

EGERTON



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**TEGEMEO INSTITUTE OF AGRICULTURAL
POLICY AND DEVELOPMENT**

Fertilizer Subsidy Programs: Constraints, Opportunities and Lessons

Tim Njagi

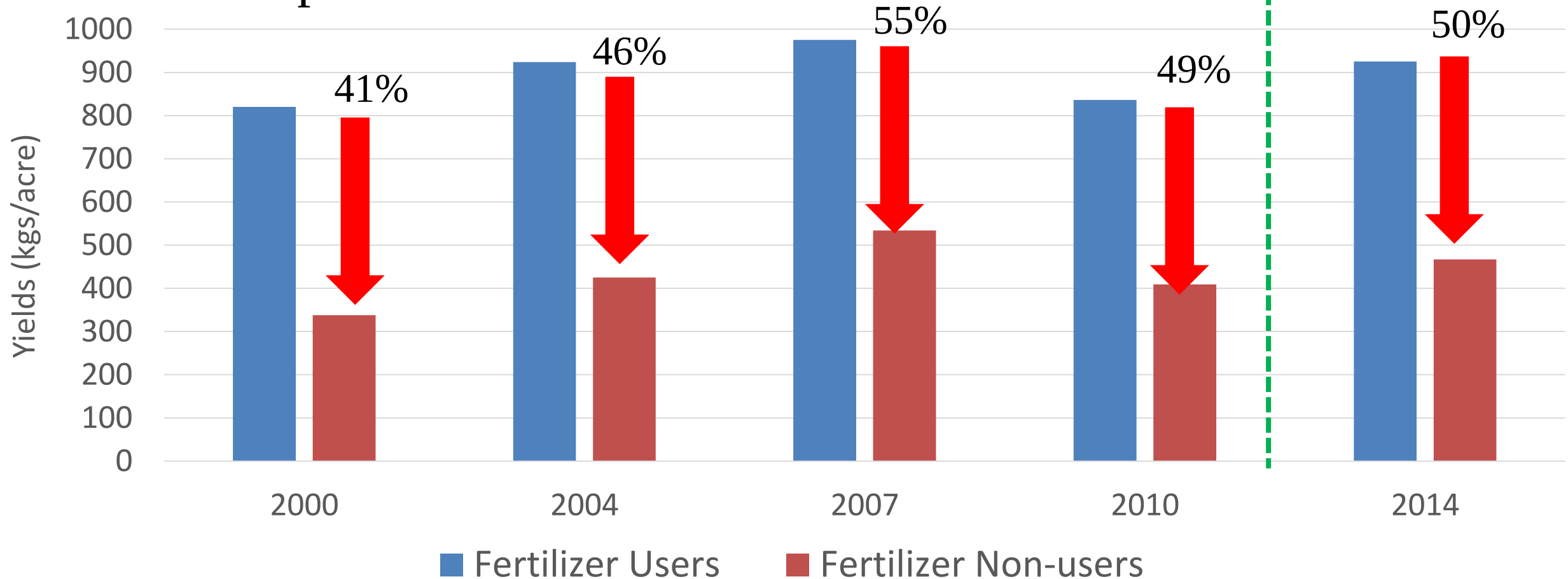
KeFERT Conference

KICC, Nairobi

16th - 17th October 2018

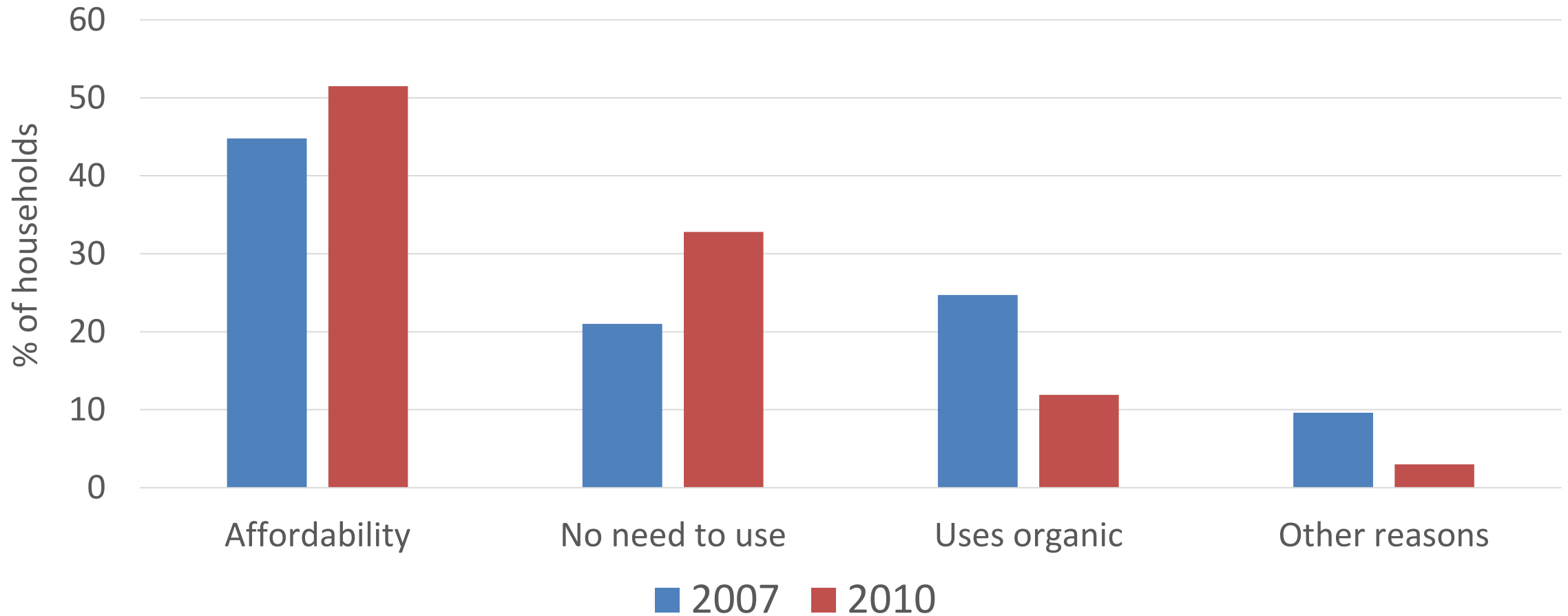
Importance of inorganic fertilizer in improving productivity

Example: Maize Farmers

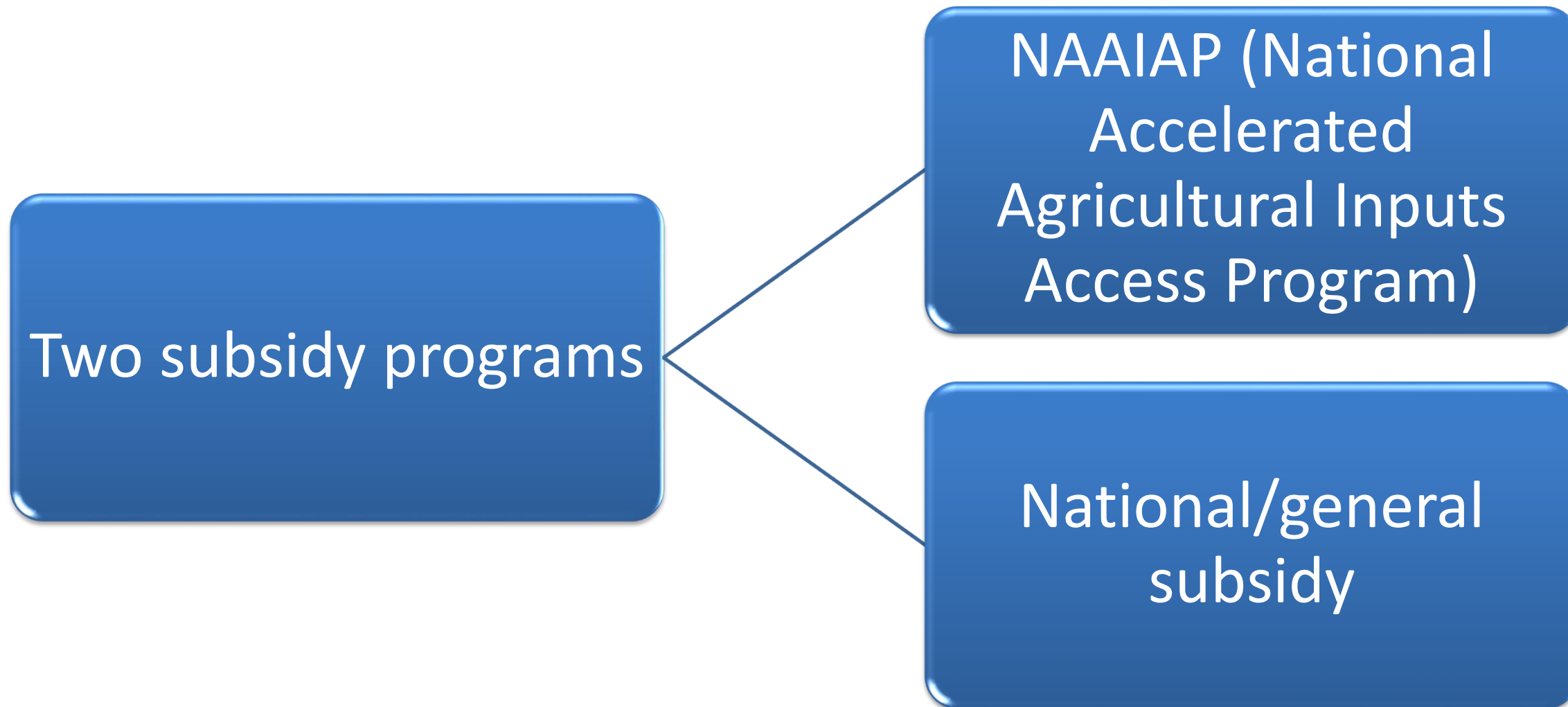


Yields still low even for farmers using fertilizer

Reasons for not using inorganic fertilizer

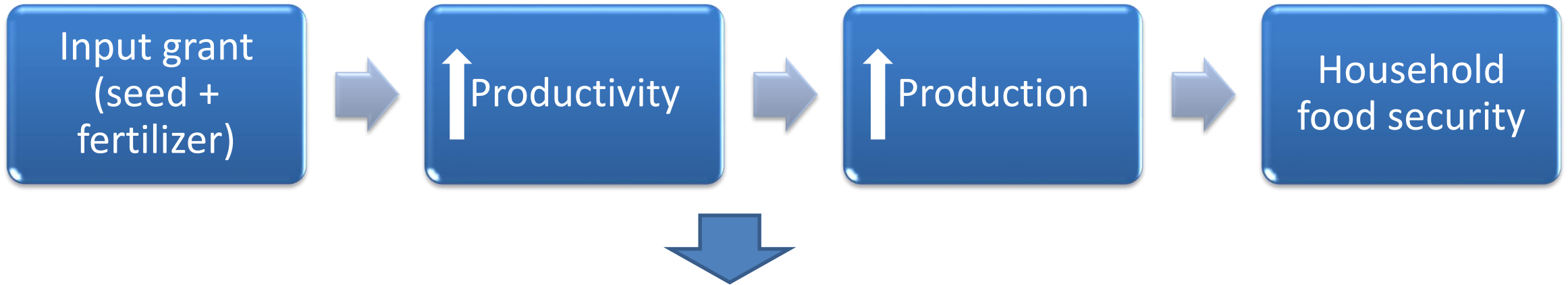


Fertilizer subsidy programs in Kenya



NAAIAP (from 2007)

Kilimo Plus



Kilimo Biashara



Re-investment in agriculture

Target beneficiaries

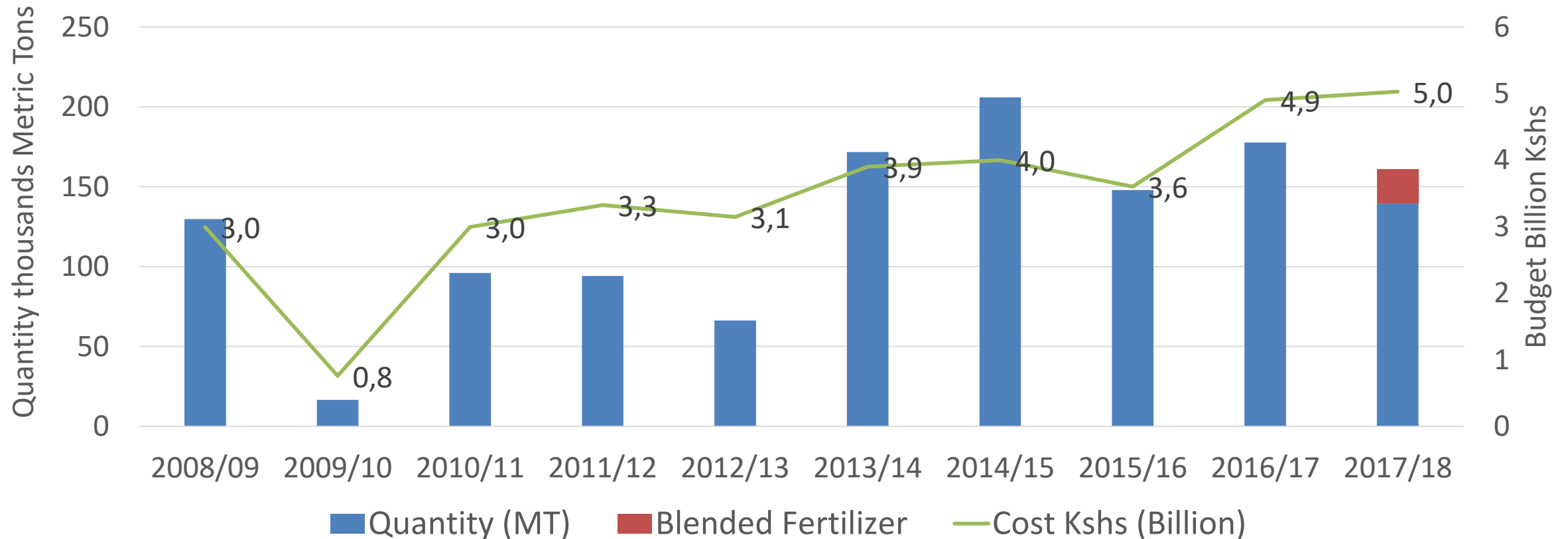
- Farmers unable to afford farm inputs at commercial prices
- Farmers growing maize/rice and had at least 2.5 acres of land
- Farmers who had not received similar support in the past
- Implemented through vouchers redeemable at private agro-dealers
- Reached 537,218 farmers

NAAIAP program effects

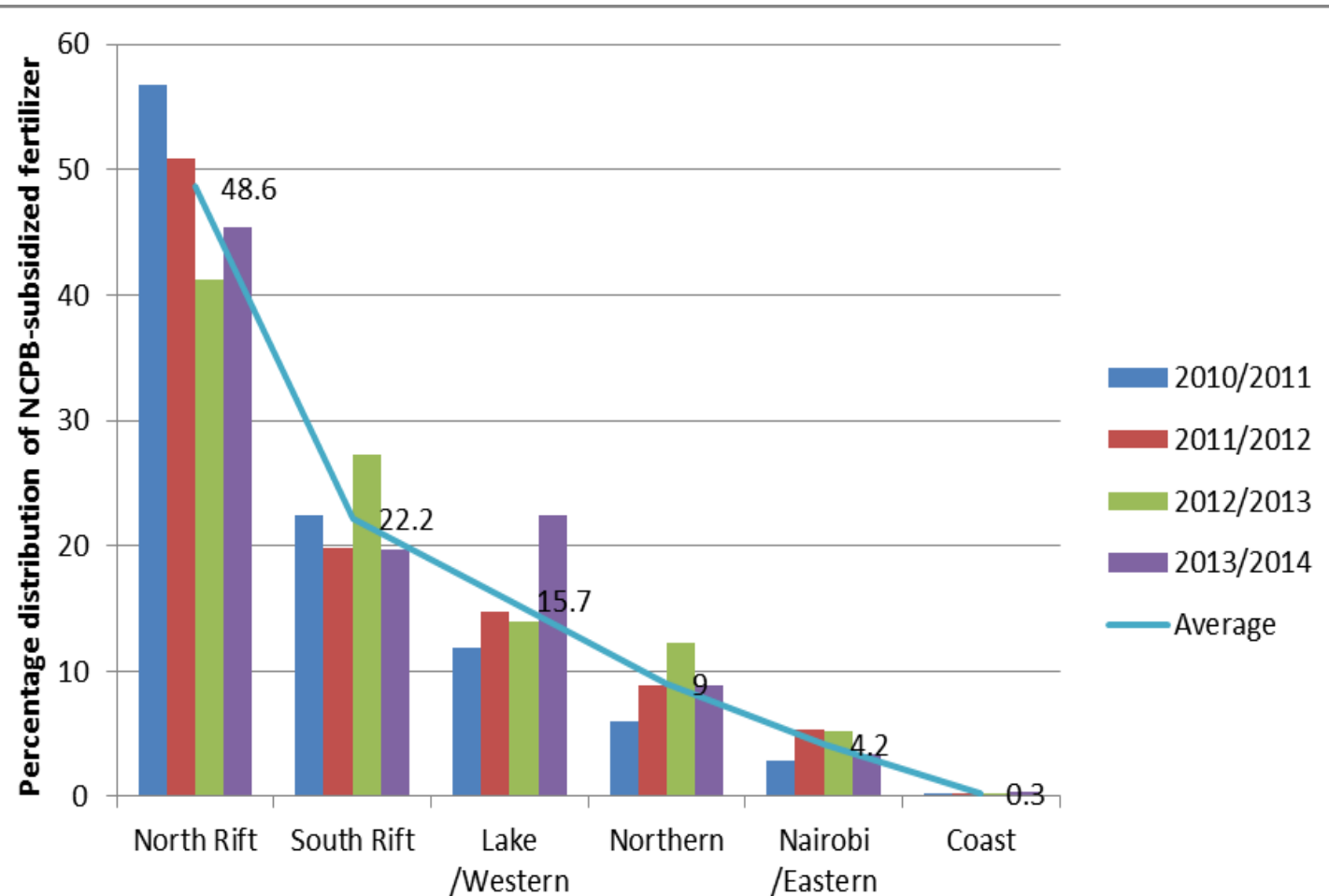
- Significantly raised maize production among beneficiary households (13-30%)
 - Primarily by increasing maize yields
- Reduced poverty severity
 - poverty gap (about 10 percentage points)
 - severity of poverty (11 percentage points)
- Hence program succeeded in raising average incomes of the poor

National/general subsidy program

- Government procures and distributes fertilizer at subsidized prices to farmers across the country through NCPB



Distribution & effects

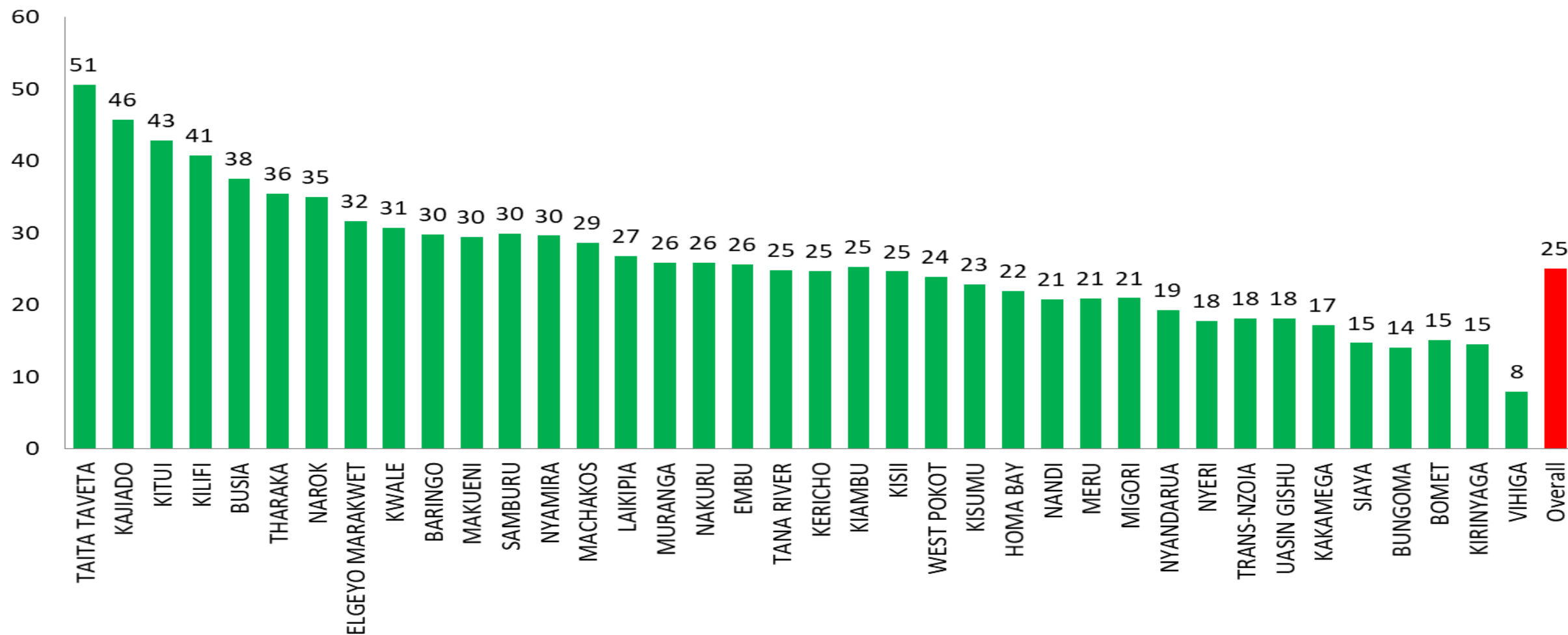


- In North Rift, national fertilizer subsidy reduces farmers' probability to participate in commercial fertilizer market by 30%
- On average one ton of subsidized fertilizer displaces 0.2 tons of commercial fertilizer
- Distortionary effects in the private fertilizer markets

Constraints facing fertilizer subsidy programs

- Distance to NCPB depots: farmers incur costs in time and transport where the depots are situated far from their farms
- High transaction/non monetary costs-----cumbersome acquisition process
- Diversion of the subsidised fertilizer – Repackaging & resale
– Adulteration
- Late delivery of fertilizer
- Dependency syndrome

Average distance to NCPB depot by county (Km)



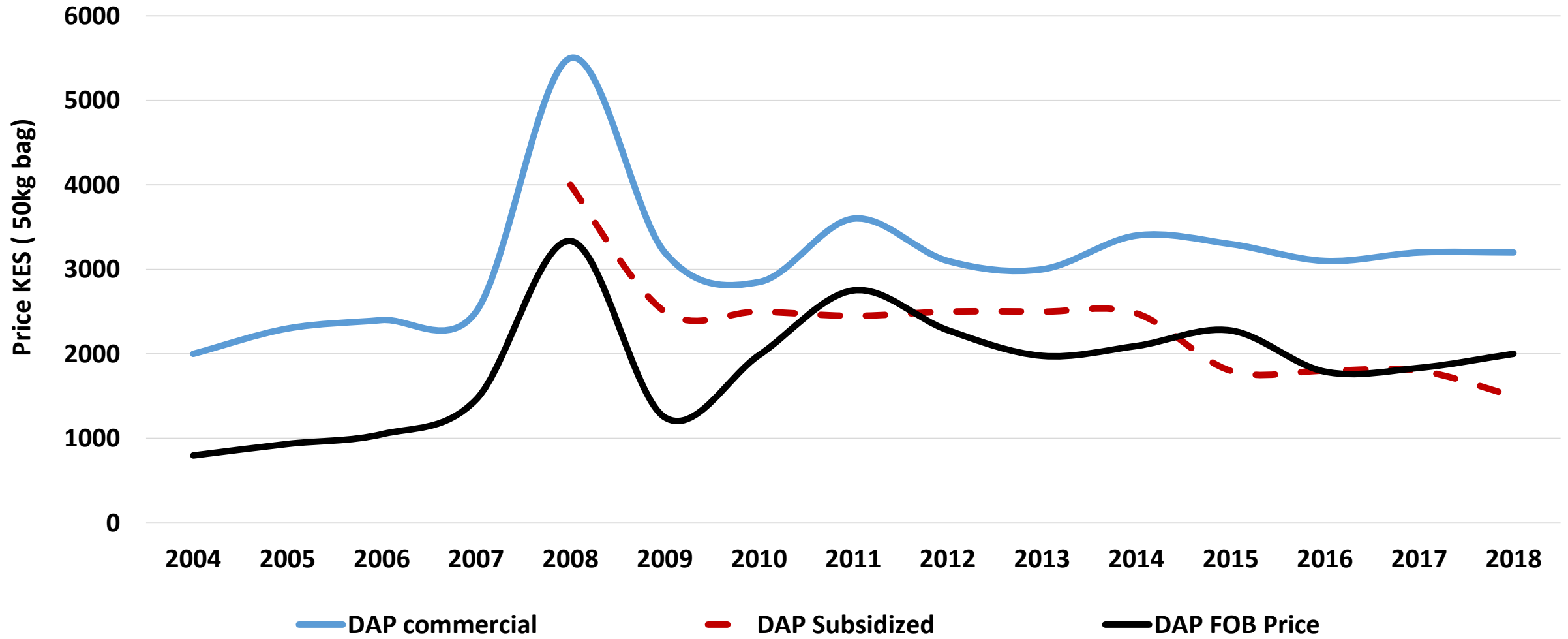
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Constraints facing fertilizer subsidy programs

- Sustainability---- high fiscal cost
- No clear exit strategy hence difficult to control the cost of the program
- Market distortions in key distribution areas--crowding out of private sector
- Rent-seeking, political interference and elite capture

Trends in DAP prices



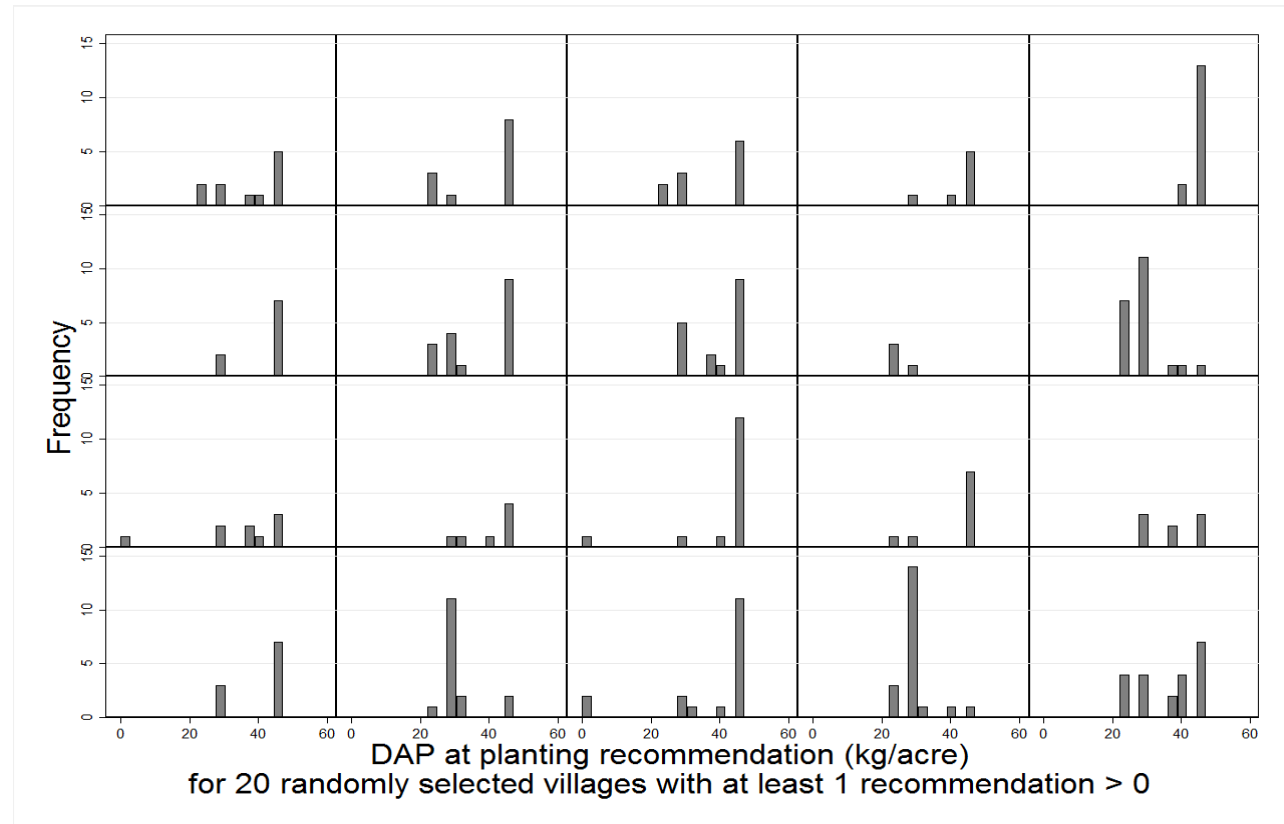
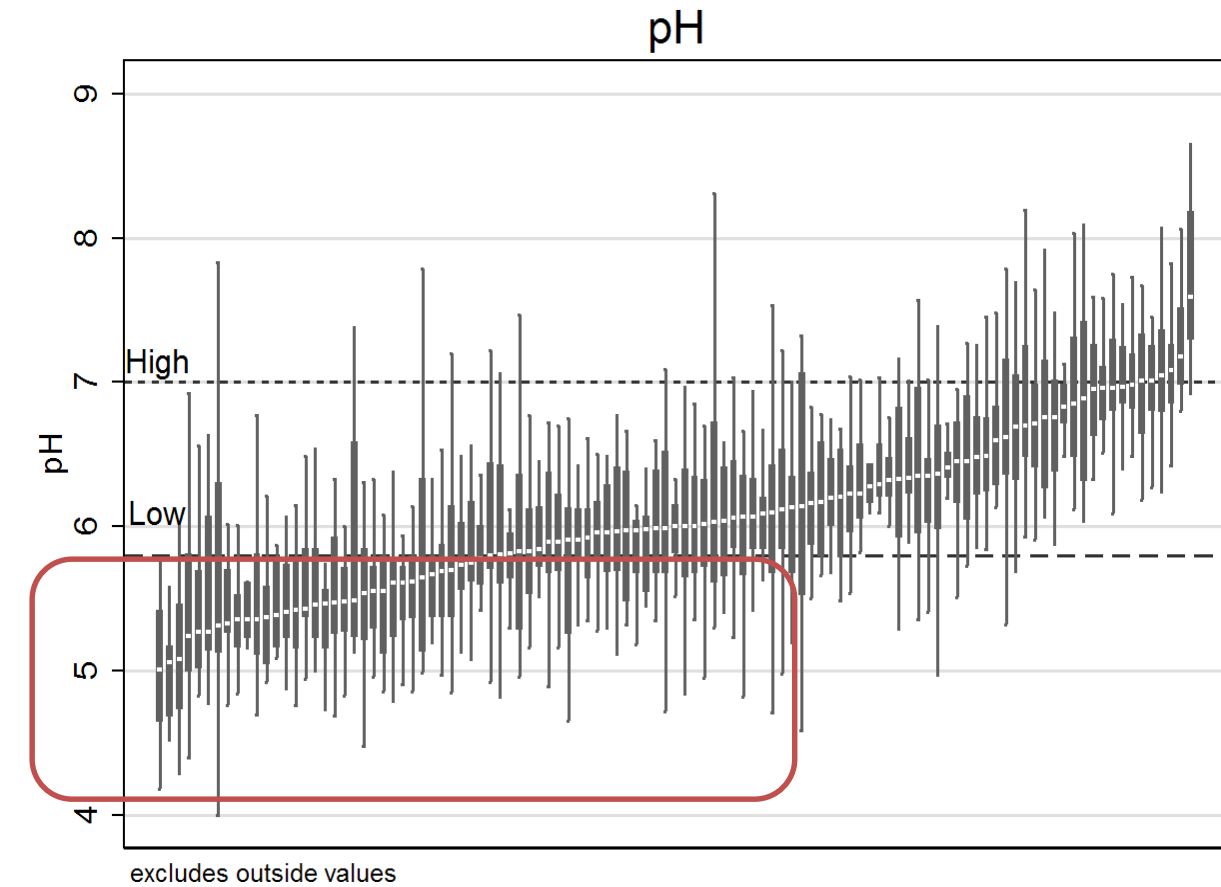
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Opportunities through ISP

- Blending----Tier 2 of fertilizer cost reduction program
 - Partnership with private sector to develop custom blends
- Enhanced fertilizer response rate
 - [Localized fertilizer blends](#) informed by soil testing to respond to heterogeneity in soil fertility
 - Local institutions/capacity for soil testing e.g. KALRO stations
 - Stimulate demand for soil testing among farmers
 - Financed from fertilizer subsidy kitty
- [Bundling of inputs](#)
- Increased use of fertilizer (% households using and intensity of use)

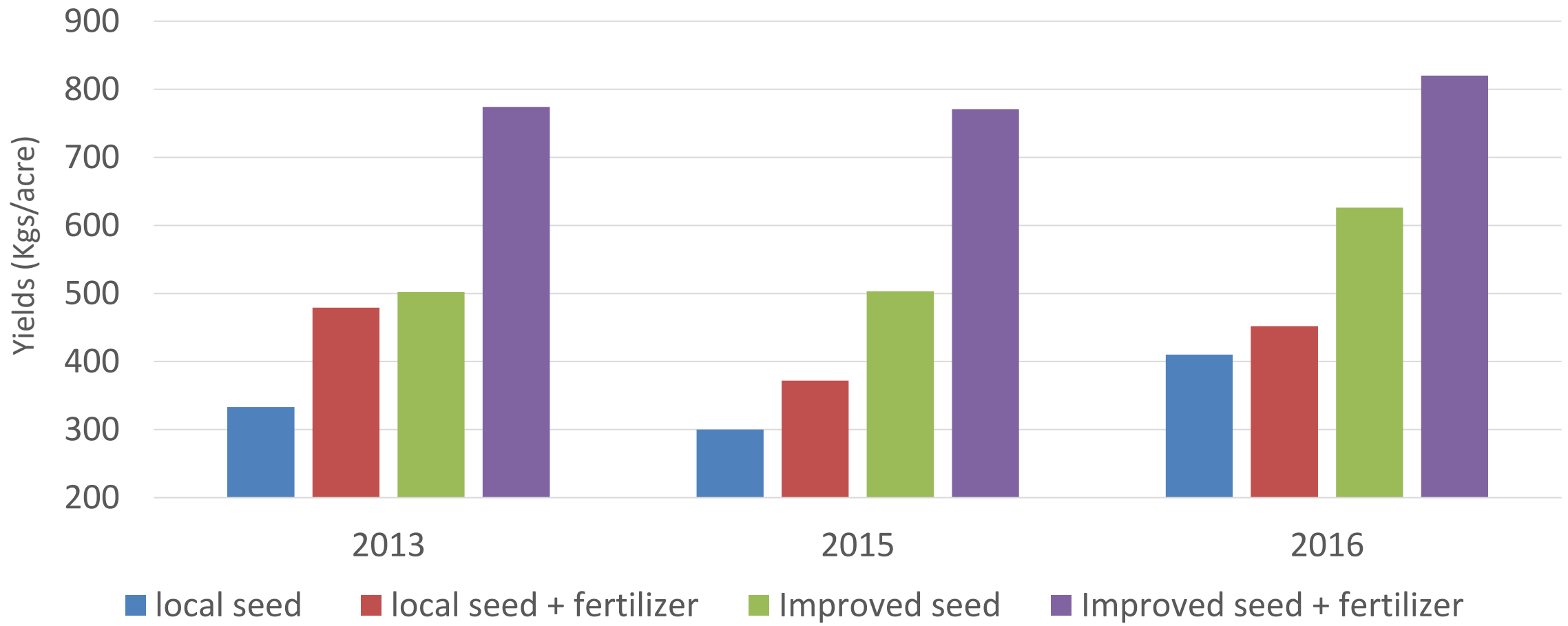
Soil are heterogeneous even at village level



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Bundling of inputs enhances productivity



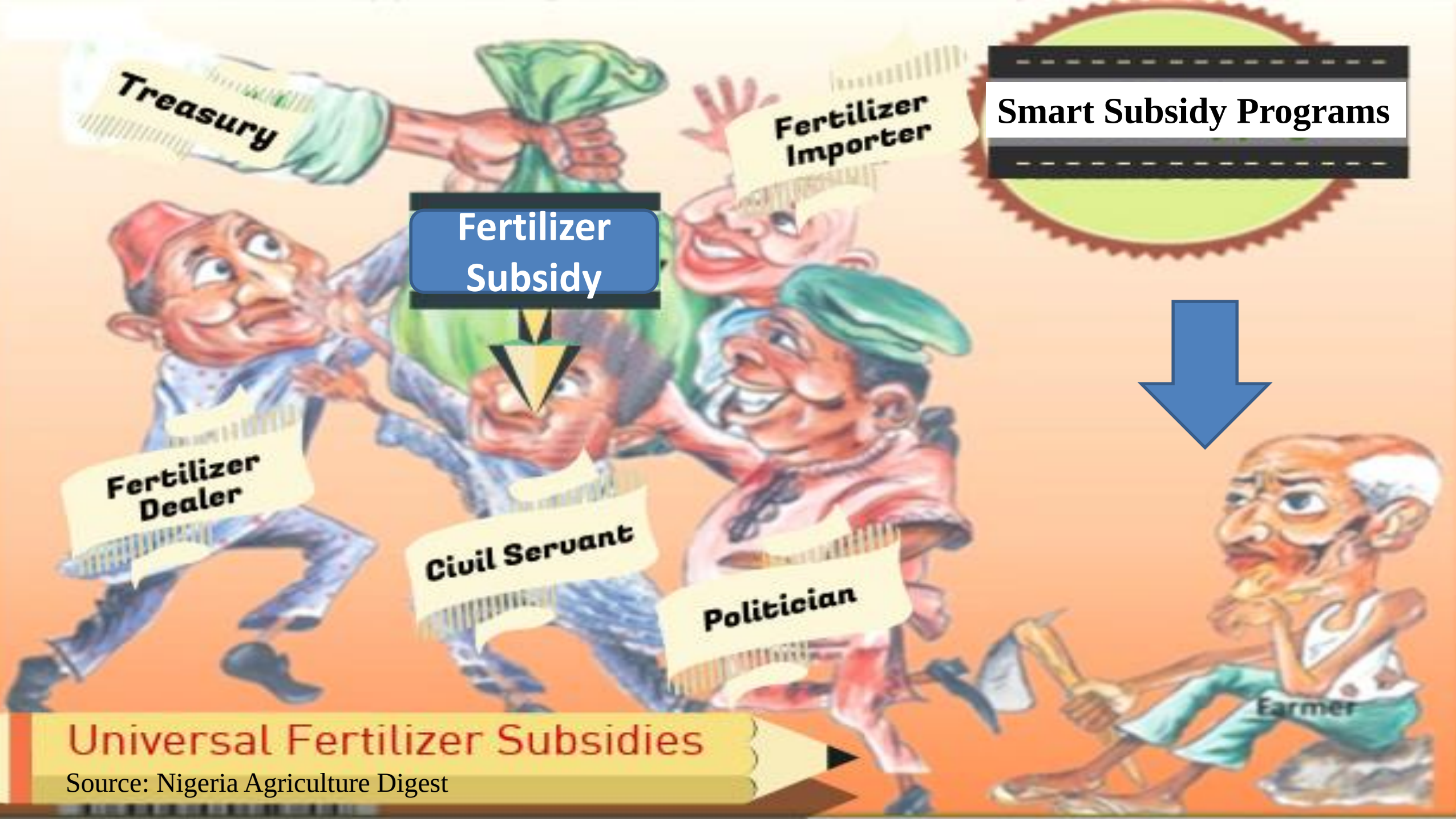
Source: Njagi et al, 2016

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Lessons

- Design and implementation
 - Strategic objectives integrated with learning
 - [SMART subsidies](#)
 - [Joint government & private sector participation](#)
 - Clear exit strategies--control endless fiscal burden
- A holistic package of support interventions
 - Bundling (seed + fertilizer + insurance + extension)
- Soil health management
 - ISFM practices
 - Periodic soil testing



Smart Subsidy Programs

Fertilizer
Subsidy

Fertilizer
Dealer

Civil Servant

Politician

Farmer

Universal Fertilizer Subsidies

Source: Nigeria Agriculture Digest

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Classification of ISP in SSA

	Government distribution	Private sector distribution
Non-targeted subsidy	Govt importation & distribution (Burkina-Faso, Kenya)	Private sector importation & distribution (Senegal)
Targeted subsidy	Private sector importation, Govt distribution (Malawi, Zambia)	Private sector importation & distribution (Ghana, Kenya, Tanzania, Rwanda)

Source: Wanzala & Groot, 2013

- Nigeria's E-wallet subsidy program closely mirrors NAAIAP
- Kenya piloted the E-Voucher in 2016, what happened after the pilot??

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Thank you