

# **Breeding and promotion of sweetpotato genotypes for consumer preferred traits in time and space in Zambia**

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# Background

- AGRA supported the program to develop and select high yielding sweetpotato varieties with consumer preferences
  - high dry matter and
  - beta-carotene content
  - Tolerance to pests and diseases
- Support ended in November 2013 with a promise of renewal
- Renewal was scheduled to start in 2015

# Status of the project

Seeds collected		Lines available	
Open pollinated	Hand pollinated	Open pollinated	Hand pollinated
59,233*	1,428	181	65

# Objectives

- The project is targeted at producing
  - virus tolerant,
  - early to late maturing,
  - high yielding,
  - weevil tolerant sweetpotato clones
- which take into account farmer- and consumer-desired traits
  - Vegetable
  - Survival ability

# Virus Symptoms



# Virus symptoms



# Testing Sites

Province/ Region	Primary Test Site	Latitude	Longitude	Altitude (m.asl)
Luapula/ Region III	Mansa	15° 52' 0"	27° 46' 0"	1102
Eastern/ Region II	Msekera	13° 39'	32° 34'	1025
Copperbelt/ Region II	Copperbelt	12° 03 '7"	28° 09 0"	1245
North-western/ Region III	Mutanda	12° 11' 0"	26° 24' 0"	1386

# Methods employed

- Polycross design – natural pollination
- Diallel – hand pollination
- Breeding nursery – Check plot design
- Participatory variety selection
  - On-farm - Augmented design
  - Farmer involvement from land preparation to tasting roots and leaves

# 2015/2016 Season trials

S/N	Title	Date Planted	Date Harvested	No. of clones	Check Clones
1	UYT 1	26/11/15	19/05/16	15	Kanga Chiwoko
2	UYT 2	27/01/16	27/05/16	17	Chiwoko Chumfwa
3	AYT 1	28/11/16	17/05/16	20	Olympia Lukulu
4	AYT 2	14/12/15	26/05/16	16	Chumfwa
5	PYT	30/12/15	18/05/16	25	Kokota
6	seedling nursery	27/11/15	16/05/16	30 Families	

# Marketing challenge this season

**Chumfwa**



**Olympia**



# Challenges

- Limited funding
  - Some funding from the government that is inadequate, erratic and unreliable – election year
- Zambia is no longer a priority country with AGRA
- Potato research included without increased support

