







SWEETPOTATO BREEDING IN MALAWI FOR MALAWI

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	Sweetpotato	production	trends in M	alawi
Year	Area (ha)	Production (MT)	% change	Yield (t/ha)
1994/95	60,701	317,714		5.23
1995/96	68,804	596,469	87.74	8.66
1996/97	91,884	860,085	44.20	9.36
1997/98	136,709	1,447,994	68.35	10.59
1998/99	140,904	1,561,345	7.83	11.08
1999/20	166,251	1,966,833	25.97	11.83
2000/01	190,947	2,534,896	28.88	13.27
2001/02	219,766	2,783,307	9.80	12.66
2002/03	112,287	1,444,087	-48.12	13.43
2003/04	147,000	1,573,000	8.93	11
2004/05	122,000	1,041,790	-33.77	10.4
2005/06		1,802,685	73.04	
2006/07		2,200,402	22.06	
2007/08	159,227	2,320,696	5.47	14.57
2008/09	135,558	2,313,525	-0.31	17.07
2009/10	164,255	2,340,286	1.16	14.25

Successes of the green revolution

Systematic plant breeding to develop high performing varieties

Basis-:

Variation in plant phenotype $V_P = V_G + V_E + V_{GxE}$

Genotypes G change their relative performance across environments E

Breeders and Agronomists worked together to realize yield potentials of crops

Sweetpotato breeding

The ultimate goal of a breeder is the development of cultivars which can be adapted to a wide range of diversified environments



Sweetpotato is grown in diverse of environments in Malawi

Farmers select cultivars that perform in their environment, therefore need for many genotypes as their selection population (varieties)

Traits of importance

Agronomic

Yield, shape, size and numbers/plant

Field weevil tolerance

Field tolerance to sweetpotato virus

Organoleptic acceptability



Dry matter content->28% for orange and >30% of white fleshed

Taste, flavour, fiber content, texture (mealiness)

Post-harvest shelf life

Traits of importance...



White grabs



Traits of importance...



On-farm activities



Participatory genotype evaluation and variety development

On-farm activities...



Organoleptic testing

Signs of satisfaction?



Signs of satisfaction?



Successes





Anaakwanireone of the 7 released

Technology transfer



Access to the improved varieties







Acknowledgement



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