From Lab to Land

Promoting the adoption of row planting to teff farmers in Ethiopia

Joachim Vandercasteelen (LICOS, KU Leuven)
What?

• Teff production
  – Major food crop but low yield
  – Transformation Agenda
  – Traditional broadcasting

• System of Teff Intensification (STI)
  – Row sowing at reduced seed rate
  – Complex technology
Why?

- On-station experimental trials
  - Debre-Zeit Agricultural Research Center
  - Doubling of teff yields

- On-field demonstration trials
  - Farmer Training Centers
  - 65 - 70% yield increase over national average

- TIRR package
  - National extension system
  - Rollout to >3M model farmers
But...

• Limited scientific evidence
  – Agronomic evidence?
  – Farm level evidence?
  – Profitability impacts?

• Impact evaluation
  – Pre-scale-up phase (2012)
  – Experiment under farmers’ conditions
  – Randomization (toss of a coin):
    • Farmer selection
    • Technology assignment
Farm level impact

- **Yield (ton/ha)**: Δ = 0.02
- **Labor productivity (kg/day)**: Δ = -0.45***
- **Profits (1,000 birr/capita)**: Δ = -0.14
Yield gap

• Implementation issues in promotion
  – Delivery of inputs
  – Quality of extension

• Implementation issues in adoption
  – Seed rate, number of rows, ...
  – Heterogeneous effects

• Appropriateness of row planting
  – Labor cost
  – Marginal seed reduction
Policy implications

• Understanding adoption process
  – Assessment of constraints
  – Learning by doing
  – Alternative extension approaches

• Political agronomy
  – Policy based on limited evidence
  – Right place, right time but wrong solution?
  – Rigorous evidence before up-scale
Reality...