



---

# Jimma Research Center Land and Water Research process

## N<sub>2</sub> Africa Mid-season Evaluation Workshop

02 October 2014  
Debrezeit, Ethiopia



# Outline of presentation



- Introduction
- Activities implemented
  - (Activity name i.e. cluster, # of sites, # of farmers reached, Planned vs Achieved, reasons if the planned # is not achieved)
- Trainings given
  - (# of training sessions, # of trainees (m+f), location, contents of training)
- Evaluations or field days
  - (# of evaluation/field days, locations, # of participants (m+f))
- Volume of inputs
  - (seeds, inoculants, fertilizers) used/distributed (adaptation trials)
- Stakeholders engagements
- Pictures
  - (with captions showing different occasions, i.e. crop stages, trainings, input distributions)
- Main Challenges
- Way Forwards



# Introduction



Progress made in soybean technology scaling up.

**Illu Ababor**

**Jimma**

Years	Participating farmers	Area (ha)	Production (q)	Participating farmers	Area (ha)	Production (q)
2002	50	5	50	60	7	80
2003	5, 518	552	3,156	300	25	250
2004	2, 320	290	3, 1 60	600	55	600
2005	10, 740	1, 396	14, 321	800	70	870
2006	20, 850	3, 127	57, 000	2, 300	420	4, 200
<b>Total</b>	<b>39478</b>	<b>5370</b>	<b>77687</b>	<b>4060</b>	<b>577</b>	<b>6000</b>

SOURCE: LETA TULU<sup>1</sup>, TESFA BOGALE<sup>2</sup> AND ABUSH TESFAYE<sup>3</sup>, 2006

# Stakeholders participating in soybean technology scaling up & their roles and responsibilities.



Stakeholders	Year of participation	Location/Wereda	Roles and responsibility
Jimma Agricultural Research Center*	2001-2007	All	Coordinate, train, supply seed, Monitoring/Evaluation, sharing fund and present all reports
SG2000	2002-2004	Kersa, Sokoru and Omonada	Monitoring/Evaluation and sharing fund
Facilitator for Change Ethiopia(FCE)*	2005-2007	Kersa, Omonada and Tiro Afeta	Monitoring/Evaluation and sharing fund/Search market out let
Jimma-Bonga Catholic Church	2003	Jimma town	Supported exhibition on soybean food preparation & demonstration
Jimma Town Council	2003	Jimma town	Facilitated Exhibition
Jimma Zone/Wereda Administration.*	2001-2007	Kersa, Sokoru, Omonada and Tiro Afeta	Monitoring/Evaluation
Jimma Zone/Wereda (MoARD) Bureau*	2001-2007	Kersa, Sokoru, Omonada and Tiro Afeta	Facilitate the work, Monitoring/Evaluation/Search market out let
Illu Ababora Zone/Wereda Administration.	2001-2007	Darimu, Bedele, Harotatessa and Chawaka	Monitoring/Evaluation
Illu Ababora Zone/Wereda (MoARD) Bureau	2001-2007	Darimu, Bedele, Harotatessa and Chawaka	Facilitate the work, Monitoring/Evaluation/Search market out let
Menschen fuer Menschen	2005-2007	Bedele, Harotatessa	Monitoring/Evaluation and sharing fund

\*Participated in scaling up of soybean technologies through research for development.



# Activities implemented



***Activity names :- Diagnosis and Adaptive trails***

✓ ***Cluster :- Kersa***

✓ ***Project sites (Woredas) :- Jimma (Kersa)***

✓ ***# of Sites :- 5 kebele (Tikurbalto, Kitimble, Babu, Girma and Awai sebu).***

✓ ***# of farmers :-***

➤ ***Diagnosis trial***

❖ 5 kebele/ 5 farmers =25

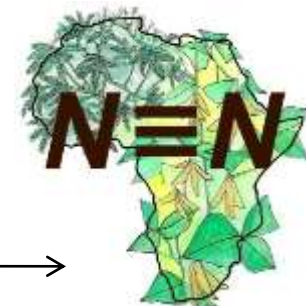
➤ ***Adaptive trails***

❖ 300 farmers

□ **WE have ACHIVED the target according to the PLAN**



# Diagnosis Activity cluster - Kersa



## Treatments and experimental design

Treatment*	DAP	Inoculant	Colour code
1	-	-	Red
2	-	+	Green
3	+	-	Yellow
4	+	+	Blue

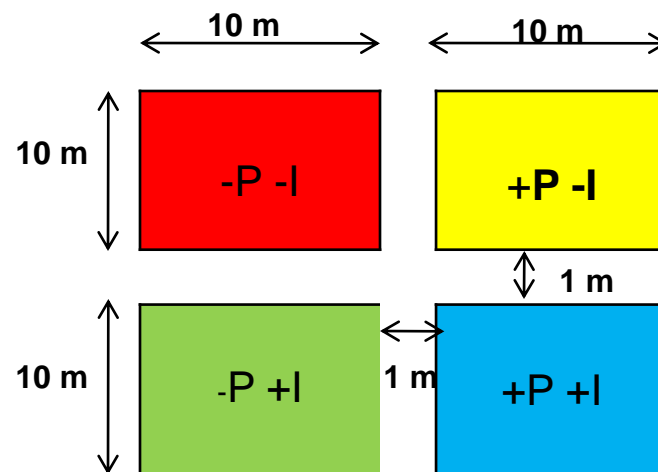


Figure 1: Layout of the diagnostic trial.

- The trials were laid as one experiment with one replicate per site all plots arranged in one place, adjacent to each other
- Before planting and applying fertilizer, soil samples were collected from trial field at each trial location.
- Rain gage at two representative sites was installed to take daily readings of rainfall



# Adaptive trial at kersa

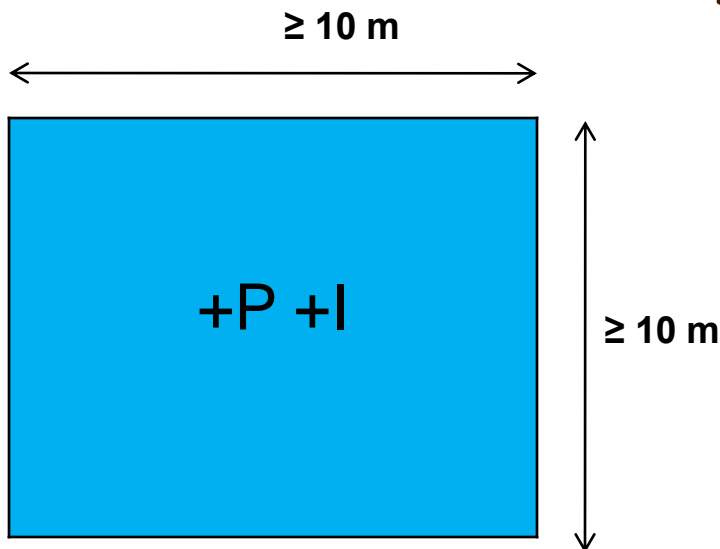


Figure 1: Sketch of adaptation trial plot

## Treatment structure

- Use best bet legume technology: *(improved seed with phosphorus fertilizer and inoculants [+P+I]).*
- *Applied the farmer's current practice as a control treatment in each adaptation trial.*
- *In each woreda, 5 kebeles a total of 300 farmers was selected, and*
- *In each kebele a total of 20-60 trials was established.*
- The adaptation trials was established on individual farmer's fields, and are fully managed by the farmers.





## Training at Kersa werda



**Farmers trained on soybean field management, bio fertilizer application and field layout for adaptive trials**



**Pictur1. Awarness creation meeting at Kersa werda at Kitimble Kebele**

□ 2 wereda experts, 10 DAs and 5 model farmers



# Evaluations or field days

---



- 2-3 times, field evaluation have been made by researchers at JARC/ soil fertility and field crops researchers/
- The Jimma Research Center Monitoring and evaluation team have been evaluated the activities
- In Early October, the land and water process consists of (National soil fertility and probelematic case team) have a plan to monitor the trial sites

# Volume of inputs



## *Target legumes :-*

- Soybean ( var. Clark 63 K)
- Seeds: 60 kg seed per hectare.
- 25 quintal distributed

## *Fertilizer :-*

- *Fertilizer rates*
  - DAP was applied using a rate of 100 kg DAP per hectare.
  - 5 quintals , 150 kg DT,

## *Inoculants :-*

- inoculated seed was applied using a rate of 60 kg seed per hectare.
- applied the inoculants using recommended rates 1 bags per 4kg seed
- 650 bags

# Stakeholders engagements

---



## Team involvement

- Researchers from land water research and crop research process (Soil Fertility and field crop)
  - 2 Woreda expert from Kersa MoA
  - 10 DAs from each 5 kebles at Kersa wereda
  - 5 model farmer
  - Farmers (25 DT+300 AT)
- ✓ was involved in both Diagnostic and Adaptive trials



# Data collection status



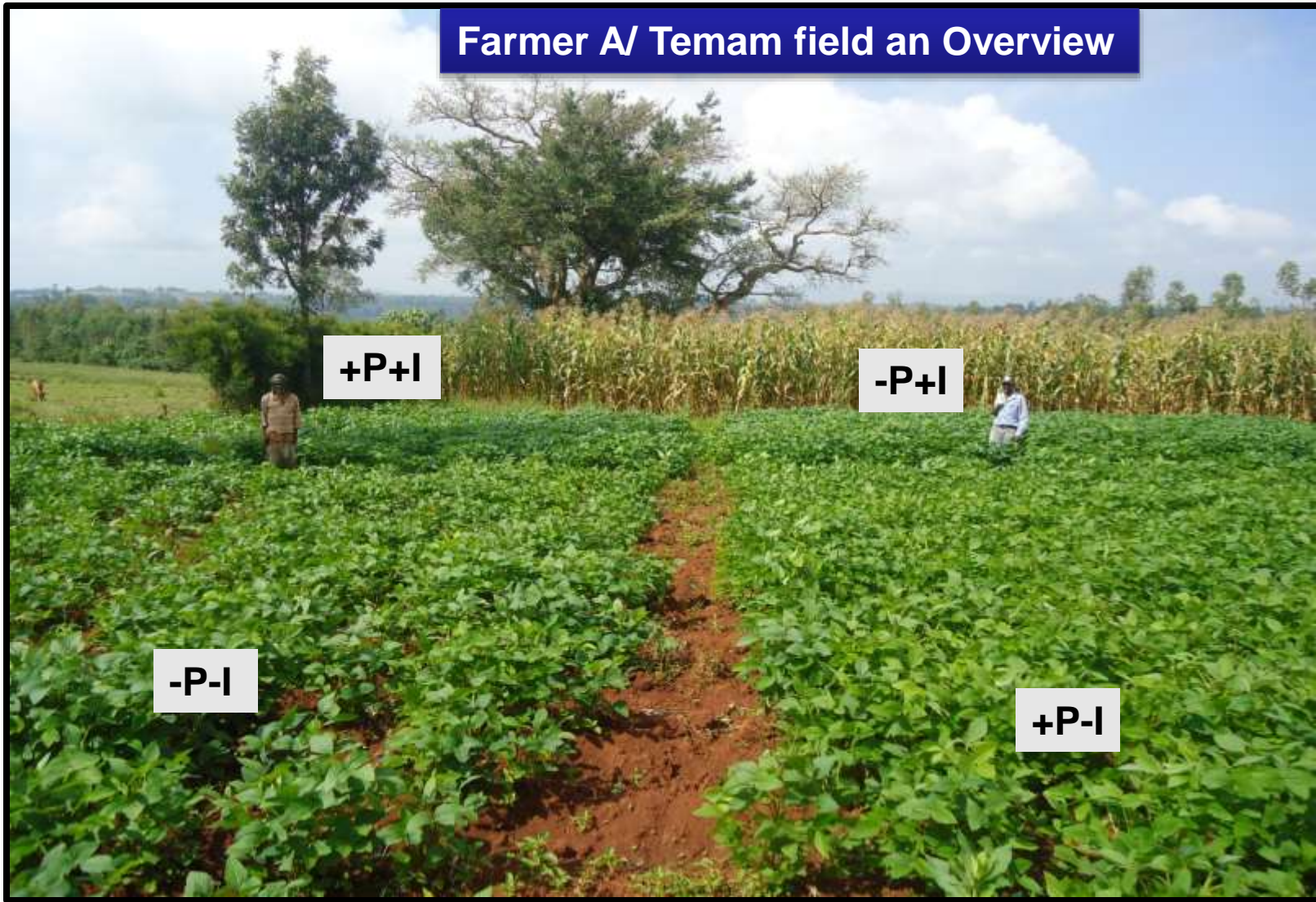
- GPS position (decimal degrees) and farm code of the trials
- Initial soil sampling, tagged with farm code and sample number
- Field history
- Rainfall
- Dates of management practices
- Emergence %
- Thinning
- Physiological dates (days to flowering, podding)
- nodulation score at mid-podding - N<sub>2</sub>-fixation through natural abundance technique



## Figure 2. Diagnostic trial at Kersa Tikurbalto Kebele



Farmer A/ Temam field an Overview







Picture 3. Diagnostic trial at Kersa Tikurbalto Kebele



Putting nitrogen fixation to work for smallholder farmers in Africa





## Picture 4. Adaptation trial at Kersa Wereda



**Farmer Nezif at Kitimble Kebele**



**Farmer A/ Temam at Tikurbalto Kebele**



**Farmer Seiefu at Tikurbalto Kebele**



# Main Challenges



- Vehicle!
- Budget is not available on time



# Way Forwards



- A new approach in soybean technology popularization had, therefore, to integrate demonstration and popularization of production package and food preparation methods. This approach opened ways for the participation of different stakeholders.



---

Thank you for attention