

IPA/IGC SIERRA LEONE AGRICULTURAL WORKSHOP

The International Growth Centre and Innovations for Poverty Action are pleased to invite you to their Workshop on Agricultural Economic Research.

Thursday, 19TH June
Country Lodge, 51 Hillstation, Freetown

IGC International
Growth Centre



ipa
INNOVATIONS FOR
POVERTY ACTION

New Rice for Africa: Impacts on Yields and Nutrition



**Agriculture Workshop
June 19 2014| Freetown, Sierra
Leone**

Motivation: Poverty and Nutrition

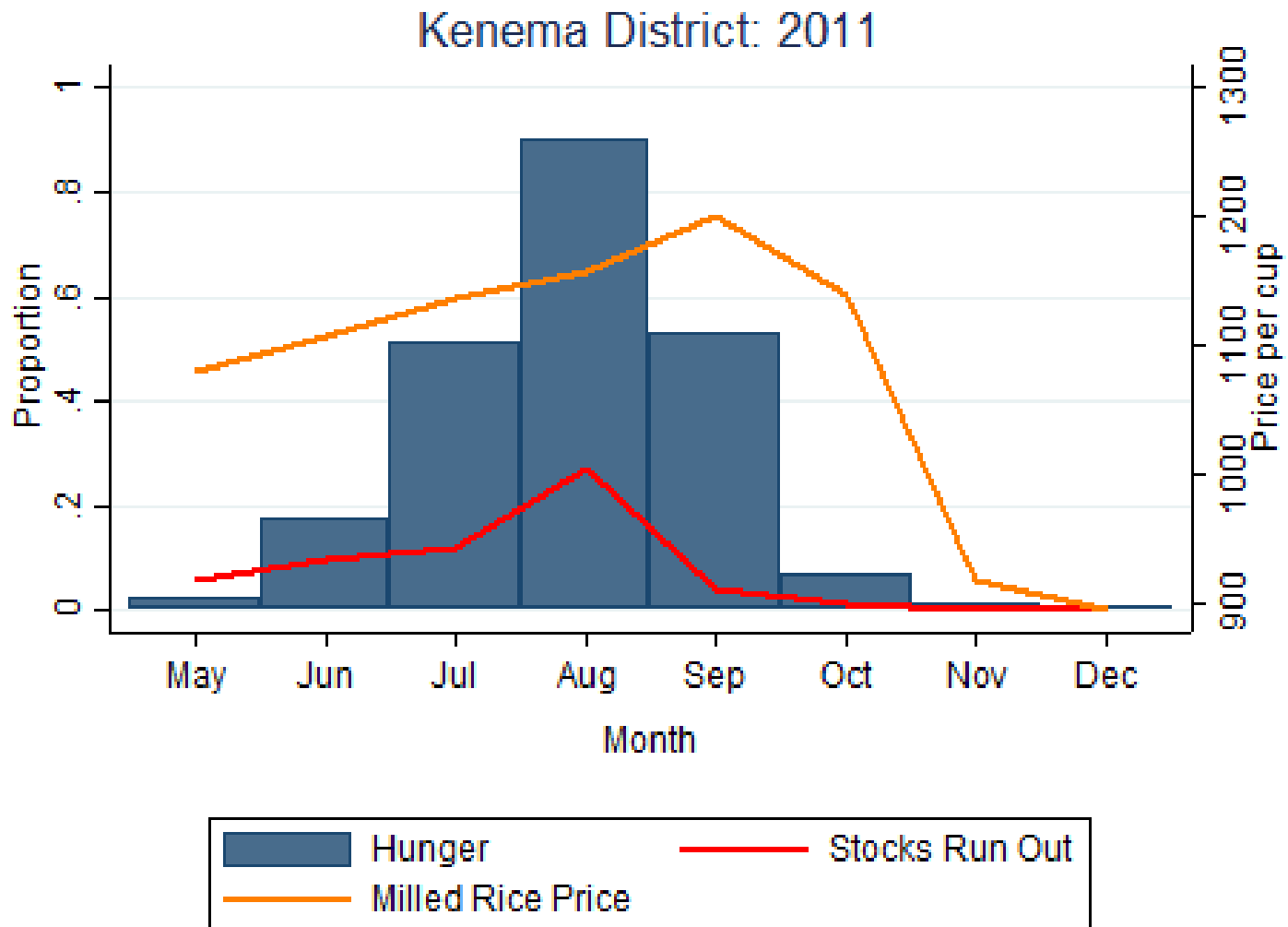
Poverty in Sierra Leone:

- PPP adjusted GDP per capita for Sierra Leone is \$1400 (2013)
- It ranks 208th out of 229 countries

Nutrition in Sierra Leone:

- Children : 22% underweight, 44% stunted, 8% wasting (UNICEF, 2010)
- 35% undernourished i.e. eat less than 1809 kcal/day (FAO, 2010)

Motivation: Seasonality



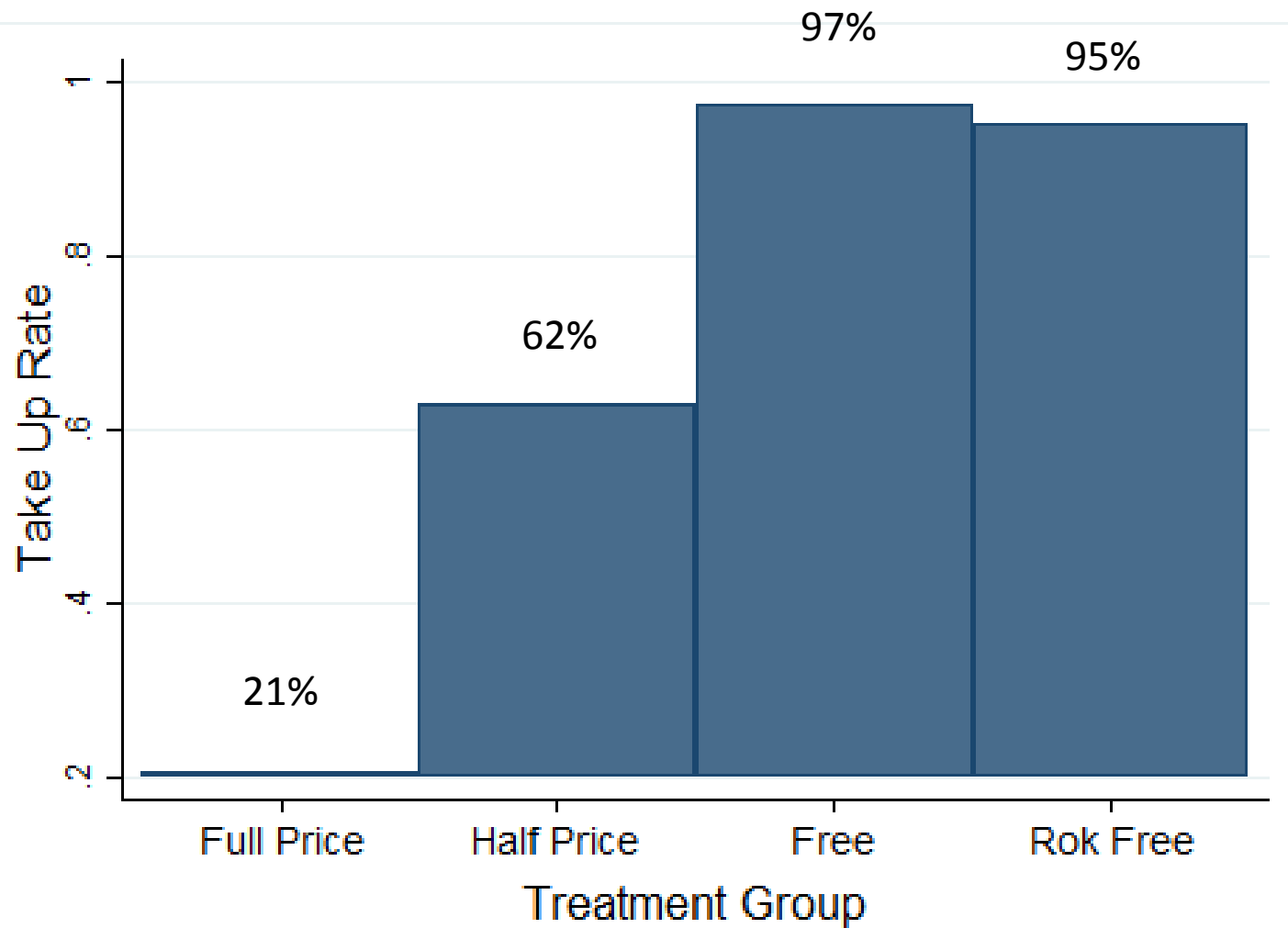
Research Project Design

- Study the yield of two upland rice varieties:
 - NERICA3 – early maturation (90 days vs 120), high yielding
 - ROK16 – pest resistant, regular maturity, high yielding
- Study NERICA demand through random variation in the price and complementarities with training
 - Full price, half price and free treatments; cross randomized with training
- Impacts on yields and nutrition

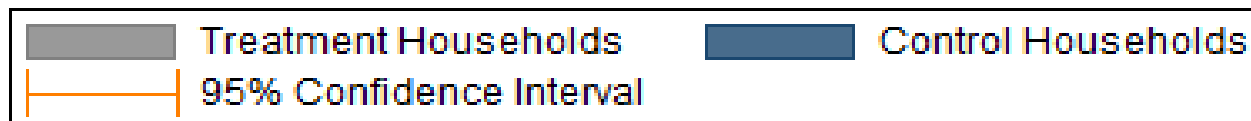
The Technology: NERICA 3 Seed

- NERICA: New Rice for Africa
 - Cross between African and Asian rice varieties
 - Upland variety: rainfed, not irrigated/lowland/paddy
- Attributes: short duration, higher yields, more protein
 - Duration: 95-100 days (Africa Rice Center); 105 days (measured in a field trial by Genesis Farms)
 - Upland local varieties duration is 120-150 days

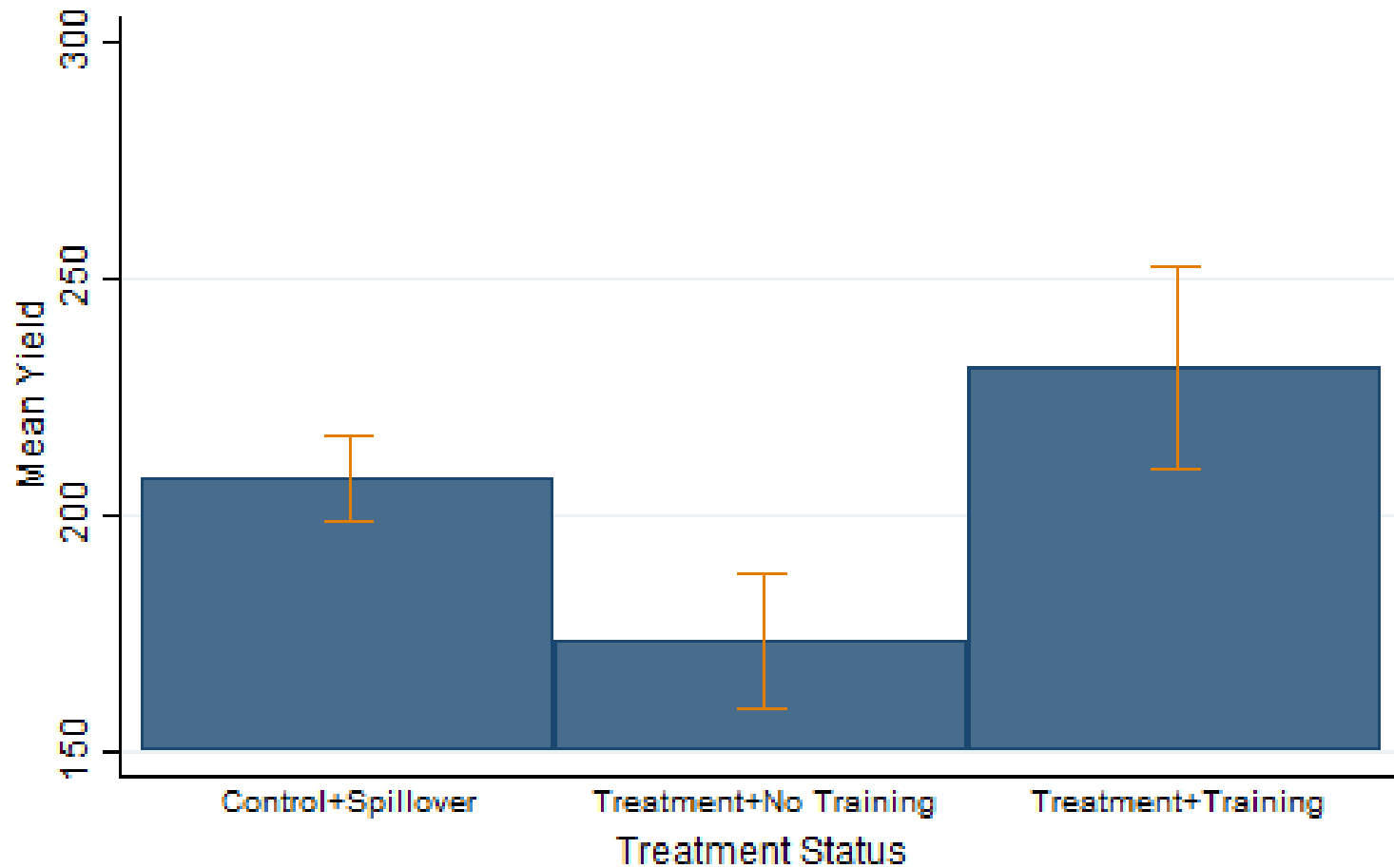
Take Up



Impacts: Harvest Week, By group



Impacts: Yields (no Port Loko)



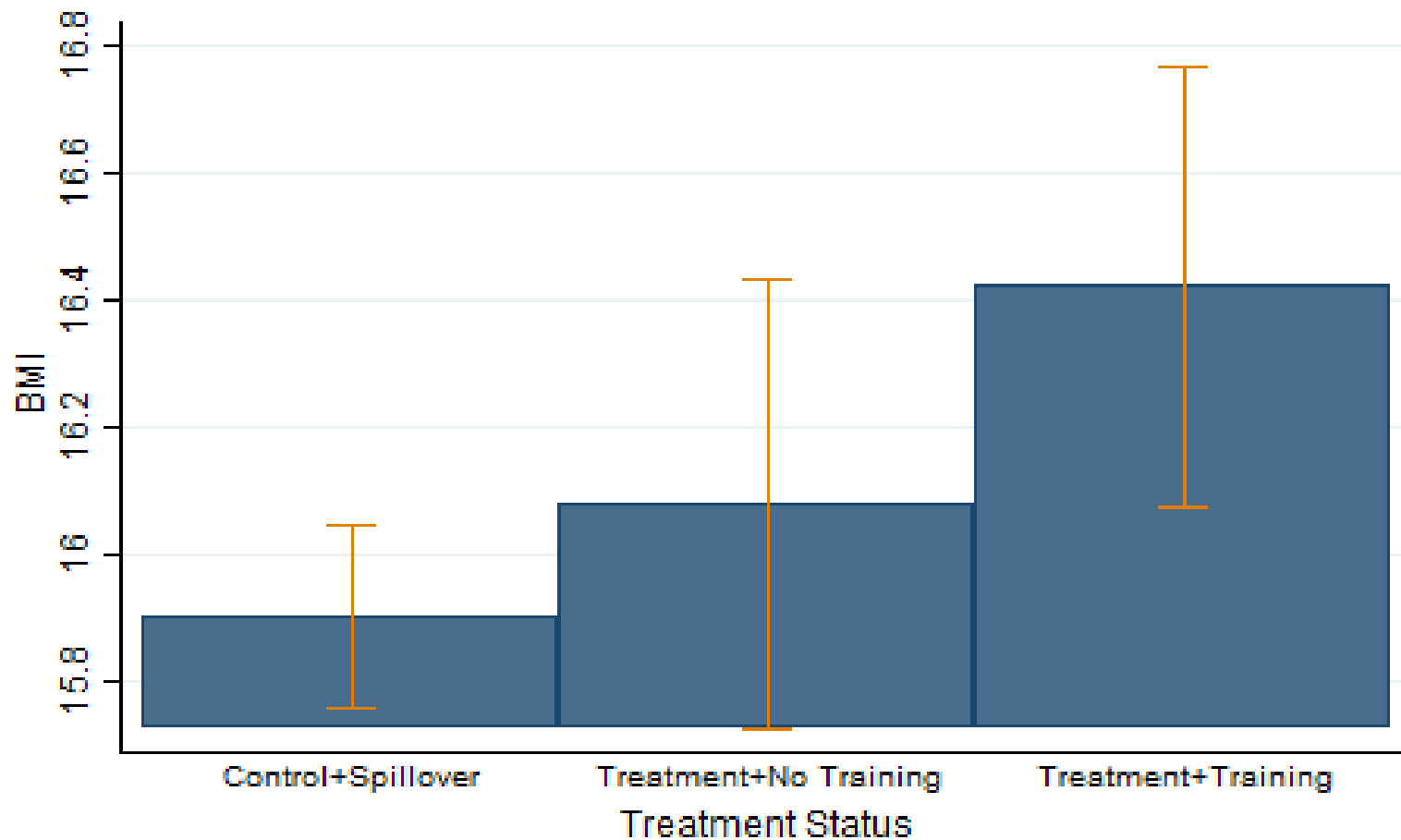
Impacts: Total/Partial Failure



70% vs 90% Germination



Impacts: BMI (10 and under)



Conclusion

- One of the first studies to show impacts of agricultural technology on early childhood health
- Future research:
 - Measure impacts on pregnant women at the right time
 - Teasing out mechanisms for nutrition : higher yield vs smoother seasonal consumption by arrival of harvest during hungry season
 - Evaluating a low-touch-low-cost training is essential to scaling up

Impacts: Weight for Age (5 and under)

