

IITA R4D stations serve our scientists and partners across sub-Saharan Africa. (Map by IITA)



Presentation outline

Introduction

On-going activities

Work plan (year 1)

Collaboration with BNFB partners



Background

Maize is a staple food for millions of people in sub-Saharan Africa where a significant number of people suffer from vitamin A deficiency.

Why bio- fortification?

Bio-fortification of staple crops is a cost effective and sustainable approach that can help combat vitamin A and other micronutrient deficiencies in developing countries



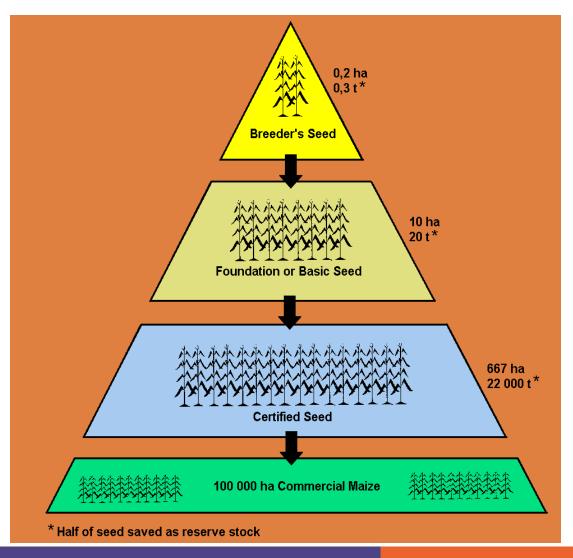
Vitamin A deficiency is widely prevalent in Africa and afflicts millions of children, resulting in morbidity, blindness, and even death. For many millions of people in sub-Saharan Africa (and Latin America) maize is a subsistence crop

Maize is also one of the most genetically diverse crops in the world, and scientists have found varieties that have naturally high levels of provitamin A

Continuous supply of different classes of seeds of biofortified maize varieties is crucial in attaining the critical shortages of nutritious foods on tables of the end users



Seed Classes



- Breeders' Seed
 - Controlled pollination
 - Small quantities
- Basic Seed
 - Extra-isolated fields
 - Strict quality standards
- Certified Seed
 - Isolated fields
 - High quality standards







On-going activities

- Different breeding activities to develop PVA maize varieties
- Laboratory confirmation of the level of Provitamin A – collaboration with nutrition unit (IITA)
- Seed productions of parental lines of the released PVA varieties
- Across location testing and evaluation of PVA maize varieties

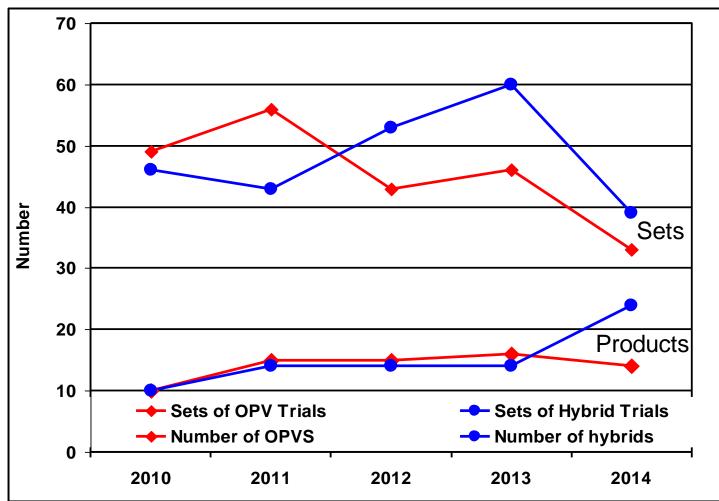






Regional Trials: Channelling promising provitamin A enriched OPVs and hybrids to partners for testing

BURKINA FASO CAMEROON DRC EGYPE GHANA GUINEA LIBERIA MALI **NIGERIA SENEGAL** SIERRA LEONE **TOGO ZIMBABWE**









Product Delivery Schedule

Target products	Target pro-vitamin A content (µg/g)	Planned year of release
1st Generation	6-8 μg/g (40-60% target increase)	2012
2nd Generation	8–12 μg/g (60–80% target increase)	2015
3rd Generation	≥15 µg/g (≥100% target increase)	2017-2018



No.	Variety name	Year of release	Country	Yield t/ha	Pro-vitamin A content (ppm)	Yield advantage over the check (%)
1	lfe-Hybrid 4	2012	Nigeria	5 - 8	7 – 10	16
2	lfe-hybrid 3	2012	Nigeria	6 - 8	7 – 10	27
3	Sammaz 38	2012	Nigeria	4 - 6	6 – 8	47
4	Sammaz 39	2012	Nigeria	4 - 6	6 – 8	48
5	CSIR-CRI Honampa	2012	Ghana	4 - 6	6 – 8	42
6	Nafana	2012	Mali	4 - 6	6 – 8	10
7	Summaz 43	2015	Nigeria	6 - 9	7 – 12	42
8	Summaz 44	2015	Nigeria	6 - 9	7 – 12	59
9	Dzifoo	2015	Ghana	6 - 9	7 – 12	45
10	Ahoofe	2015	Ghana	6 - 9	7 – 12	45
11	Ahoodzin	2015	Ghana	4 - 6	7 – 12	29



Work plan (1st year)-BNFB

- Seed production of PVA maize varieties Hybrids (2) and OPVs (2)- in collaboration with seed companies (Seed Co, Premier seed, Maslaha seed and Jirkur seed) very high demand of PVA maize seeds 4 tons of breeder seed reaches 4 seed companies
- Training/capacity building of different stakeholders and partners on PVA-maize seed production and distribution – 20 participants from different stake holders participate in the training

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- On-station trials to fast track the identification and release of 2 PVA maize varieties
- Hosting meetings between processors and commercial farmers for constant supply of PVA materials for processing- 20 tons of PVA biofortified food products produced



Work plan summary-2016

No.	Activities	Schedule	Target
1	Breeder seed production	December, 2016	4 tons of breeder seed
2	Training of the stake holders	November, 2016	20 participants trained
3	Trial evaluation of PVA maize genotypes	June – Dec, 2016	PVA maize trials evaluated at 6 locations
4	Supply of PVA maize to food processors	December, 2016	20 tons of PVA food products



Collaboration required

Collaborative work:

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CIP-Nigeria
HP-Nigeria
Seed Companies
NARS
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–Seed distribution

Facilitating the training of seed companies, NARS and other stakeholders – Capacity building



Thank you