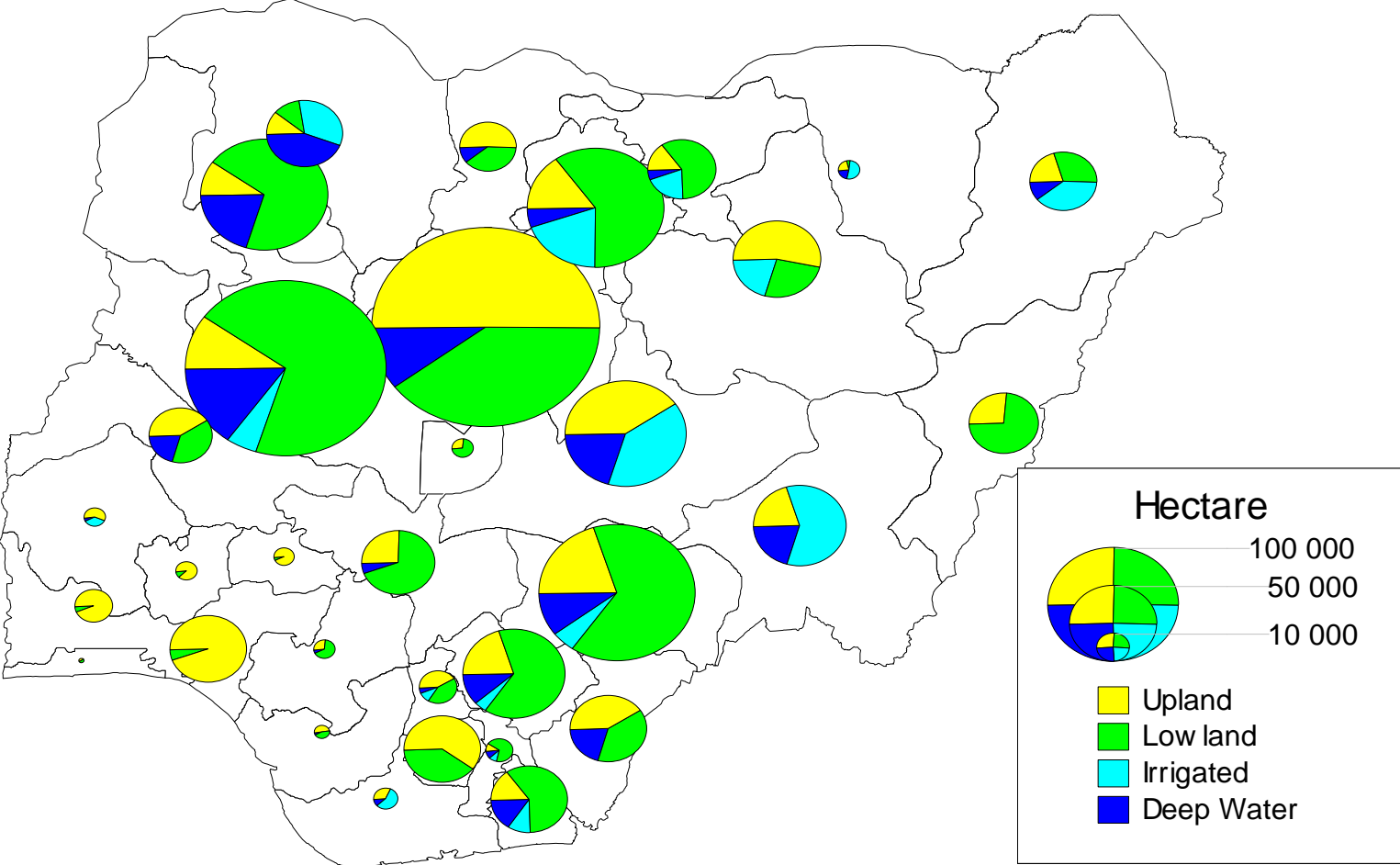


# **PARTICIPATORY APPROACH TO SAWAH RICE TECHNOLOGY DISSEMINATION TO FARMERS CULTIVATING INLAND VALLEYS IN NIGERIA**

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Presentation at the “Technology Transfer Research, Seed and the Production-Consumption Session”, The 1<sup>st</sup> Africa Rice Congress, 31 July-4 August, 2006, Dar es Salaam, Tanzania

# Rice production by ecologies in Nigeria

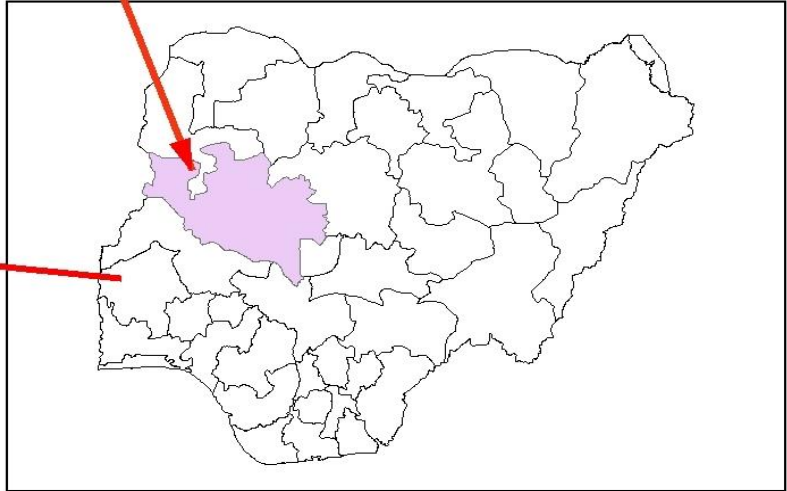
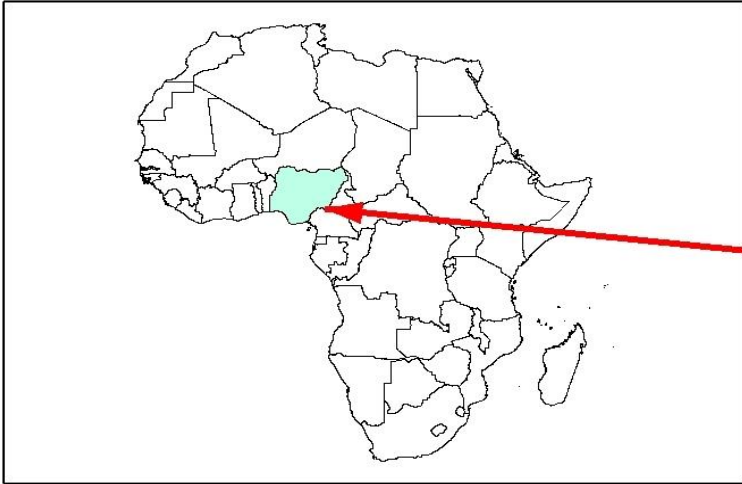
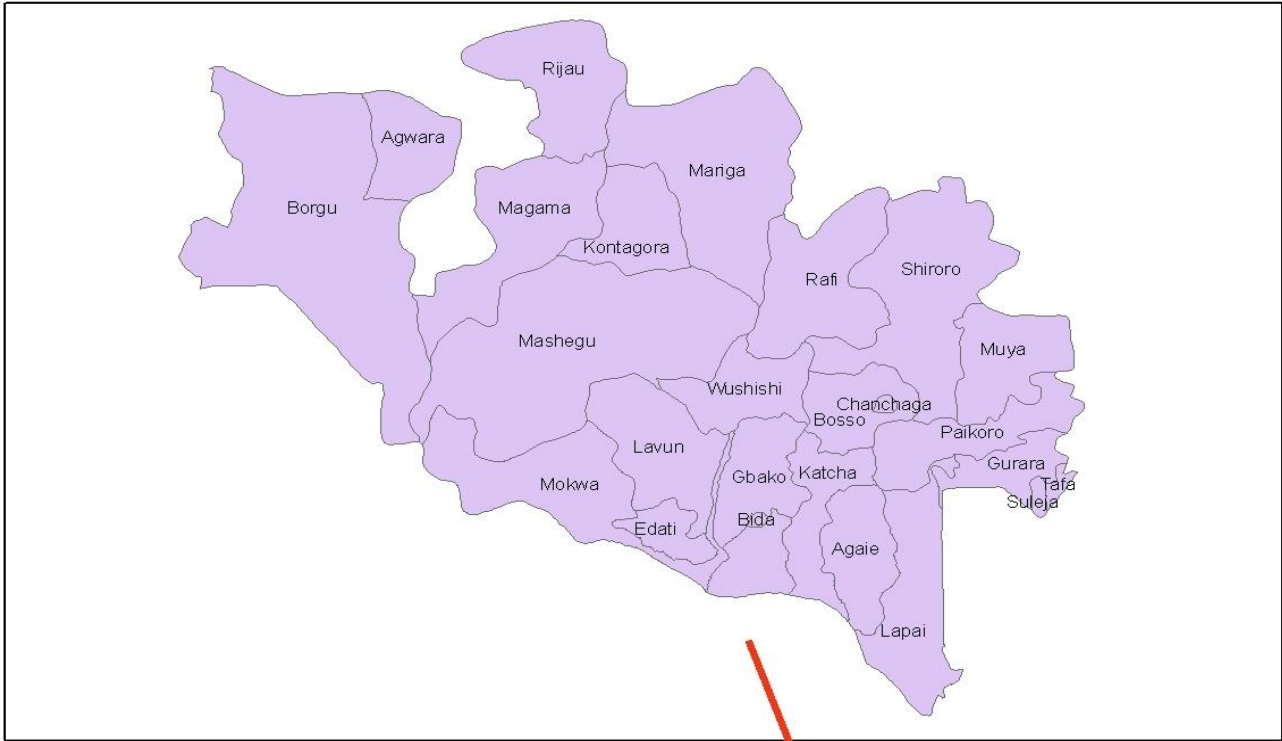


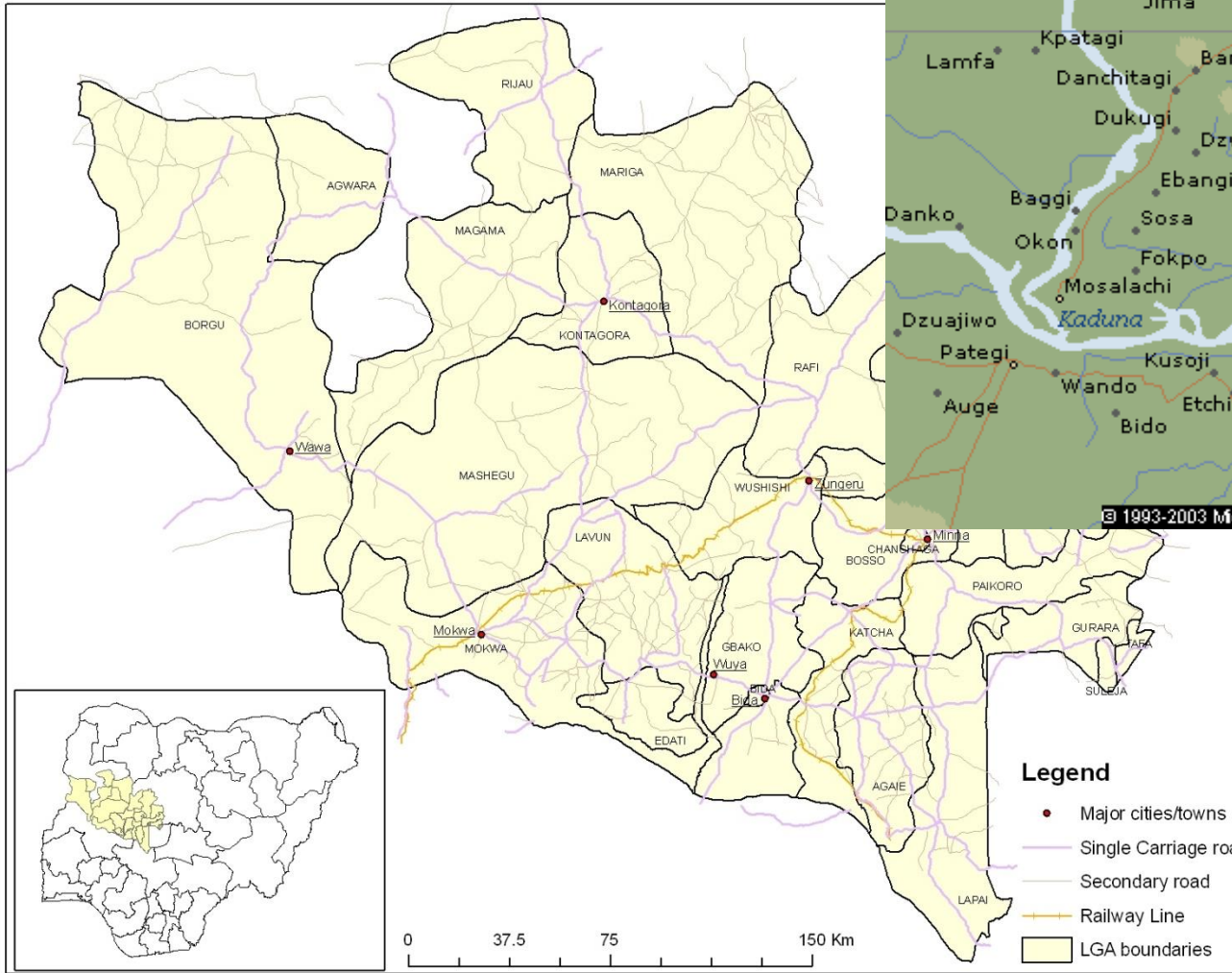
# Table 1: Rice Ecosystems in Nigeria with Average Yield

Ecology	Share of Rice Area %	Average Grain Yield t/ha	Share of rice production (%)
Rainfed upland	31	1.5	17
Rainfed lowland	47	2.2	53
Irrigated lowland	16	3.5	27
Deepwater/floating	5	1.3	3
Mangrove swamps	≈1	2.0	1

# Focus

Adapting Asian rice production system (Sawah) to African (Nigerian) Rice Farmers for effective soil and water management for high and sustainable rice production





**Legend**

- Major cities/towns
- Single Carriage road
- Secondary road
- Railway Line
- LGA boundaries



# Land preparation using the hoe from grass fallow





# Breaking the Mound with hoe beginning of land preparation for Rice



# A typical rice land directly seeded

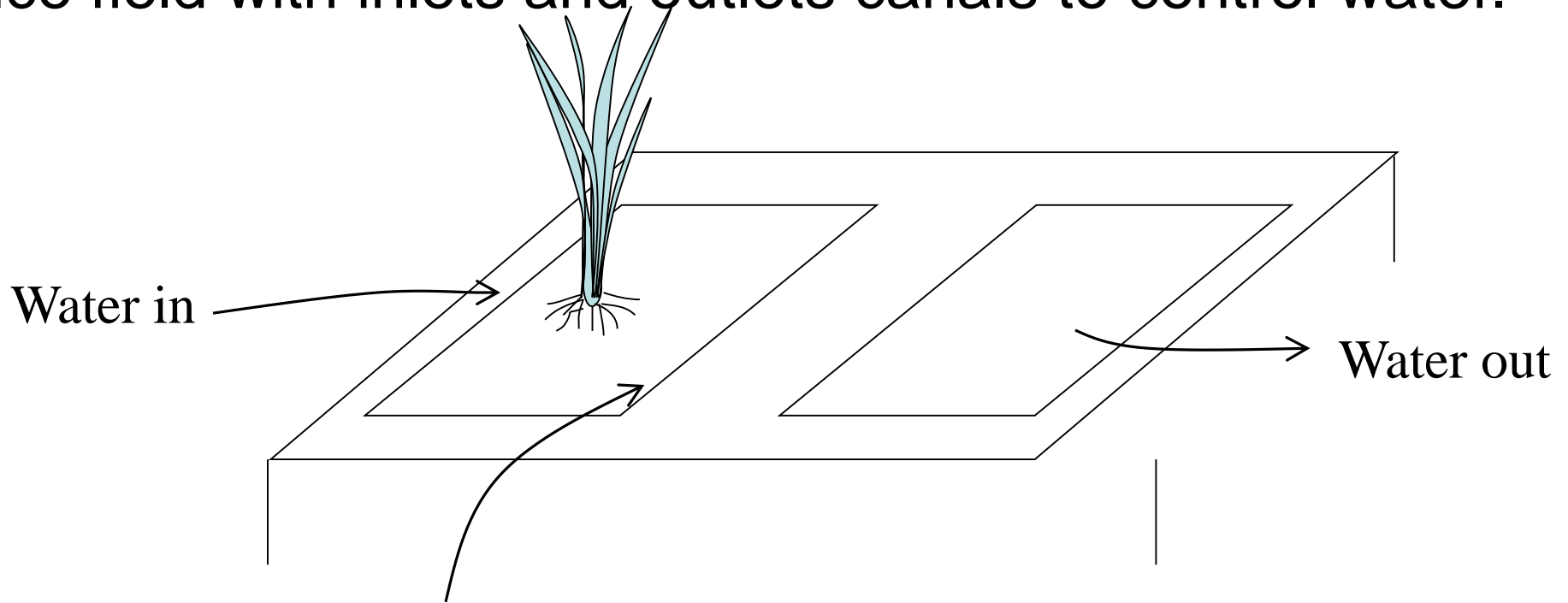


# Traditional practice by rice growing farmers in Nigeria



Directly seeded rice under flooded and droughty condition

**What is sawah?** Sawah is a bunded, puddled and leveled rice field with inlets and outlets canals to control water.



**Sawah is man-made improved rice growing environment with demarcated, bunded , and puddled field**

Because of diverse soil, geology, topography, hydrology, climate, vegetation, and socio-cultural conditions, the technologies for sawah development & management are very diverse, which are important research and development target for sustainable rice production.

# The using of the Power Tiller for puddling and leveling with farmers' participation





# Recommended Sawah plot in Bida Nigeria

Rice (variety) and environment (Sawah)  
improvement. Both technology must be developed



# A Sawah plot with good establishment



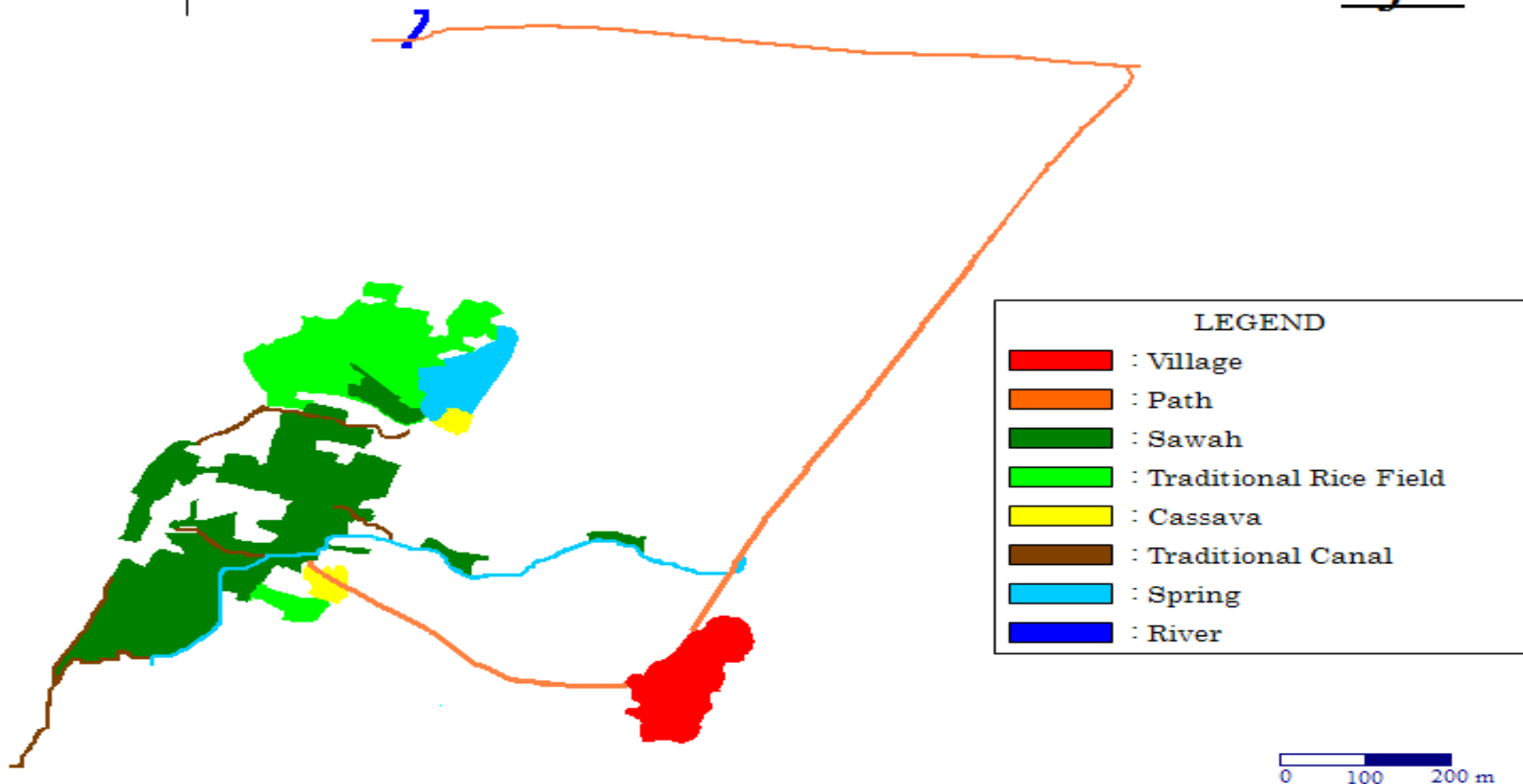




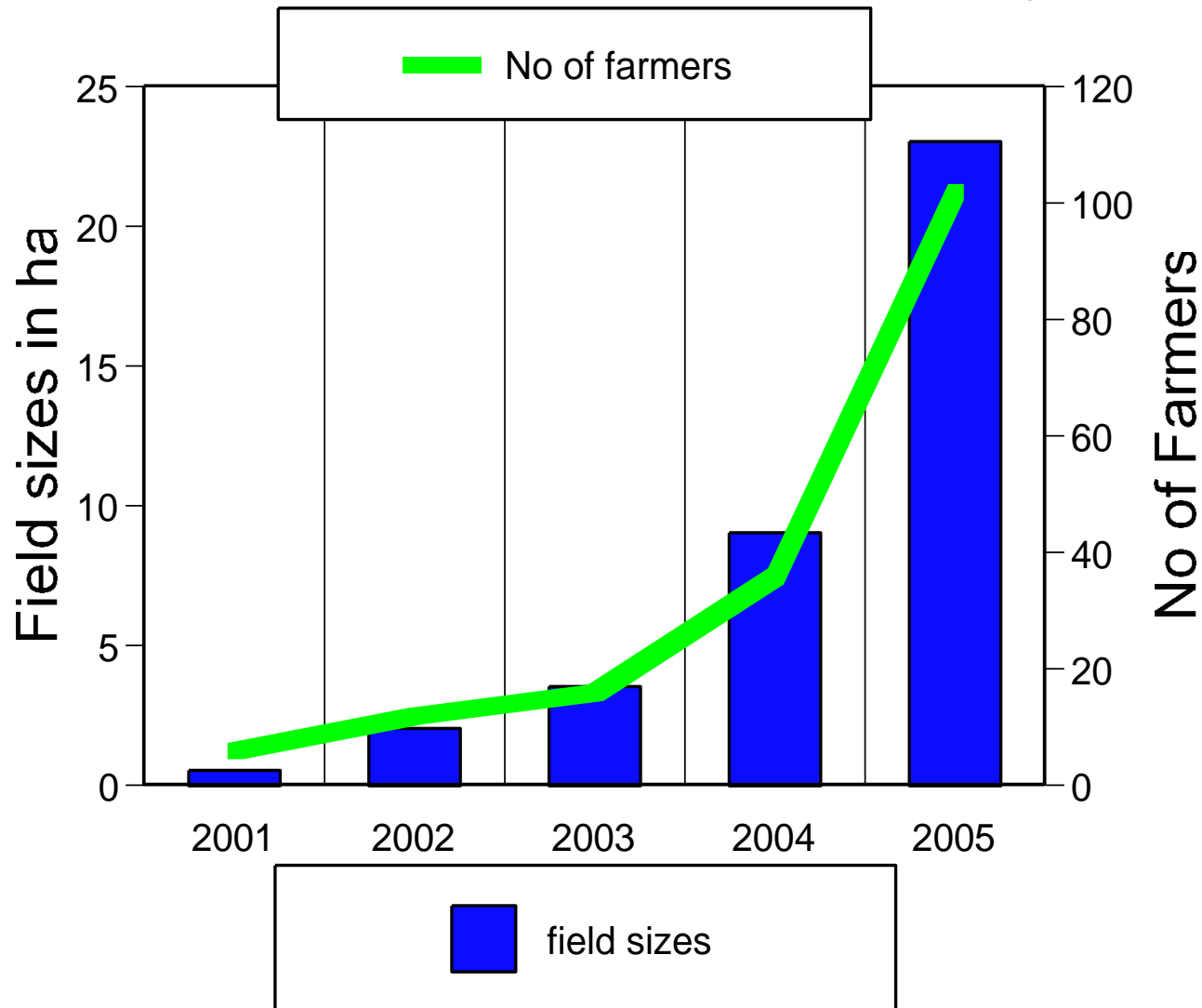
Ejeti our first village with 10ha (more than half of their lowland fields) of Sawah field in 2004



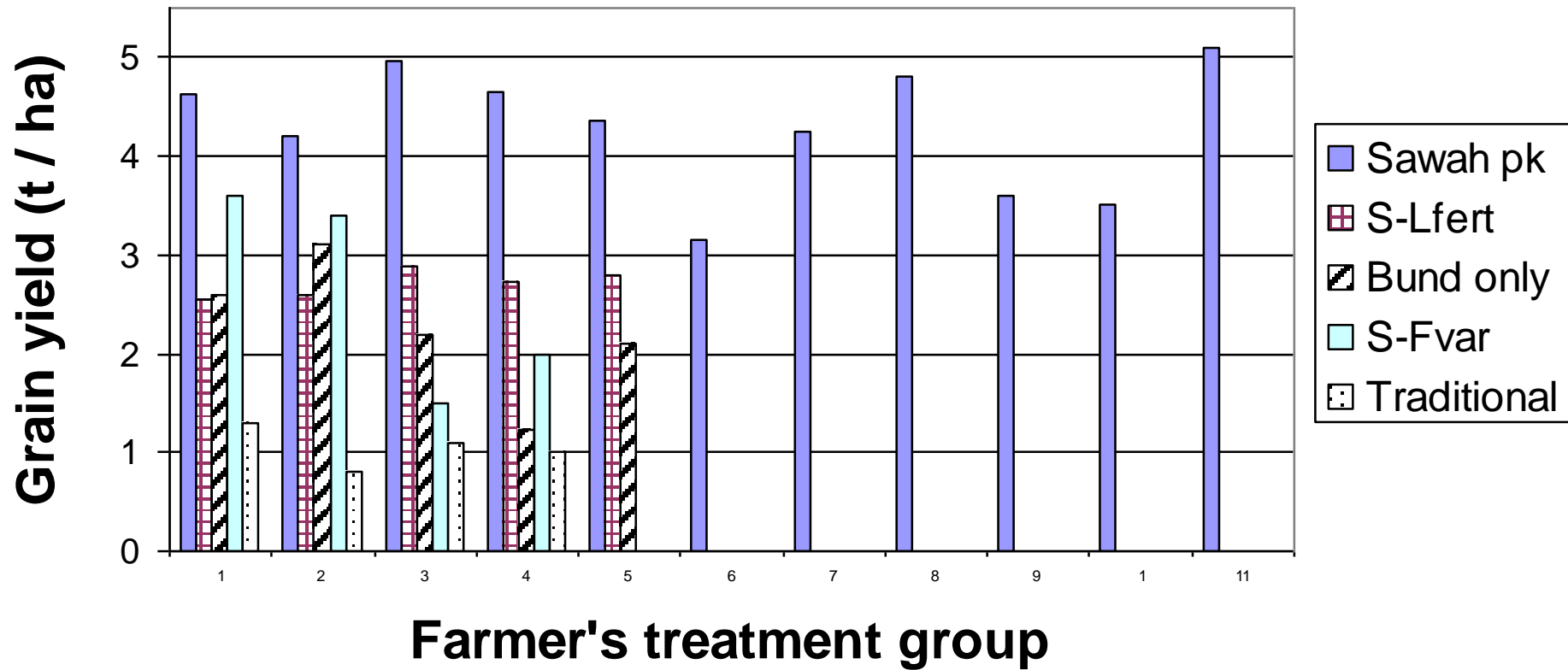
*Ejeti*



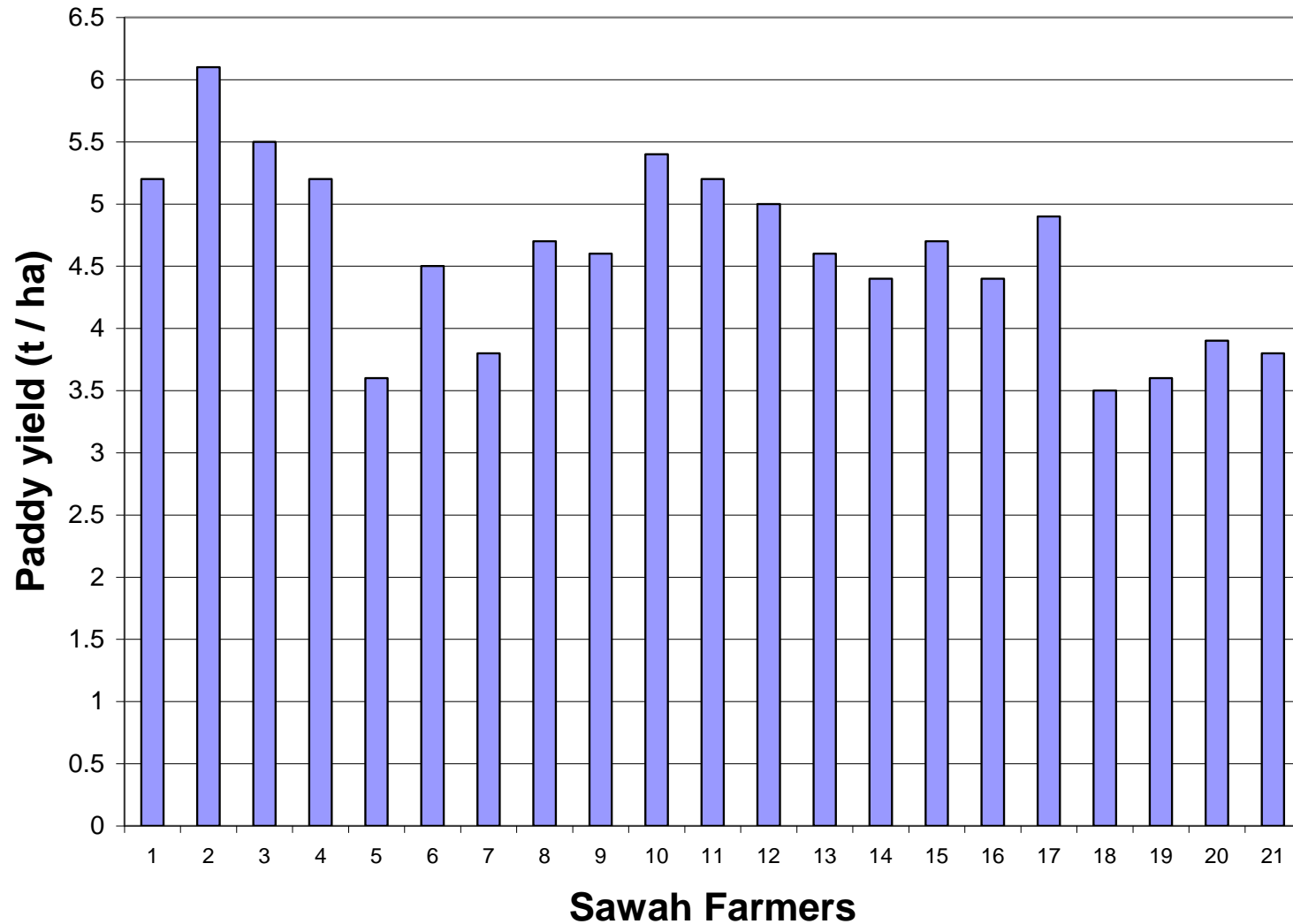
# Increase in the number of farmers and area cultivated in five years



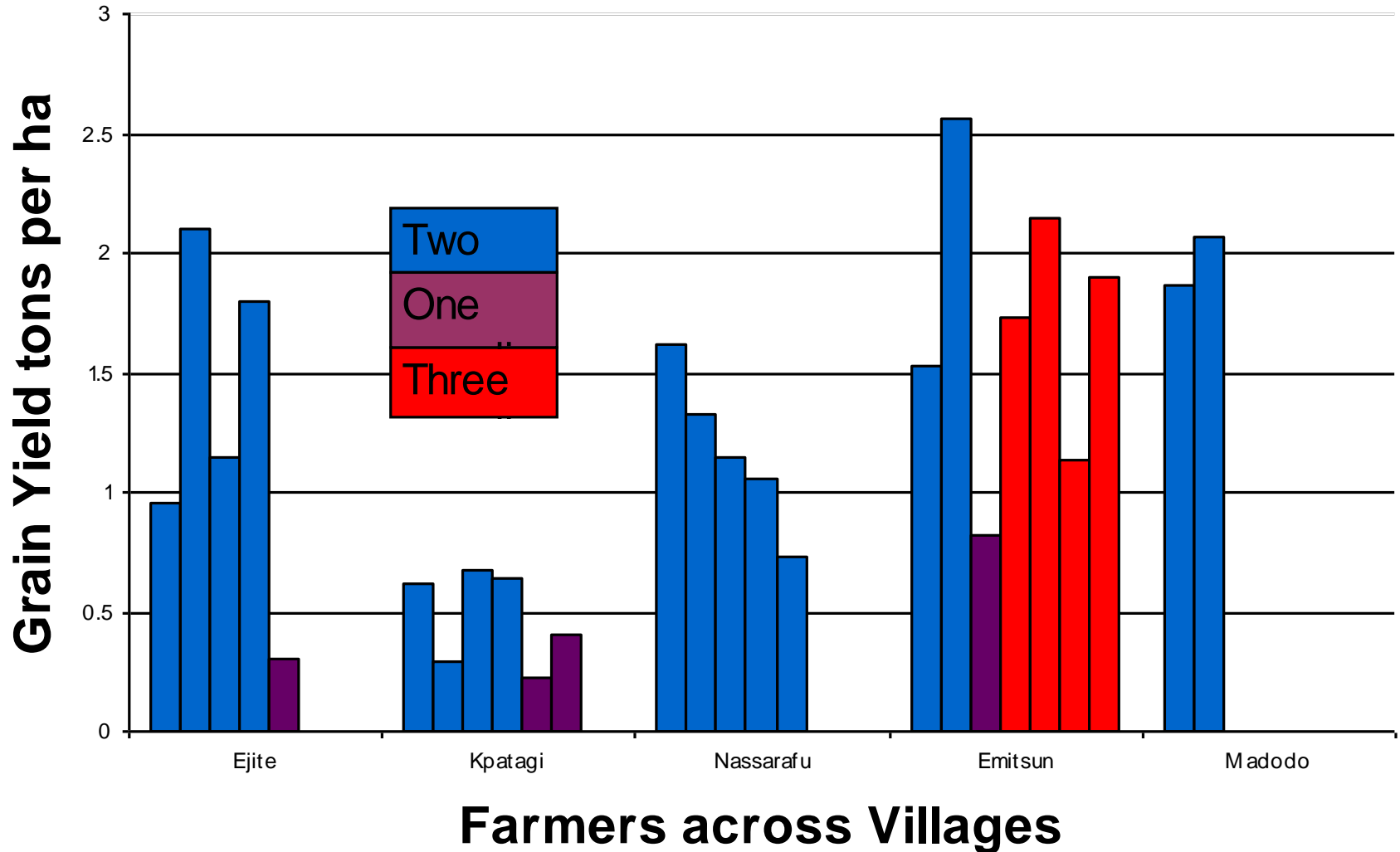
# Grain yield across locations within sawah group in 204



# Grain yield in 2005 across villages



# Grain yield of non sawah farmers with different weeding regimes across 5 villages



# Conclusion

- ✓ Sawah Package will more than double current yield levels
- ✓ Sawah system is a sustainable rice production system as seen in Asia
- ✓ The use of Power Tiller is an important component for increase productivity
- ✓ We cannot achieve Green Revolution with cutlasses and hoe
- ✓ The location of the demonstration field in the midst of farmers' field enhances farmers participation and adoption

# How to achieve Green Revolution

- Sawah System is the missing link to our Green Revolution
- The technology is a combination of the following:
  - The use of high yielding variety,
  - Row planting for optimum plant density
  - Efficient use of fertilizer
  - Bunding for water control – inlet and outlet channels
  - Better weed management





# Thank You for listening



**Power tiller** (A two-wheel hand driven tractor)