

gnum technology adoption in Burkina Faso

preliminary results from a randomized experiment

AN STATE
R S I T Y

Department of Agricultural,
Food, and Resource Economics



ipa
INNOVATIONS FOR
POVERTY ACTION



Evaluation Design

Demand Side				Supply Side				
Seed+Fertilizer Packet Marketing/Training	Listing + Production	SN + Production	HH survey		Treatment	Marketing/Training	Listing + Production	HH
	Villages	Villages	Villages	HHs			Villages	Villages
Seed free distribution randomly	40	40	80	2400	D	Early commitment offer at fixed 'market' price	12	
Seed free distribution based on degree		16	0	0	E	Late commitment offer at fixed 'market' price	12	
Seed free distribution based on eigenvector		16	0	0	F	Late commitment offer at discounted price	12	
Other interventions		20	20	400				
	40	92	100	2800			36	

Context

Surveys Collected

Plot Census, SN census, Baseline Mult-topic HH survey

Plot Census sample size = 35,016 plots

SN sample size = 7,172 hh

Baseline sample size = 2,760 hh

Villages = 168

Supply constraints to technology adoption for growing sorghum in Burkina Faso

Villages = 36

Origin: Supply of fertilizers (Partner: Agrodia)

Early commitment
Market price fairs



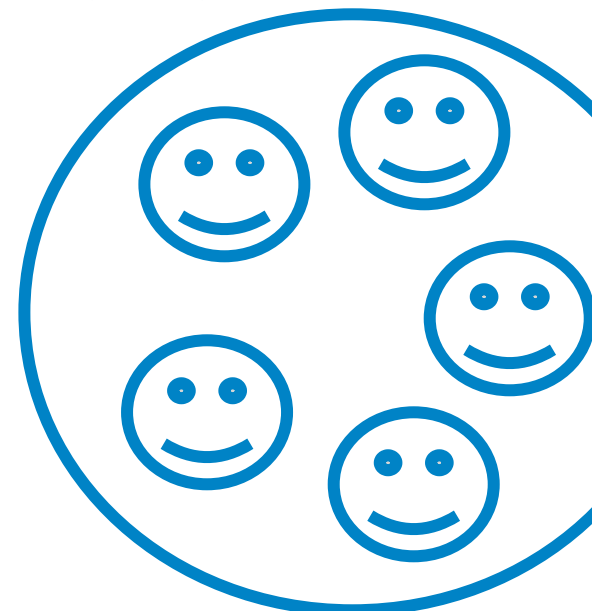
12 villages

Late commitment
Market price fairs



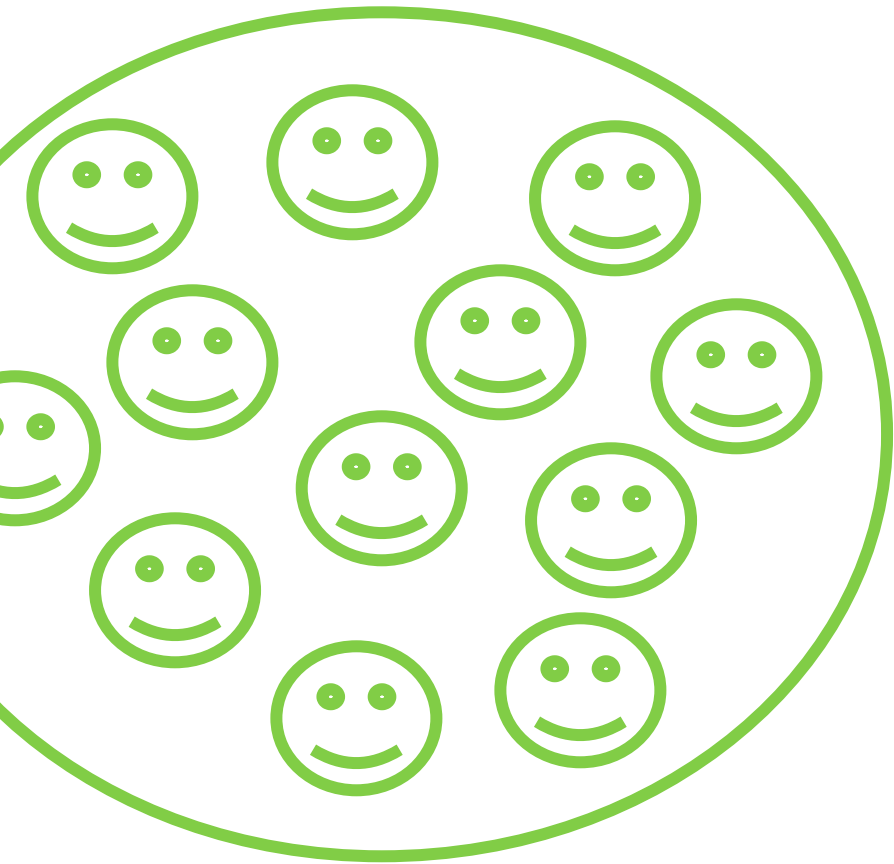
12 villages

Late commitment
Subsidized price
fairs



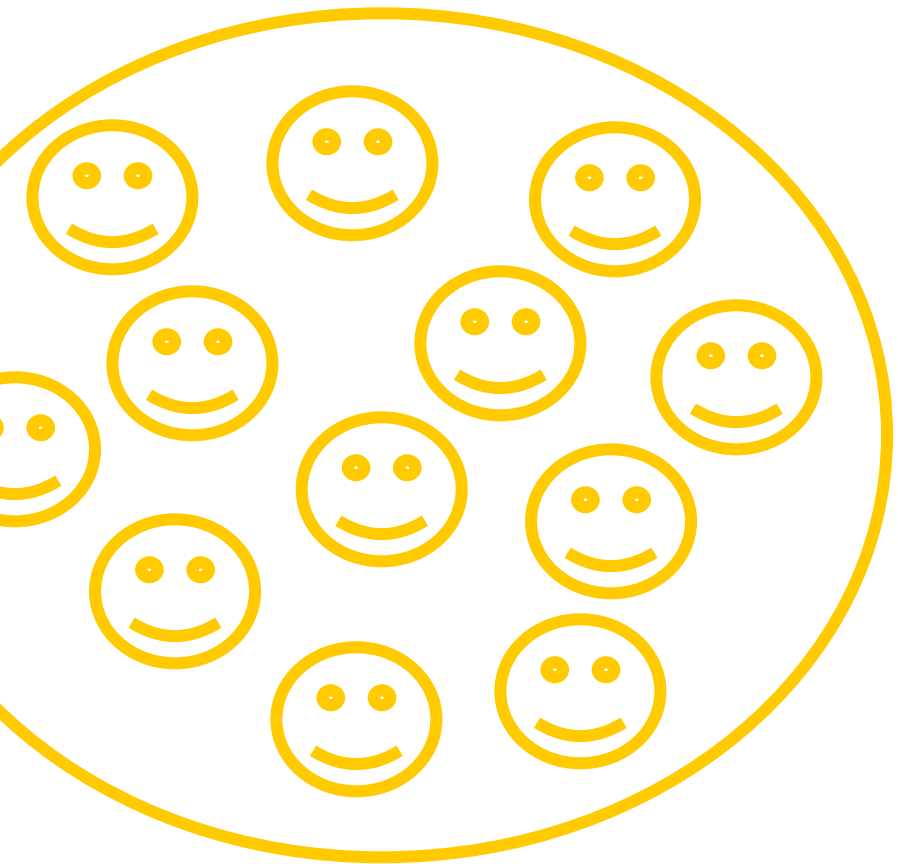
12 villages

Early commitment



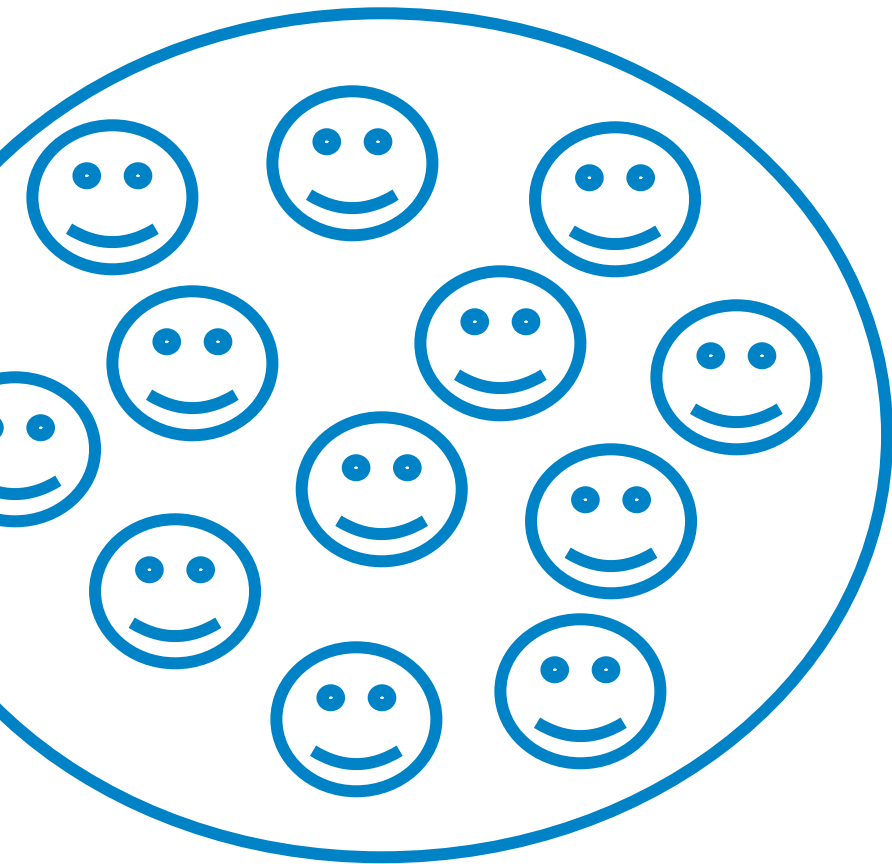
- Purchase order in February
- 5% payment upfront
- Envelope for saving
- Delivery in June
- Payment of the top-

te commitment – market price



- ❑ Agricultural input fa
in June/July
- ❑ Market price
- ❑ Payment upfront

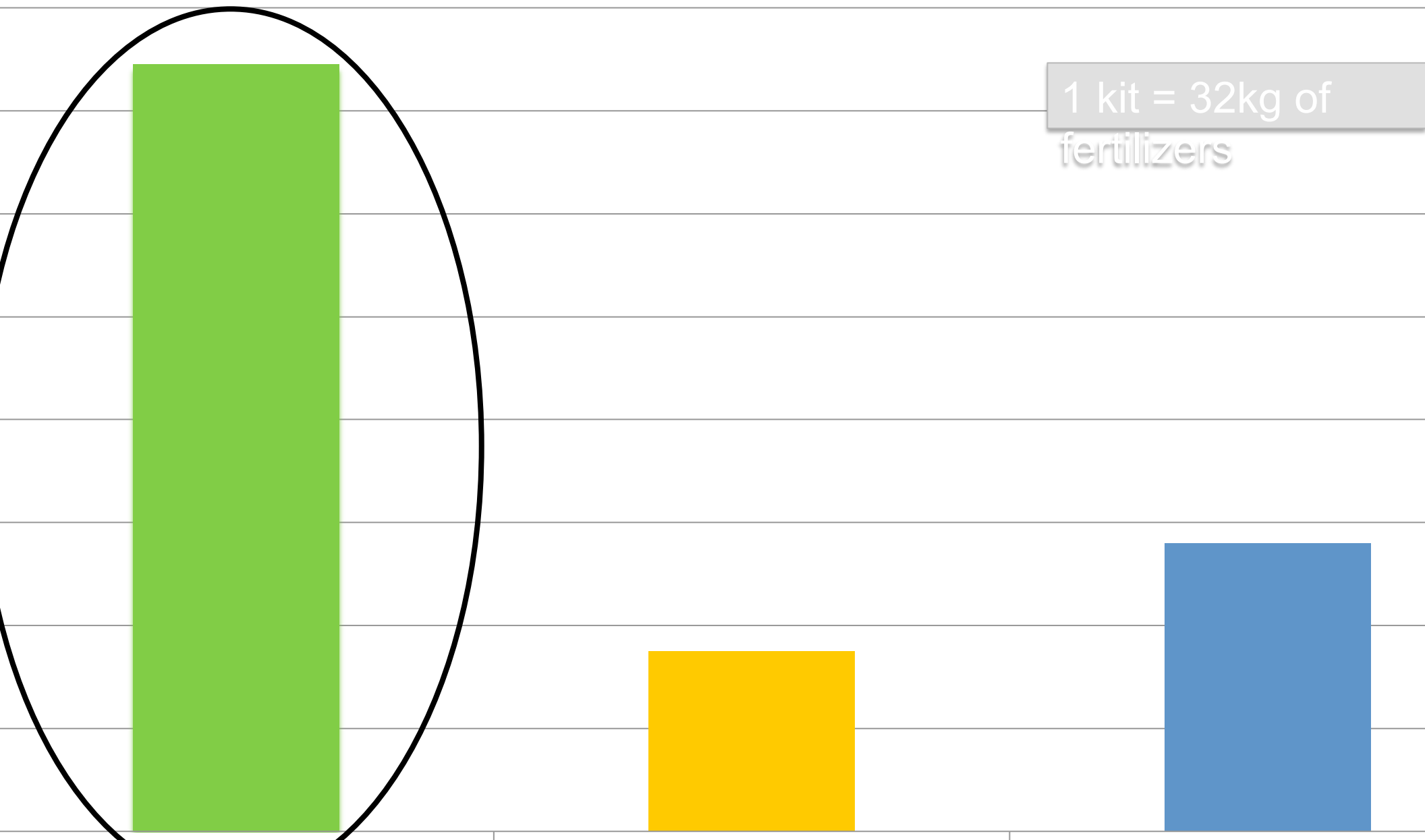
te commitment – subsidy



- ❑ Agricultural input fa
in June/July
- ❑ 20% subsidy
- ❑ Payment upfront

Results: fertilizer take-up

Number of kits bought

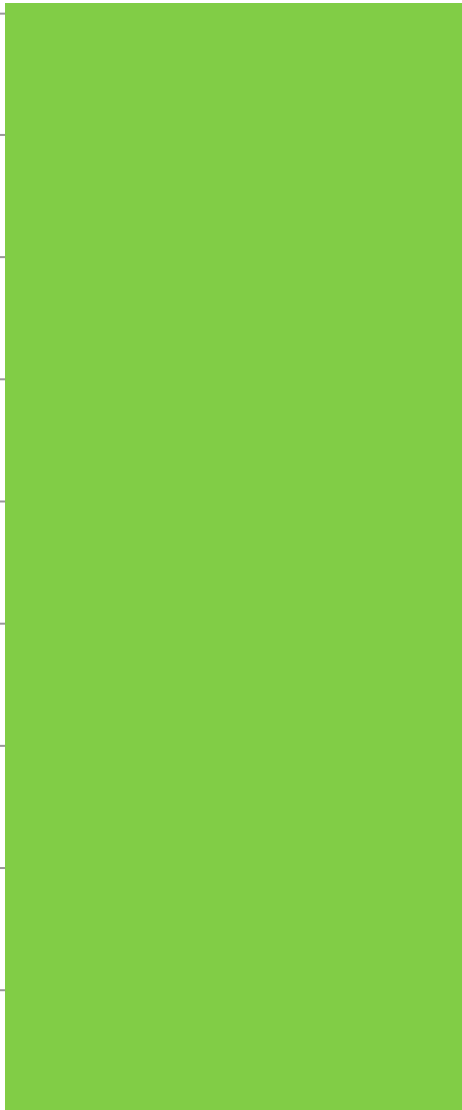


Results: early commitment

Number of kits

Top-up rate = 34%

Variations in the top-up rate across



Post-treatment follow up analysis

Comparison of demand vs supply side
constraints

Effect of social network targeting on micro-pack take
up

Gender differentiated effects of technology
adoption

Secondary effects of technology adoption

Household composition changes

Adult and child labor supply effects