



BUILDING BUSINESSES WITH NUTRIENT ENRICHED CROPS

Profiting from Nutrient Enriched Crops - a Journey through the Market for NECs

High Iron & High Zinc Beans

ROGERS MUGAMBI, 24TH AUGUST 2021



Kenya's Malnutrition status

- ❖ Of the 7m under 5year old children 1.82m still suffer from chronic malnutrition in Kenya (USAID, 2018).
- ❖ i.e. wasting(4%), stunting (26%) and underweight (11%), UNICEF,2020.
- ❖ Indicators however show malnutrition is gradually improving (35% in 2008 to 26% in 2014)- KNBS et al. 2015
- ❖ In view of the situation; High Iron & High Zinc Bean is a near perfect food with essential proteins and other nutrients
- ✓ It can be consumed as whole grain or milled and blended with cereals flour to make a nutritious meal.



Genesis of High Iron Beans in Kenya

- Varieties made available to Agriscope Africa Ltd (AAL) in late 2017
- Agriscope selected Angaza and FAIDA because of High Iron and high Zinc among other nutritional benefits
- License agreement done in 2018 with KALRO
- Basic seed scale up fast tracked in 2018 and part of 2019
- Further bulking to meet demand still a work in progress
- Immense interest from Farmers to cultivate FAIDA and Angaza
- Support from Harvest Plus and related partners in 2021 helping AAL (EASEED) to increase productions, marketing and promotion



MARKETING & PROMOTION – DEMO PLOTS

| SELECTED COUNTIES | NO OF DEMOS |
|-------------------|-------------|
| NAKURU | 20 |
| TRANS-NZOIA | 20 |
| BOMET | 20 |
| MAKUENI | 20 |
| MACHAKOS | 20 |
| TOTAL | 100 |

MARKETING & PROMOTION – FIELD DAYS & AGRIC SHOWS

| SELECTED COUNTIES | TOTAL FIELD DAYS |
|-------------------|------------------|
| NAKURU | 20 |
| TRANS-NZOIA | 20 |
| BOMET | 20 |
| MAKUENI | 20 |
| MACHAKOS | 20 |
| TOTAL | 100 |

MARKETING & PROMOTION – FIELD PROMOTERS

| SELECTED COUNTIES | NO PER COUNTY - MOTORIZED |
|-------------------|---------------------------|
| NAKURU | 1 |
| TRANS-NZOIA | 1 |
| BOMET | 1 |
| MAKUENI | 1 |
| MACHAKOS | 1 |
| TOTAL | 5 |

MARKETING & PROMOTION – STOCKIST TRAINING

| SELECTED COUNTIES | NO OF STOCKISTS |
|-------------------|-----------------|
| NAKURU | 10 |
| TRANS-NZOIA | 10 |
| BOMET | 10 |
| MAKUENI | 10 |
| MACHAKOS | 10 |
| TOTAL | 50 |



MARKETING & PROMOTION – MEDIA CAMPAIGNS & ADVERTS

| SELECTED COUNTIES | NO OF RADIO STATIONS |
|----------------------|----------------------|
| NAKURU | 1 |
| TRANS-NZOIA | 1 |
| BOMET | 1 |
| MAKUENI | 1 |
| MACHAKOS | 1 |
| LEAFLETS & BROCHURES | 10,000 |
| POSTERS | 1,000 |
| TOTAL | 100 |



HIGH IRON BEAN PRODUCTION PLAN

| CROP | VARIETY | 2020A PLANTED ACRES | YIELD ACHIEVED | 2021 PRDCTN TARGET ACR | EXPECTED YEILD (KGS) | 2022A TARGET PROD ACR | EXPECTED YIELDS (KGS) |
|--------------|---------|---------------------------|-------------------|---------------------------------|-------------------------|--------------------------------|-----------------------------|
| BEAN | FAIDA | 200 | 50,000 | 600 | 300,000 | 1000 | 500,000 |
| BEAN | ANGAZA | 120 | 30,000 | 250 | 120,000 | 500 | 200,000 |
| TOTAL | | 220 | 80,000 | 850 | 420,000 | 1500 | 700,000 |

WITH SUSTAINED STRONGER PARTNERSHIPS, WE CAN ACCELERATE AND UPSCALE PRODUCTIONS TO MAKE NEC SEED AVAILABLE TO MORE SHFs



ANGAZA (KMR11)



Key Features

- A determinate plant with an average height of 35-40cm
- Has light pink flowers
- Matures in 82-83 days
- Seeds are medium size, have a white hilum surrounded by a brown halo. The pericarp is greenish and changes to sugar-type with age.
- Potential yield ranges from 1400-1900 kg/ha or 7-9 bags/acre
- Grains taste sweet and less flatulence
- Tolerant to rust (*Uromyces* sp.), common bean mosaic virus (CBMV), angular leaf spot and bacterial blight
- Highly tolerant to heat and drought
- **Contains high content of iron and zinc protein, calcium, important vitamins and fiber.**

FAIDA (KMR13)



Key Features

- A indeterminate plant with an average height of 40-45cm
- Has white flowers
- Matures in 84-85 days
- Seeds are large and kidney shaped, have a white hilum and greenish pericarp, which changes to red-mottled with age
- Potential yield ranges from 1400-1900 kg/ha or 7-9 bags/acre
- Grains taste sweet and less flatulence.
- Tolerant to rust (*Uromyces* sp.), common bean mosaic virus (CBMV), angular leaf spot and bacterial blight
- Highly tolerant to heat
- **Contains high content of iron and zinc protein, calcium, important vitamins and fiber.**

Farmer training on Angaza bean production



Faida Bean Seed Production Gicheha Farm – Taveta Kenya



Summary benefits of NEC - HIB

- ❑ The bean is a major source of food and a perfect compliment in most meals
- ❑ Nutritional benefits key among them high iron & high zinc
- ❑ Trade opportunities among SHFs and consumers for improved incomes
- ❑ Bean is an excellent rotational crop for nitrogen fixation in soils
- ❑ Opportunities in seed production
- ❑ Creation of job opportunities in the NEC value chain
- ❑ There exists a ready market for NEC for food, nutrition and processing



THANK YOU

