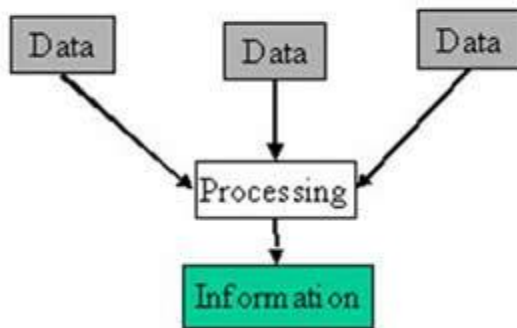
# Data vis á vis Information; Yield Gap



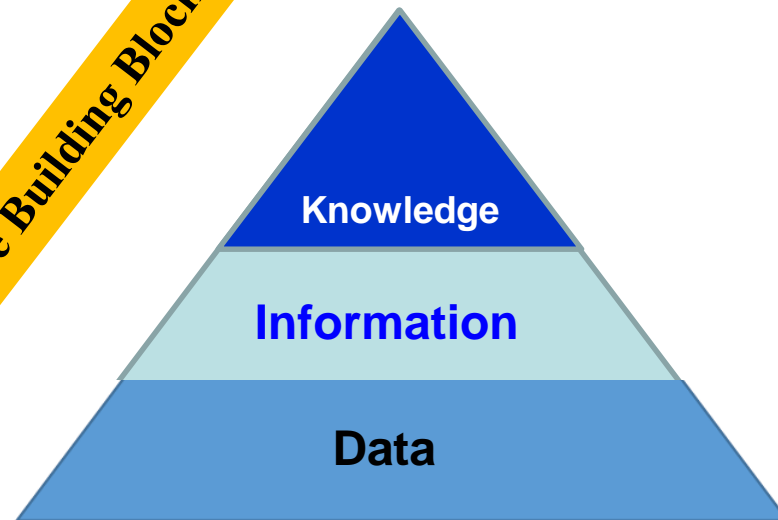
**Data** refers to raw data (numbers, it is the basic form of data, data that hasn't been analyzed or processed in any manner)

**Information** is "knowledge communicated or received concerning a particular fact or circumstance." data interpreted as a message. It provides knowledge or insight about a certain matter

Information is created from data

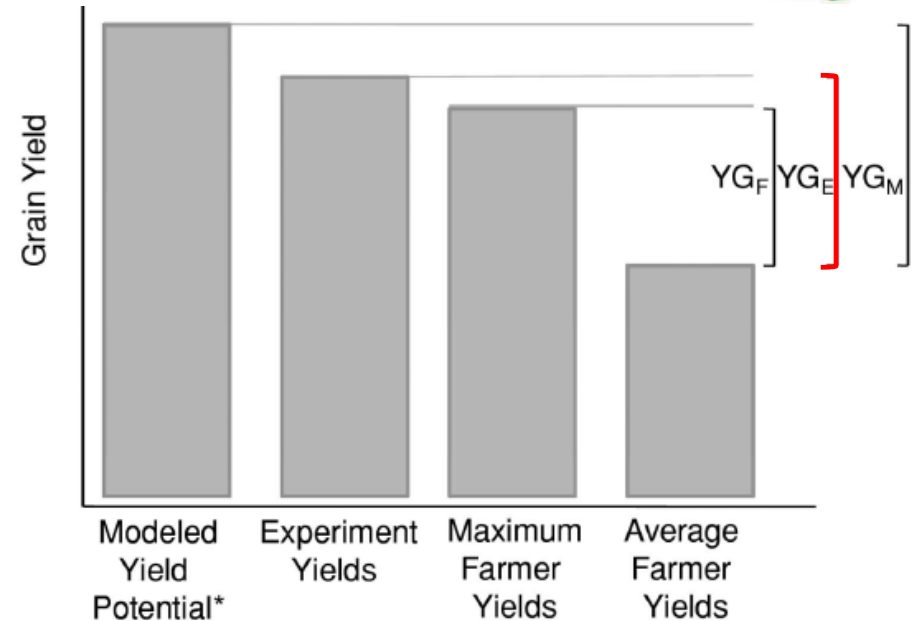
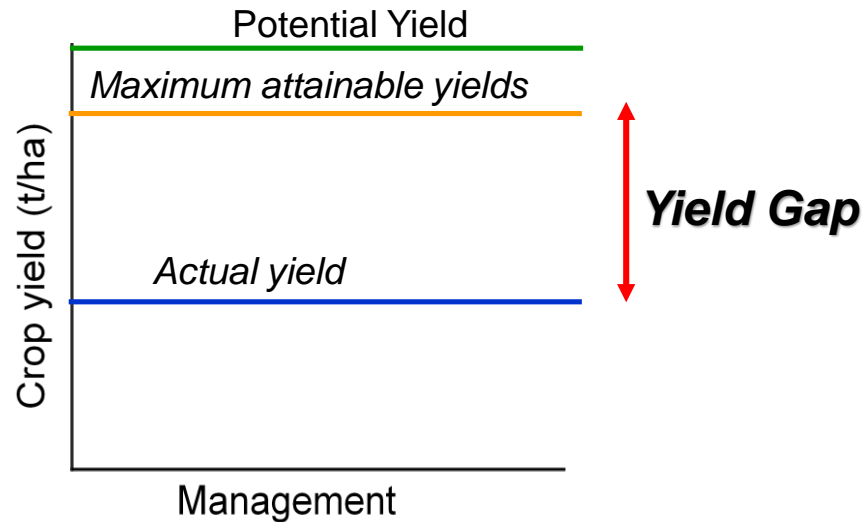


• **Data Quality: the Building Block**



- Data is unprocessed facts figures. Information is processed data.
- Bad data costs **time and effort**, gives **false impressions**, results in **poor forecasts** and devalues everything else in the continuum

# Yield Gap



A number of biophysical and socioeconomic factors puts constraints on crop yields resulting in yield gaps that can be tackled with adequate agricultural input and management

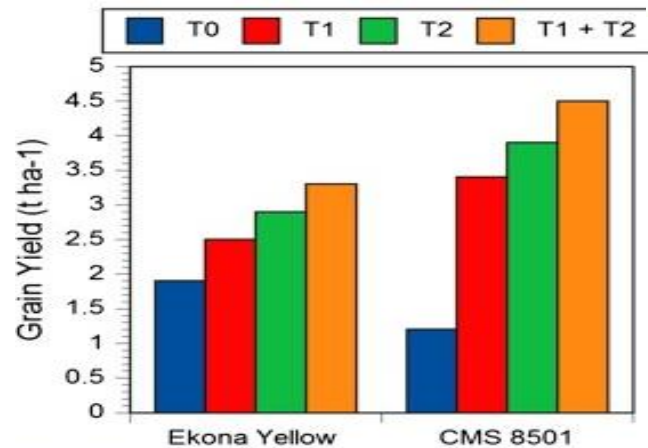
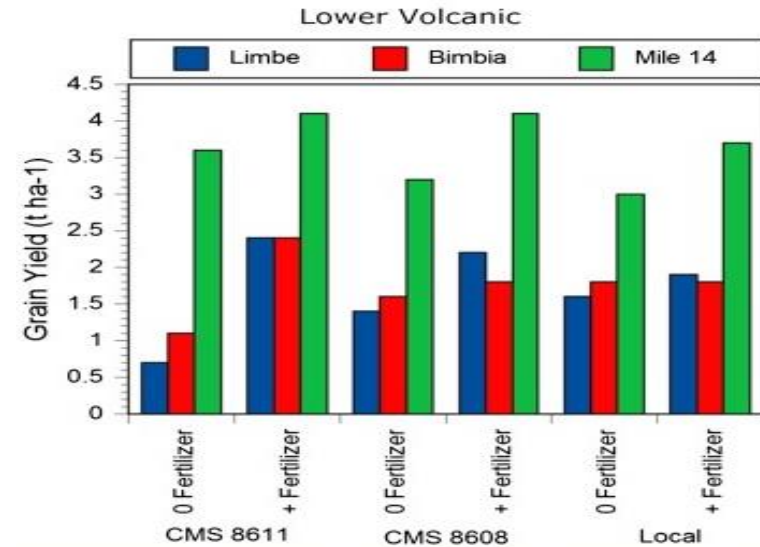
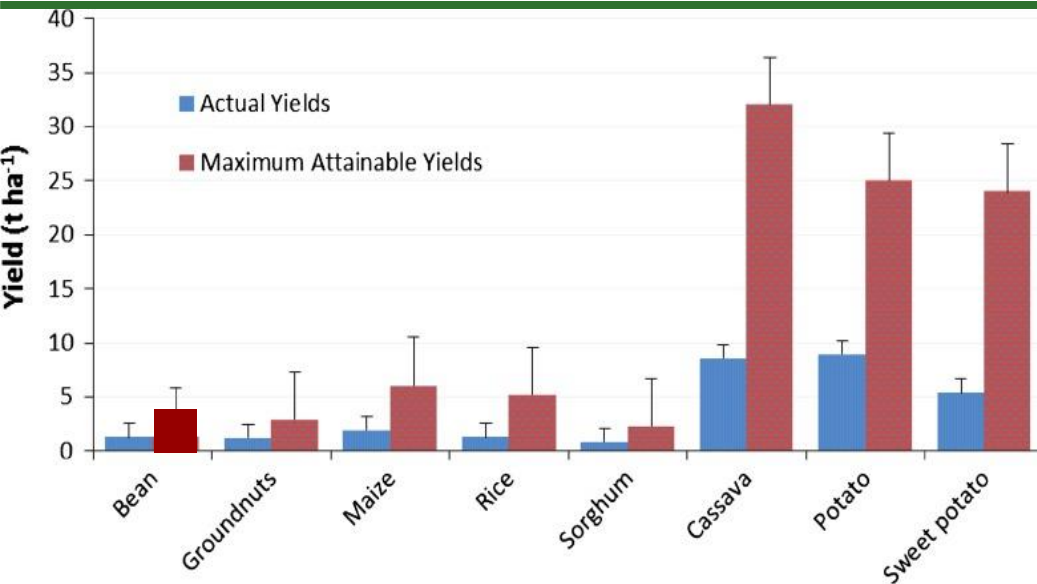
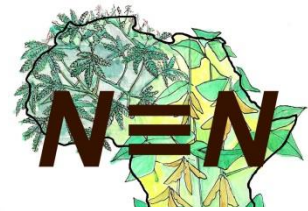
Soil Quality  
Constraints

Agro-climatic  
Constraints

Market  
Accessibility

Crop yield  
Variability

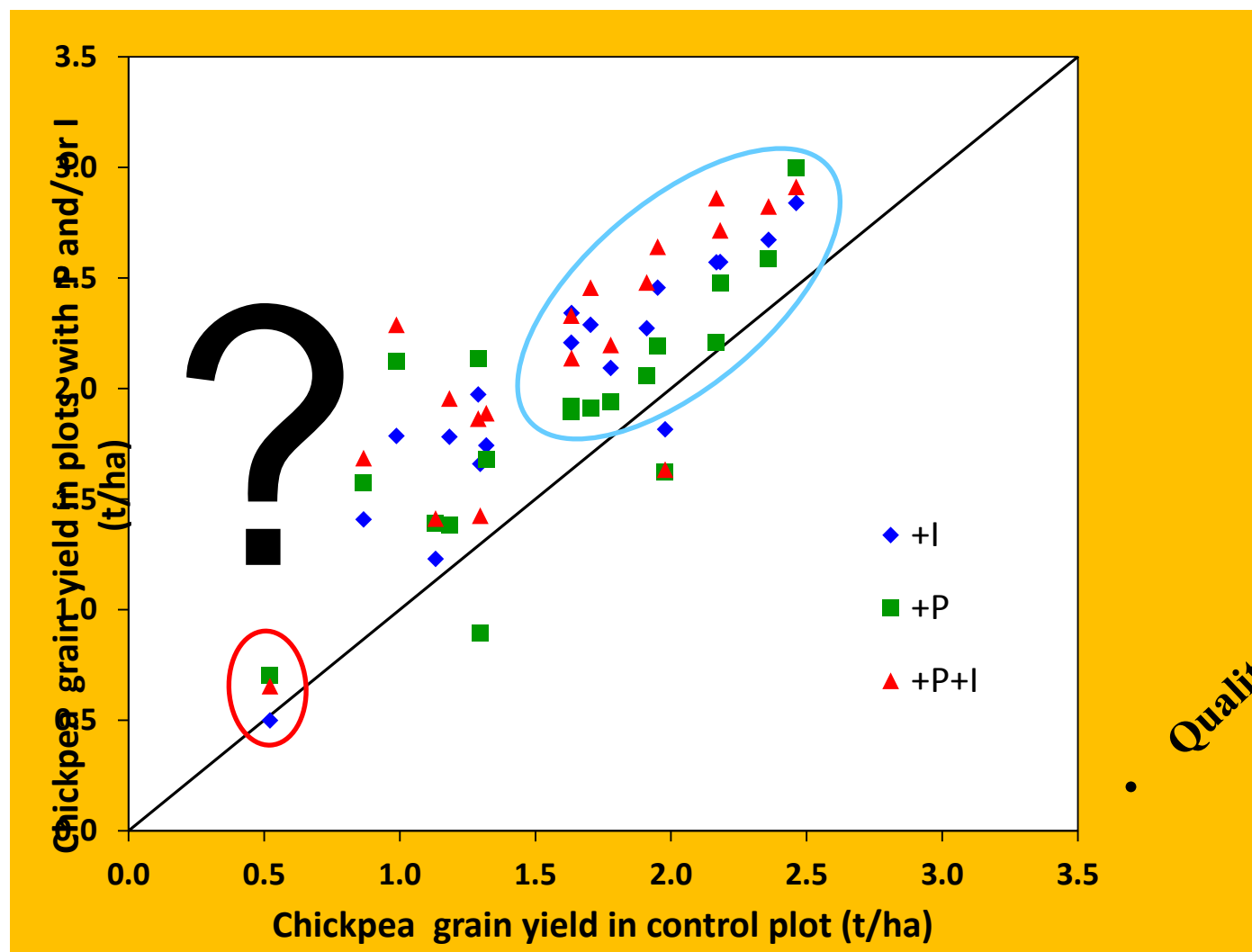
# Yield gaps (examples, Genesis et al., AMBIO, 2014, 43, 175-190)



**T0 = No fertilizer applied**  
**T1 = NPK (80-40-40Kg ha<sup>-1</sup>) applied at planting**  
**T2 = NPK (80-40-40Kg ha<sup>-1</sup>) applied at 4 weeks after planting.**  
**Ekona Yellow and CMS 8501 are maize varieties used in the study.**



# On farm chickpea grain yield response to I and R



Quality data : the Building Block

Fig. Grain yield response of chickpea to P and/or I at Wolyta (Ibsa, 2013)

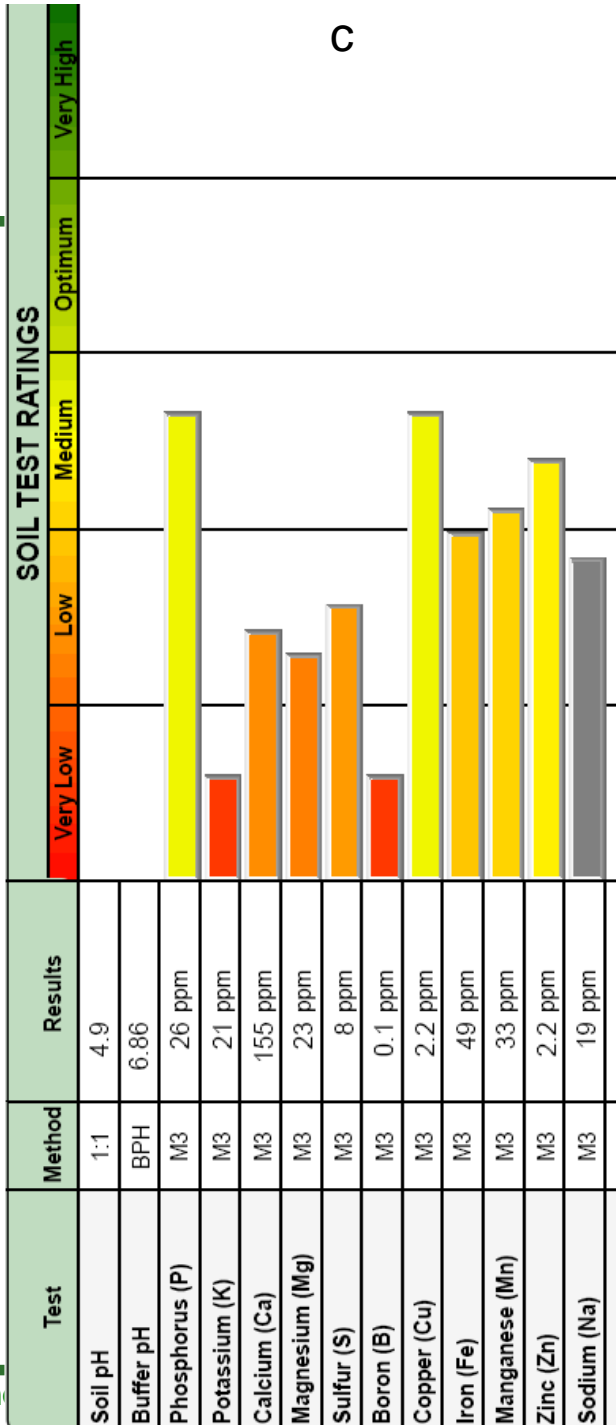
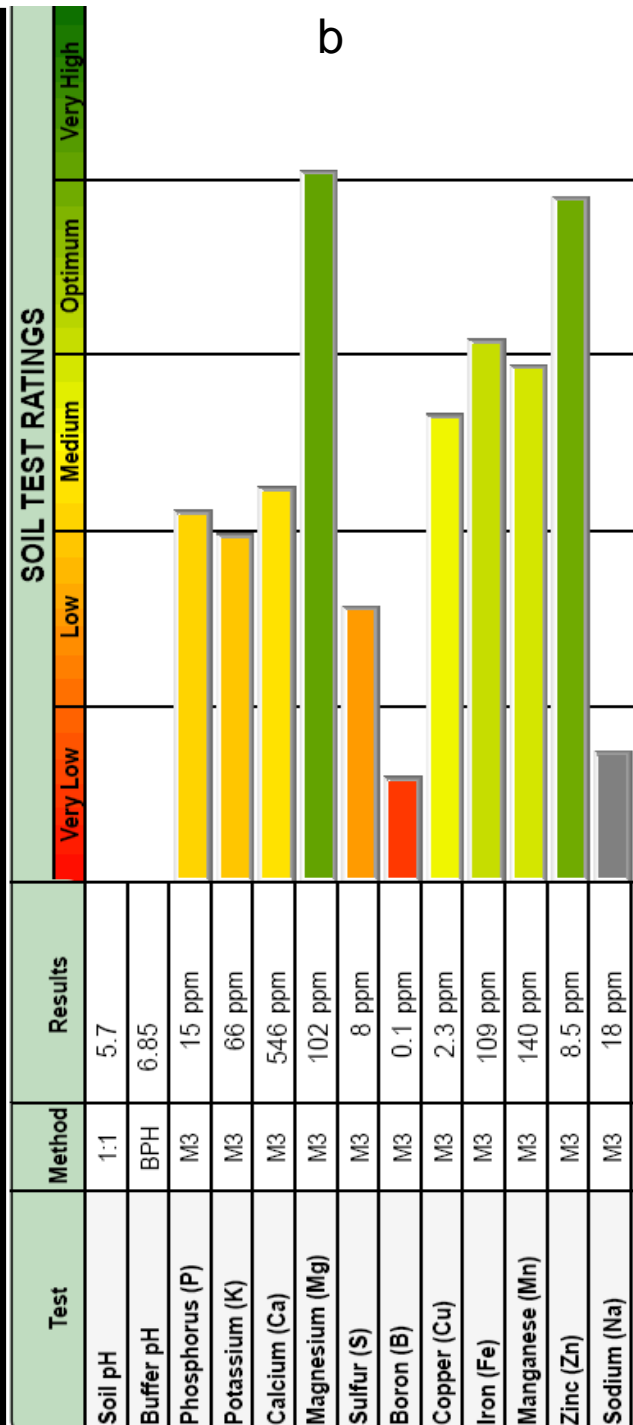
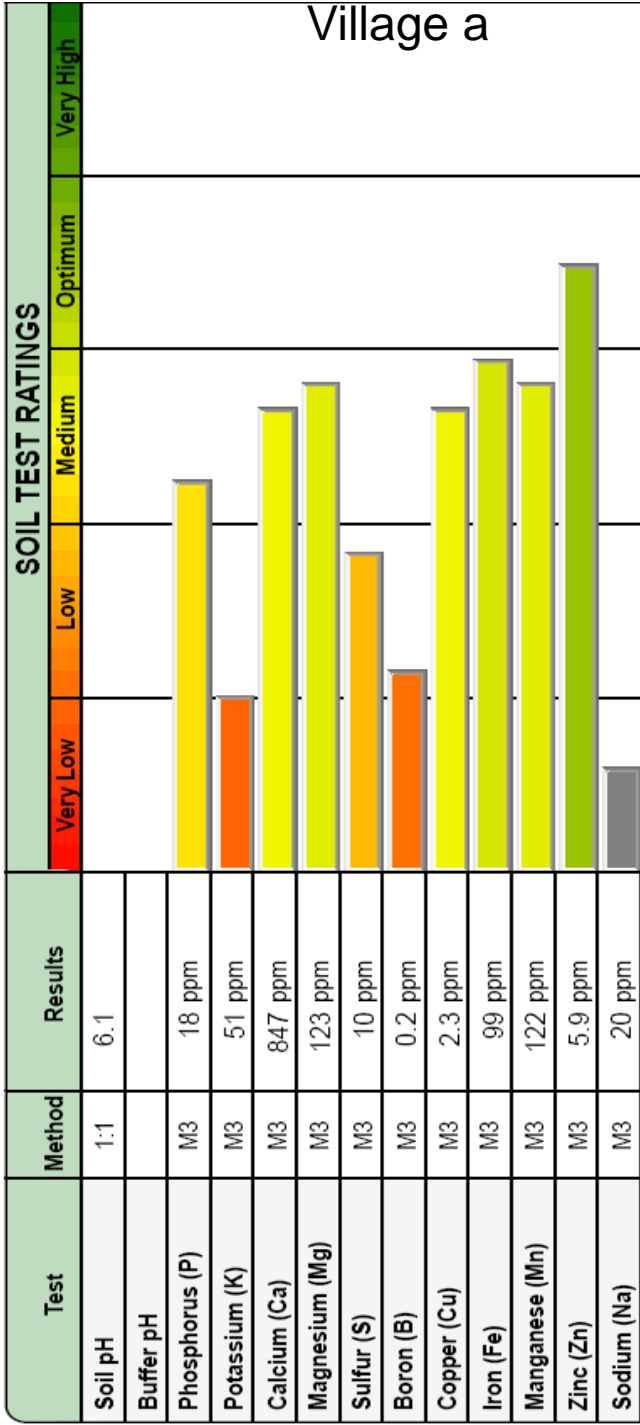
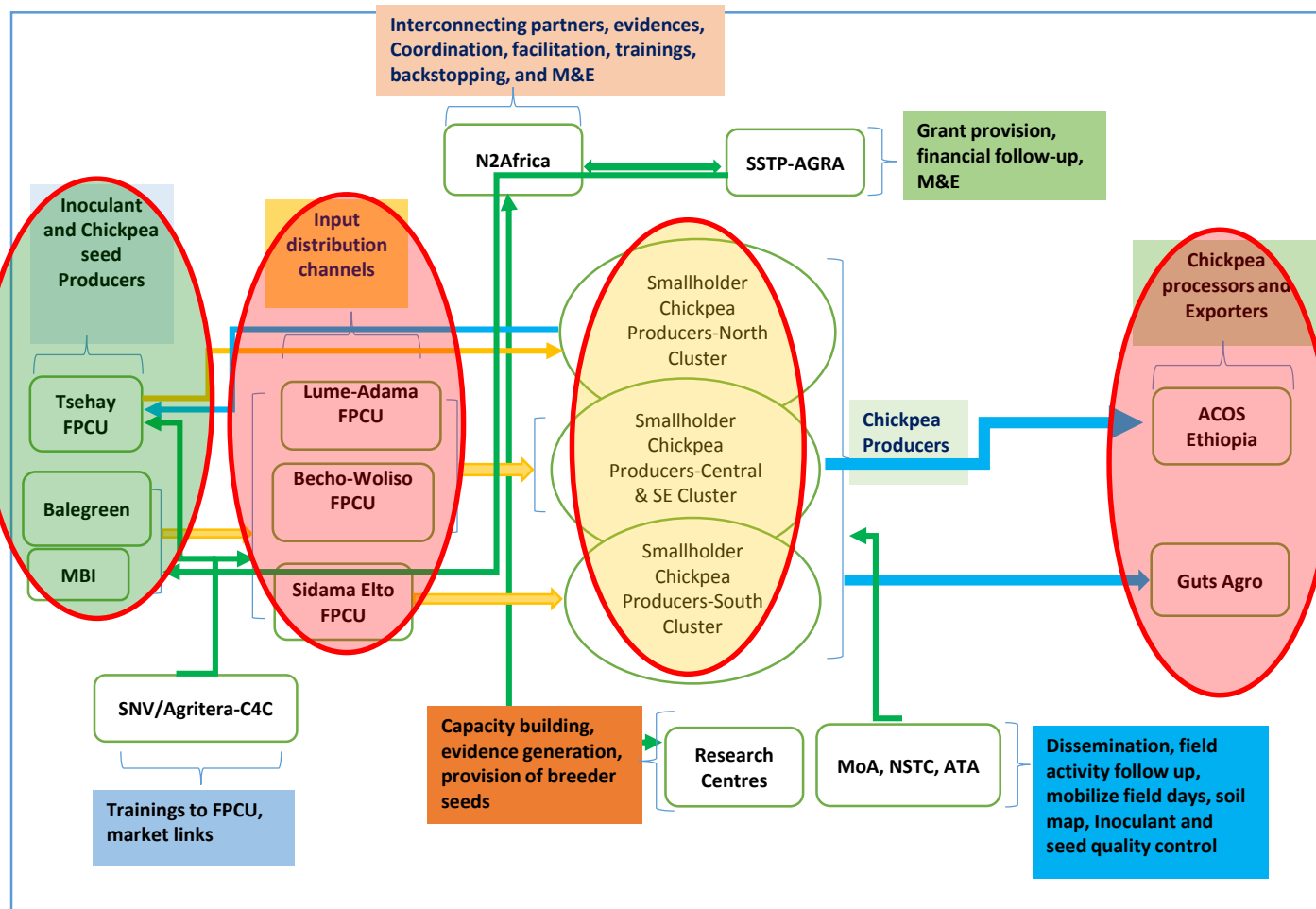






Figure: Interrelationships between the different chickpea value chain actors



## Adoption ?

### Variables

Functional partnership is **KEY**

Market development

Extension support/institutions

Farming experience

Age of household

Education level farmers

Distance to production input markets

Distance to output markets

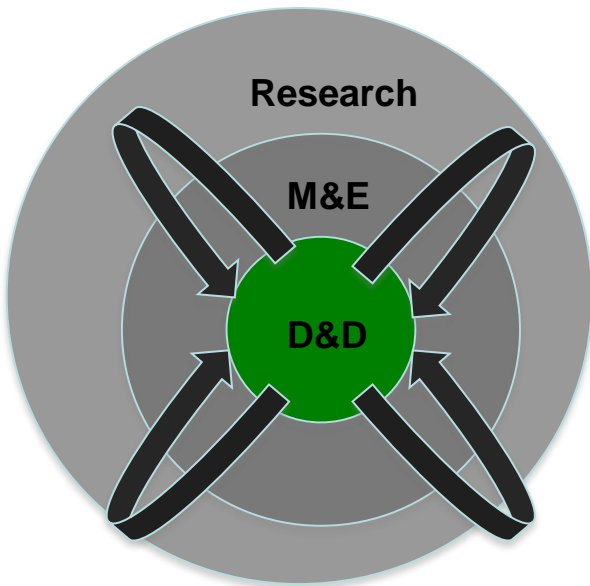
Distance to source of information

Infrastructure

Size of land holding

Productivity

## The N2Africa 'development to research' model

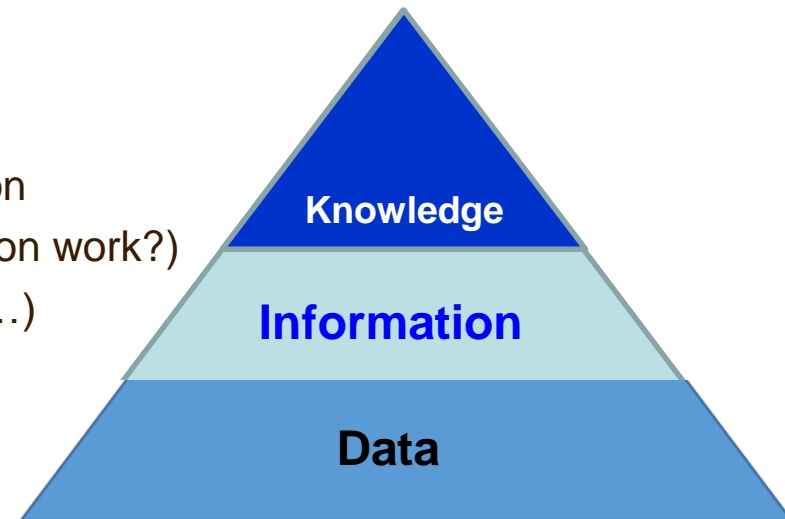


- The N2Africa 'development to research' model has Delivery and dissemination (D&D) as core activities that **take technologies** to farmers
- Monitoring and Evaluation (M&E) provide the learning of what works where, and why for whom
- Research learning loops **analyze** and **iteratively improve** the technologies and their targeting within D&D

# Three questions



- **What data to collect?** – 13 data tools (most with only few pages)
- **How to improve data quality?**
  - Knowledgeability/Training of the data collector
  - Role of technology – GPS, Mobile phones, Tablets ....
  - Institutional set up
    - Coordination/harmonization (Timing!)
    - Commitment of the researcher/extension agent
    - **Incentives** (opportunities for self promotion)
- **How to maximize its use and impact?**
  - Processing (analyses)- Generation of Information
  - Learning (what did we learn from previous season work?)
  - Planning (what modifications for next season? ...)





## Main objectives;

- To provide a clear overview of all data tools (in integration with digital tablet data collection for smooth data flows);
- To refine the 2014 data with implementing partners

## Expected outputs

- Data to be collected with respective data tools and guidelines will be clearly understood.
- M&E and agronomic data compiled and refined
- Digital data collection technology (using tablets) introduced & practiced.



*Thank You*