



Be the **Right ONE**

Toyota Tsusho Fertilizer Africa – BARAKA Fertilizer



Toyota Tsusho Group / Company Profile

Corporate Profile

Corporate name	: Toyota Tsusho Corporation
Head office location	: Nagoya, Tokyo
Consolidated companies	: 955 *As of March 2018
Global network	: 90 countries and more
Global deployment	: More than 150 countries
Revenue	: 65 billion USD (consolidated) *As of FY2017
Number of employees	: 56,827 (consolidated) *As of March 2018
Major shareholder	: Toyota Motor Corporation (21.7%)



Nagoya head office



Tokyo head office

Business Divisions



Metals



Global Parts &
Logistics



Automotive



Machinery, Energy &
Project



Chemicals &
Electronics



Food & Consumer
Services

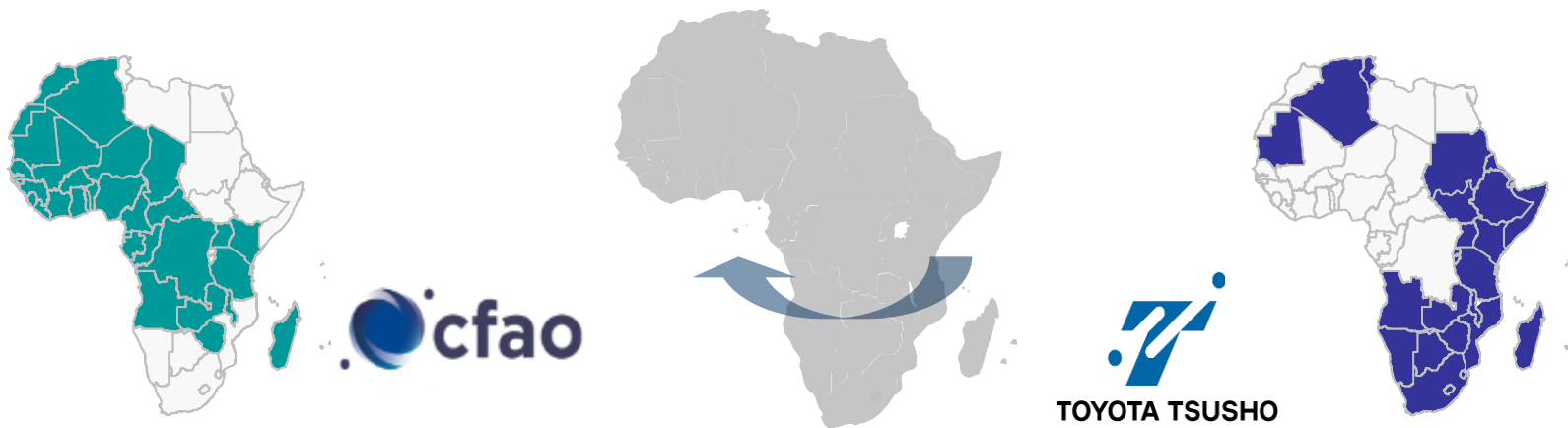
Established in April
2017





Africa

Bringing CFAO into Group and Building Alliance in Africa

TTC acquired CFAO (French trading firm) in 2012 toward becoming leading corporate group in Africa



Operations in: (automotive)	35 countries	53 of 54 countries	28 countries
Number of employees:	11,000	13,500	2,500
Brands carried (automotive)	Covering more than 20 brands 	20+	Centered on brands of the Toyota Group 
New vehicle volume (2013)	78,000	101,000	23,000

Bringing CFAO into Group and Building Alliance in Africa

Business network covering almost the whole of Africa, and rich human resources

Global deployment: **53 countries**
(Business sites in 36 countries)

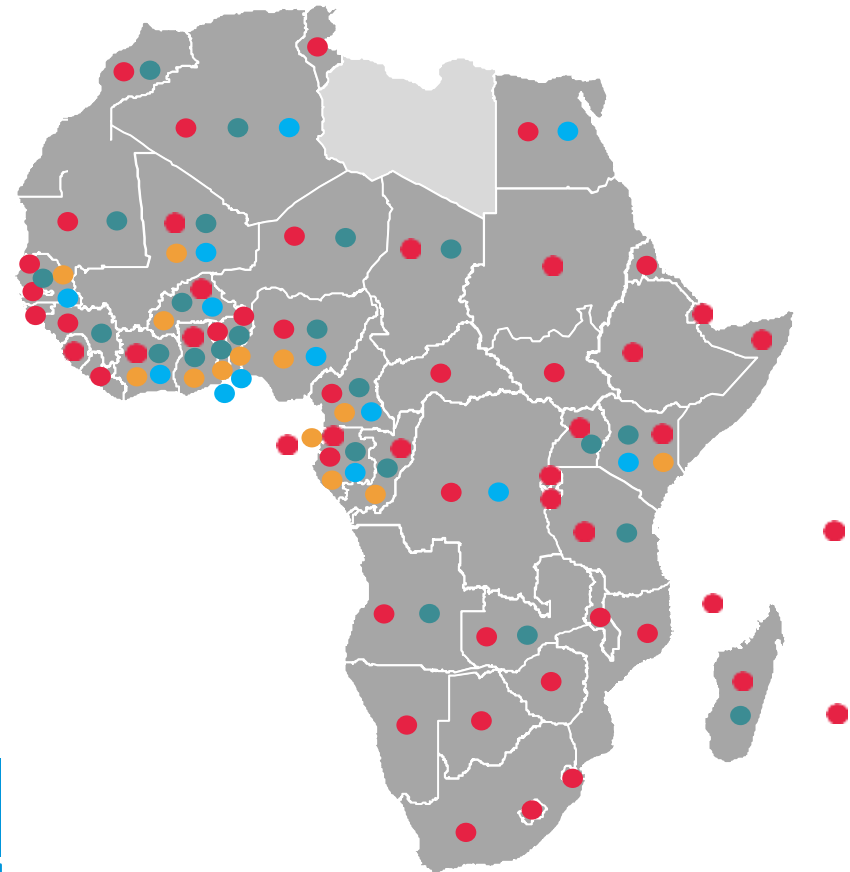
Number of employees: Approx. **15,500**

Group companies: **165**

Sales: Approx. **5.5 billion USD** (2017)

Sales composition of 4 major businesses (2017):

Mobility	Healthcare	Consumer Goods	Technology Energy
57%	34%	7%	2%



- Business Lines
- Mobility ●
- Healthcare ●
- Consumer Goods ●
- Technology Energy ●

(KENYA)MOU with VISION 2030 1st step of fertilizer PJ in 2012



This Memorandum of Understanding delineates the agreements between VDB and Toyota Tsusho on mutual interests in strategic collaboration towards implementation of various Vision 2030 flagship projects.

IT IS THEREFORE HEREBY AGREED as follows:

ARTICLE 1: PURPOSE & SCOPE

The purpose of this MOU is to clearly identify the roles and responsibilities of each party as they relate to five key sectors of interest and supportive of Vision 2030 flagship projects specified as below.

- 1) Power and Energy Infrastructure
- 2) Oil and Mineral Mining
- 3) Environmental Protection Infrastructure
- 4) Agricultural Industrialization
- 5) Taking Initiative to Enhance Investment Activities (Establishment of Regional Vehicle Logistics Center and Central Parts Depot in Kenya) to Develop EAC Regional Automotive Business



Agriculture Business Vision in Africa



Phase 1

Agricultural Mechanization

- CASE / Captain Franchise, 3S business
- Finance Package
- Training Program at TOYOTA KENYA Academy

Phase 2

Fertilizer Production & Sales

- Producing Balanced Fertilizer suitable for Kenyan Soils and Crops
- Promoting Better Farming Practice

Phase 3

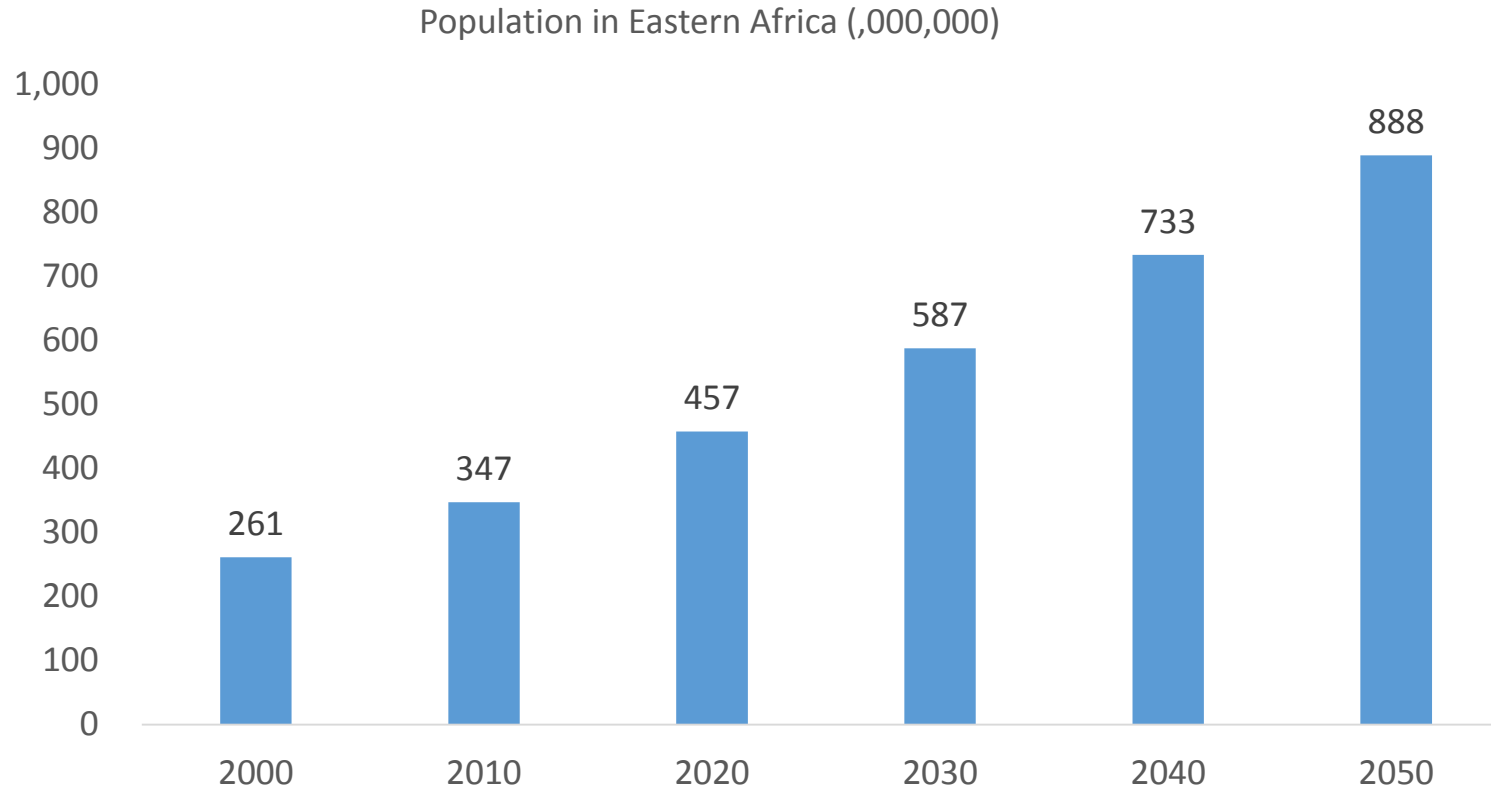
Agricultural VC Expansion

- Participating in Large Scale Farming (Zambia)
- Post Harvest and Processing of Agricultural Products /Crops (in Study)



Business Opportunity in fertilizer sector (1)

Population in Eastern Africa is growing steadily and strongly.



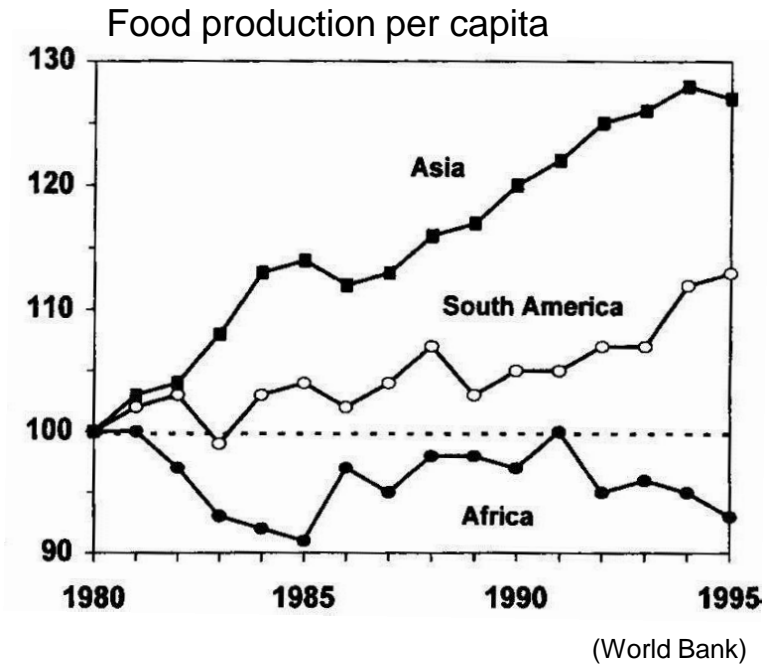
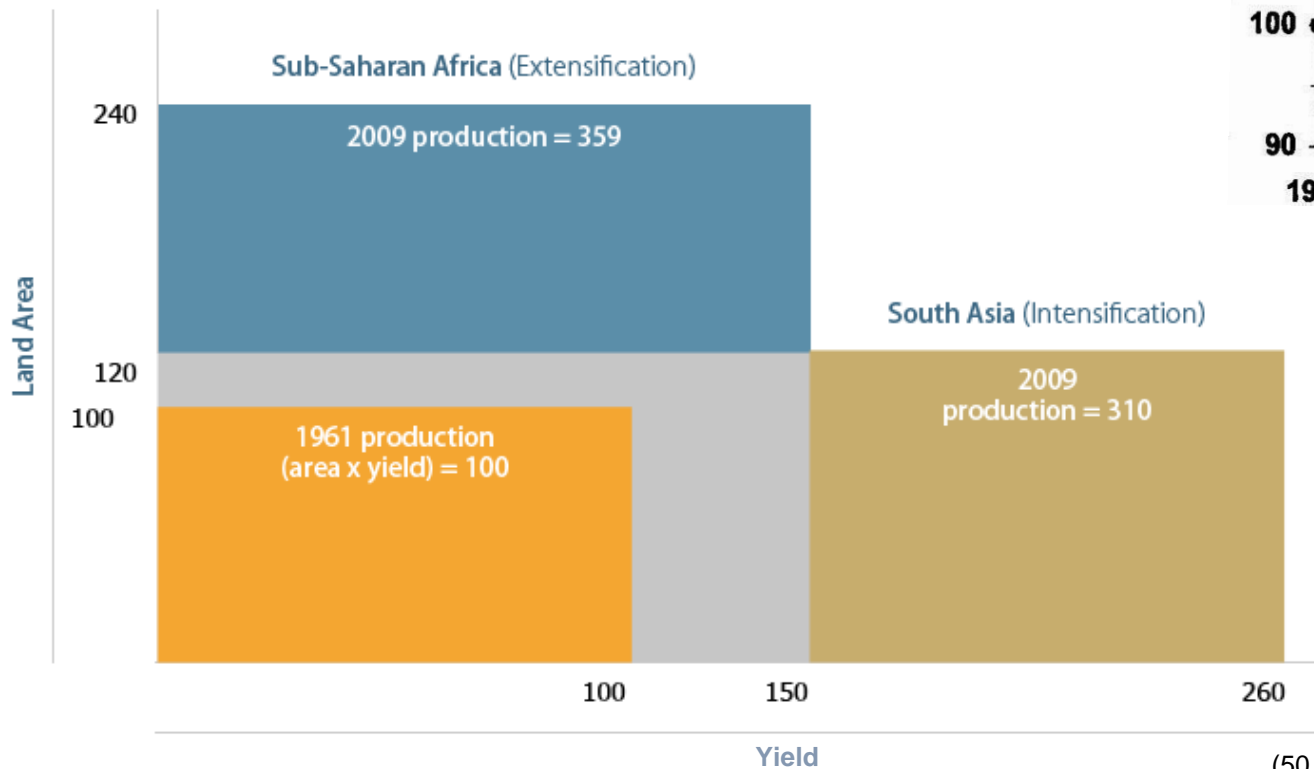
(Source: UN)

Ethiopia, Tanzania, Kenya, Uganda, Mozambique, Madagascar, Malawi, Zambia, Zimbabwe, Somalia, South Sudan, Rwanda, Burundi, Eritrea, Mauritius, Djibouti, Réunion, Comoros, Mayotte, Seychelles

Business Opportunity in fertilizer sector (2)

Improvement of food productivity is limited.

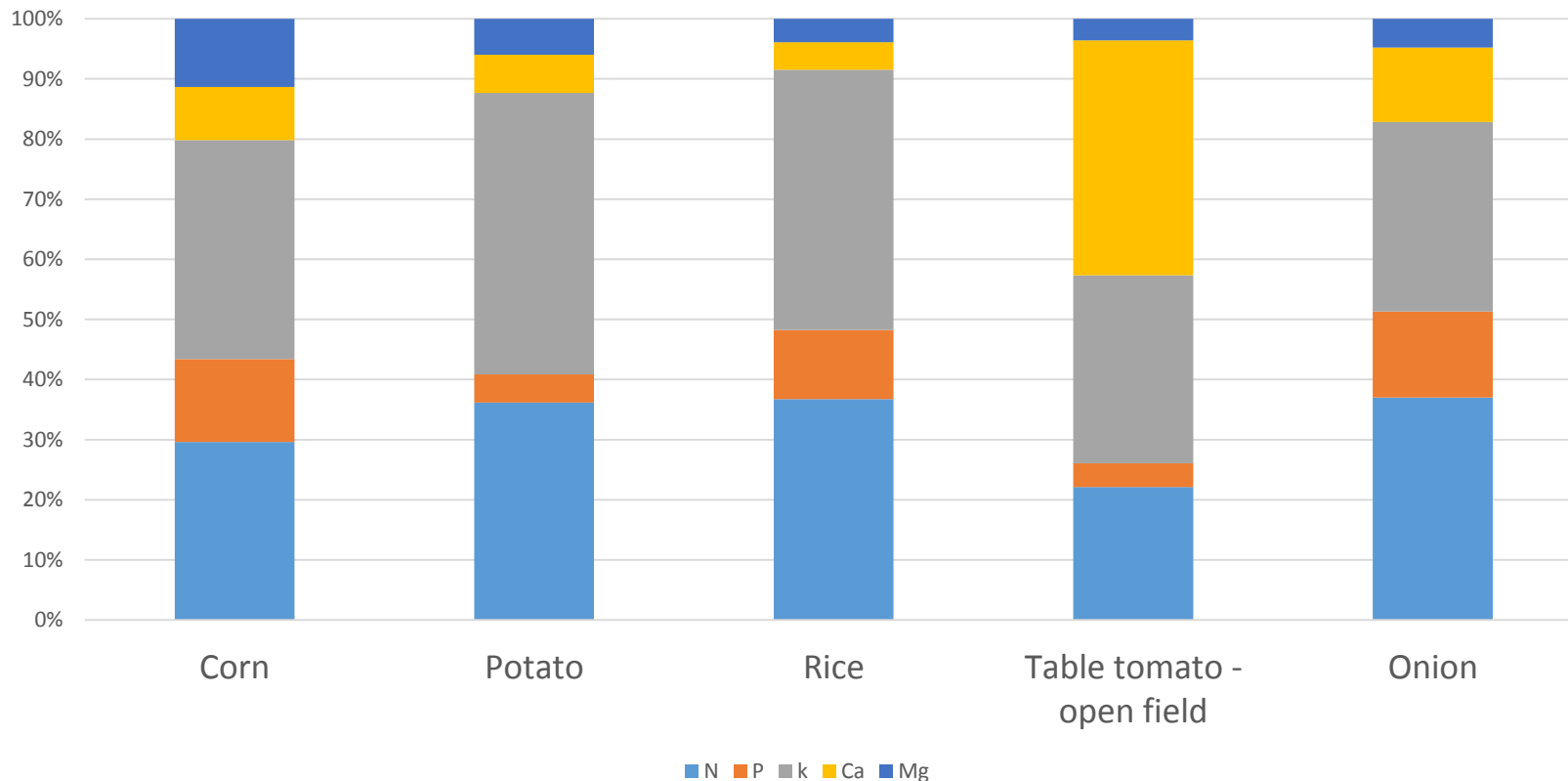
Cereal production, yield and land usage in South Asia and Sub-Saharan Africa, 1961-2009



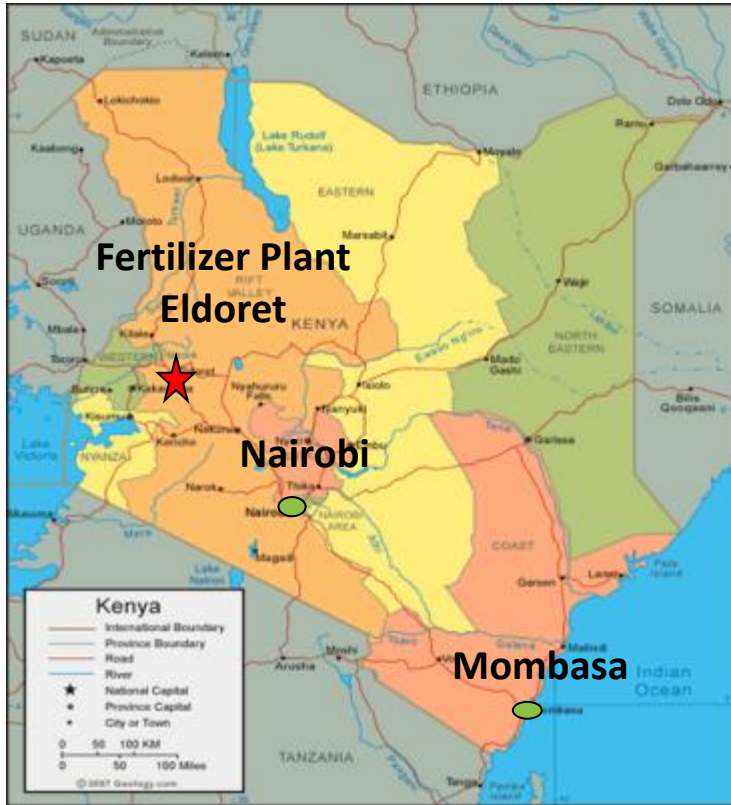
Business Opportunity in fertilizer sector (3)

- ✓ **Variety of crop produced/consumed is being diversified
Maize to Maize/Rice/Potato/Vegetables**
- ✓ **But variety of fertilizer is still limited in East Africa**

Nutrition requirement by various crops



Solution: Toyota Tsusho Fertilizer Africa (TTFA)



- Brand Name: BARAKA Fertilizer
- Products : Balanced Nutrition Blending NPK Fertilizer
- Installed Capacity : 50MT/HR (Max. 150KMT/YR)
- Production Start : August 2016
- Ownership: Toyota Tsusho Group 100%
- Location: Eldoret, Kenya



Agriculture Sector Facts in Kenya

- Arable Land: 5.8 Million HA - 10% of Total Land (Arable Land in Japan: 4.5 Million HA)
- 75 % of Workforce Involve in Agriculture
- 25% of GDP in Kenya Generated in Agricultural Sector (Total GDP in Kenya US\$69B)
- Main Export Goods for Kenya: Tea (US\$1B) & Cut Flower (US\$700M) (16% & 12% of Total Export)

What is



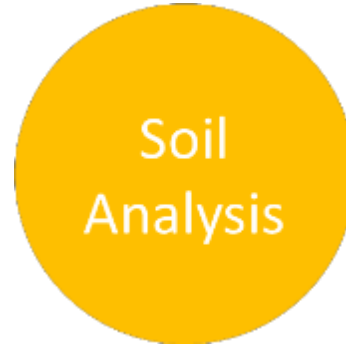
?

Africa.
Now!

FARMER IDENTIFICATION



SOIL SAMPLING & ANALYSIS



THE BEST FORMULATION & APPLICATION RATE



**BARAKA FERTILIZER
"PATA BARAKA SHAMBANI"**



**PRODUCTION
AT THE STATE-OF-ART PLANT**

Nitrogen (Urea /AS)

Phosphate (DAP/MAP/NPS)

K(Potassium)(MOP/SOP)

Ca Mg S

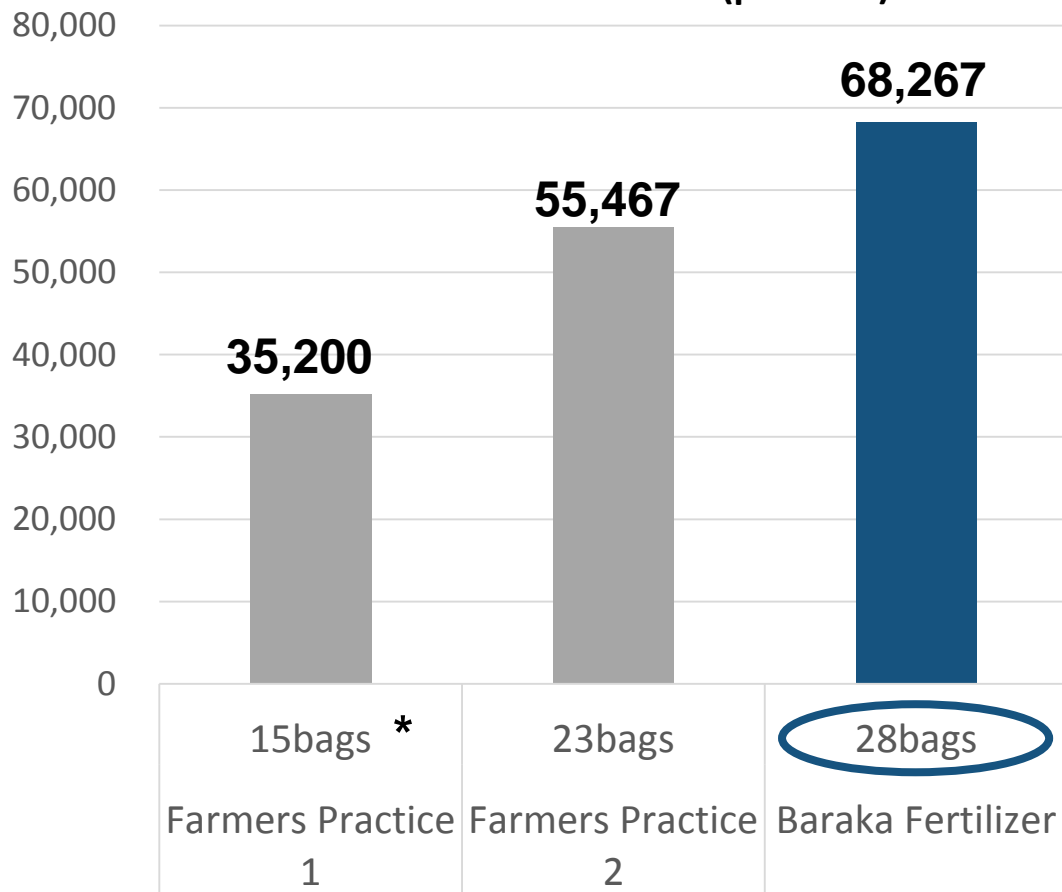
B Zn Cu Fe

**PROCURE QUALITY FEEDSTOCK
GLOBALLY & LOCALLY**

Maize Trial Result in Bungoma, KENYA

Farmers earned **extra kshs. 33,067** per acre with Baraka Planting fertilizer

Income from Maize sales (per acre)



*90kg maize bag

(Source) TTFA Internal Data / 9 farmers in Bungoma in 2016 short rain season

Fertilizer application rate (per acre)

	Planting Fertilizer	Topdressing Fertilizer
Farmers Practice 1	NPK 23:23:0 75kg/acre	CAN 75kg/acre
Farmers Practice 2	Local blended NPK fertilizer 75kg/acre	CAN 75kg/acre
Baraka Fertilizer	Baraka Planting Fertilizer 75kg/acre	CAN 75kg/acre

Baraka Potato Fertilizer

Baraka planting fertilizer: NPK 14:28:14 +5S +0.4Zn +0.12B

Baraka topdressing fertilizer: NPK 24:0:24 +9S



Rice Fertilizer Development supported by JICA

**TTFA developed the best bet rice fertilizer supported by JICA.
Nowadays, Baraka Rice Fertilizer is the most popular fertilizer in Mwea, Kenya**

(Development History)

2015

- Discussion with Researcher of JICA
- Formulation design

2016

- 1st Trial (Feb-June)
- 2nd Trial (July -Dec)

2017

- 1st Commercial Sales
- 3rd Trial
- Formulation design for Ratoon fertilizer

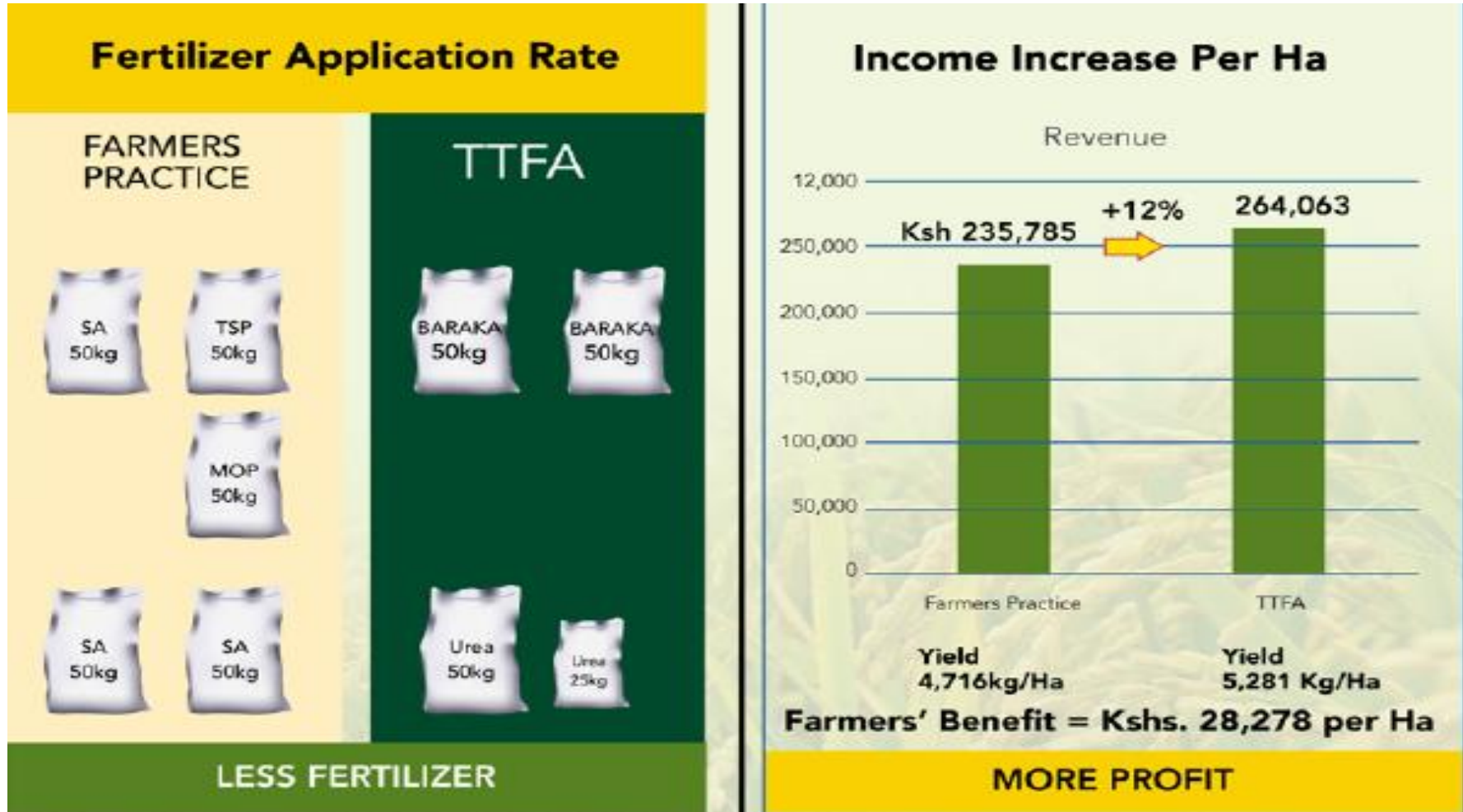
2018

- Fine tuning of formulation based on 3rd trial
- 2nd Commercial Sales



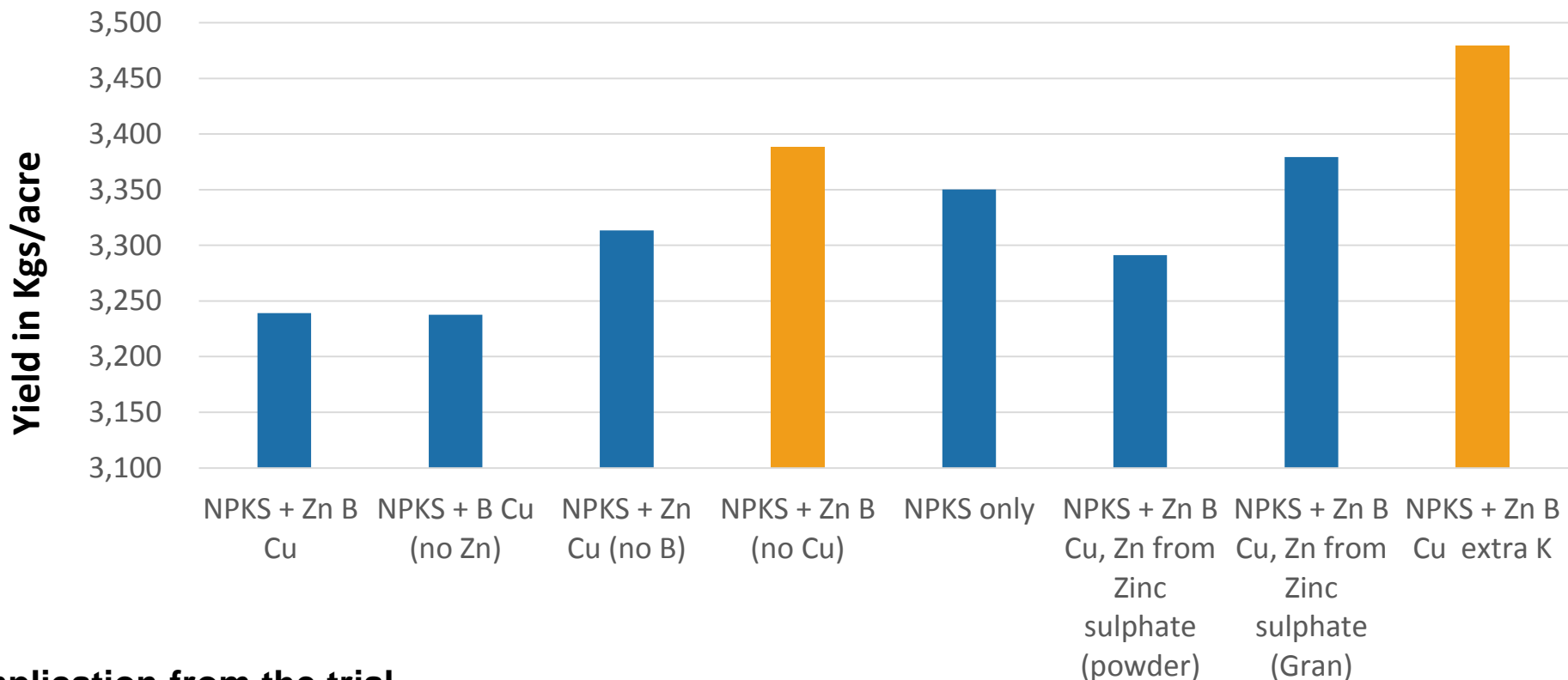
Yield improvement by Baraka Rice fertilizer (2017 version)

Baraka Rice Fertilizer (2017 version) achieved yield increase by 12% despite rice farmers in Kenya has been educated well by JICA and their original farming practice is also nearly ideal!



Result of omission trial on rice (3rd Trial in 2017)

Rice Yield in Kgs/acre during SR 2017 from Mwea Region



Implication from the trial

1. **Cu is not necessary**
2. **Extra K (potash) is positive**
3. **ZnSO₄ could be better than ZnO**



**Fine-tuning formulation.
Baraka Rice Fertilizer (2018 ver.)
shall increase yield more!**

TTFA strategy as Agri Input Solution Provider

TTFA will offer full-range of solution to farmers in Africa

Soil analysis (PH)

Handy PH meter



Soil conditioning

High quality Calcium



TTFA is a distributor of Calciprill (high quality soluble lime) produced by Omya

Right Fertilization

Baraka Fertilizer



Potassium Nitrate



TTEA

Agri-Mechanization

Tractors



CASE IH
AGRICULTURE



TTEA

CAPTAIN
Pioneer of The Mini Tractor

New agenda by Government of Kenya (GoK) “Big Four”



GoK has set “The Big Four” agenda as next 5 years development plan.

1. ***Manufacturing***
2. ***Food and Nutrition Security***
3. ***Health***
4. ***Housing***

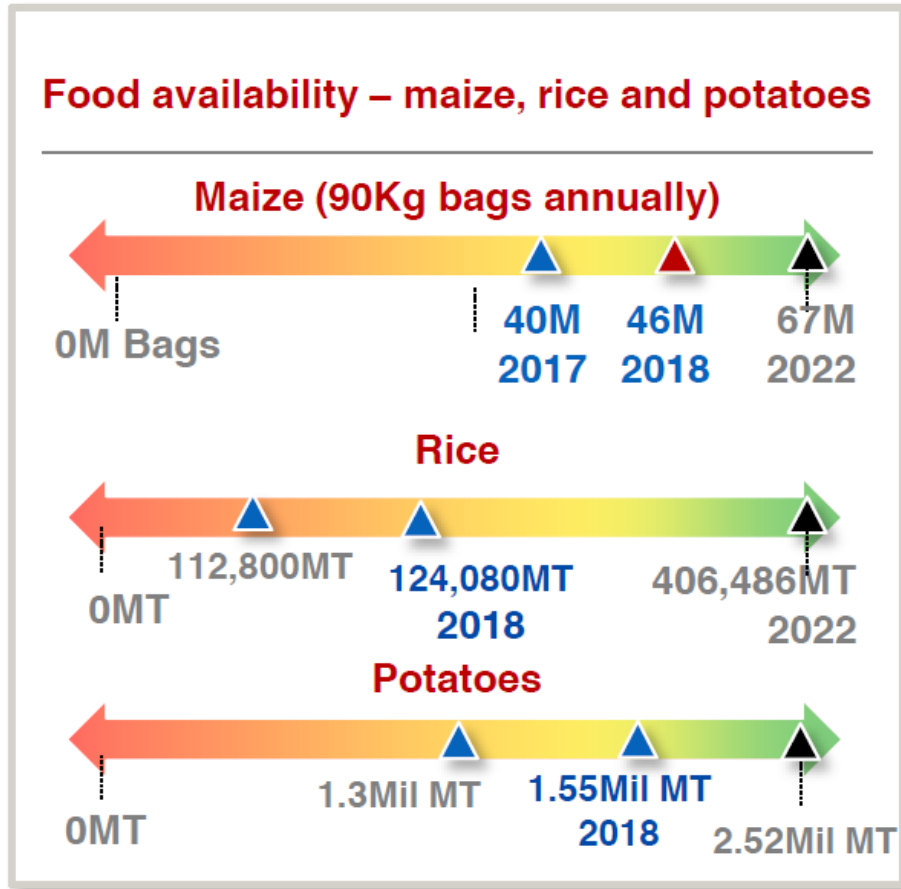
TTFA can provide great contribution for “Food and Nutrition Security”

Local blending can contribute for “Manufacturing” as well

Potential Contribution by TTFA

Top agenda in “Food and Nutrition Security”

Increase local food production



Source: GoK

Potential Contribution by TTFA and Japanese public support

Crop	Action Item	Potential Contribution
MAIZE	Baraka Standard Fertilizer	+20-30%
	Farmer Education Increase application rate 50kg =>100kg	+10-20%
	Farmer Education Use of high quality lime	+20%
RICE	Baraka Rice Fertilizer	+10-20%
	Dam construction by JICA	double
	JICA RICE MAPP program	Positive
POTATO	Baraka Potato Fertilizer	+50-100%
	Farmer Education Use of high quality lime	TBD
	Farmer Education Authorised Seed potato	Positive
	Mechanization Tractor + Potato harvester	+20%

Challenge in agribusiness in Africa

Challenge

Majority of small scale farmers in Africa is not affordable and too conservative to try new technology

Conceptual Solution

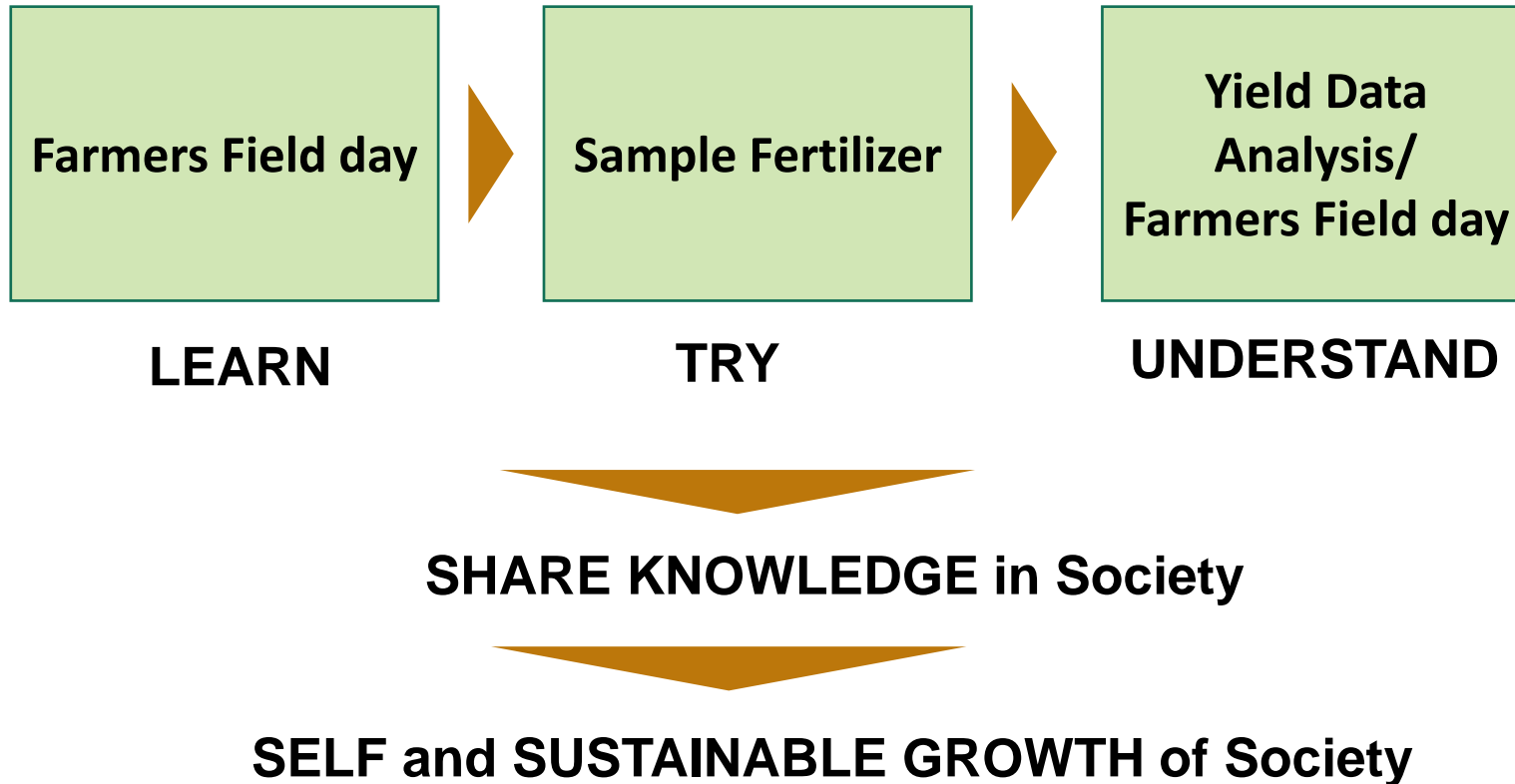
- (1) Education and training for farmers are primary essential tools.
However, education and training alone does not solve the challenge.
- (2) Self-experience and referral from neighboring farmers also plays important roles as well to accept the technology by farmers.
“Seeing is believing” “Word of mouth”

How to connect Education, Self-experience and Referrals?

How can private companies play this key role with public sector?

Farmer Education program for Balanced nutrition Fertilizer

TTFA will conduct Farmers Education Program
In Lake Victoria area supported by MAFF
(Ministry of Agriculture, Forestry and Fisheries)



With Africa, For Africa



Thank you very much