

3.6 Action Plan for Promotion of Drought and Early Maturing Crop Varieties

3.6.1 General Description

Promotion of drought-tolerant and early maturing food crop varieties helps to reduce the risk of crop loss and enhance crop resilience to disease and harsh climatic conditions. Drought-tolerant and early maturing crop varieties have varied benefits. However, drought-tolerant and early maturing crop varieties are not without difficulty when promoting them. The main benefit of this adaptation option is that it allows farmers to plant crops that demonstrate the qualities of early maturity, resilience to disease and greater nutritional value.

3.6.2 Target for Technology Transfer and Diffusion

The preliminary targets for the promotion of drought and early maturing crop varieties project in Table 2 is 3,000 agricultural households in Agro-ecological Region I. Each will be helped to access drought and early maturing seed varieties of cassava and sorghum. The total investment cost of cultivation of improved cassava variety using hand hoes on 1 ha plot of land is US \$ 151.

3.6.3 General Barriers and Measures

Of the barriers listed the relatively high cost of improved varieties in general was the only economic/financial barrier. This was due to the high cost of research and breeding new varieties. Non-financial barriers included the lack of information and inadequate access to improved varieties of crops like cassava, sorghum and millet. The reason for this is as in the other two technologies, i.e. the inappropriate restructuring of the Ministry of Agriculture and Livestock² which saw the abolition of the RELO position. The other was inadequate access to improved varieties apart from the relatively high cost to farmers of hybrid seed and inadequate information on new varieties and crop diversification, was also due to the low multiplication of the varieties by seed companies preferring instead to focus on maize.

In order to address the barriers identified under this technology, the enabling framework require promoting and implementing policies that will:

1. Secure funds for initiatives aimed at increasing flow of information to farmers on farming practices through translation of materials into easy-to-read and user-friendly formats and better coordination of the flow of information.
2. Lead to public policy that tackles the high price of improved seed including special subsidies for seed multiplication such as by small farmers in rural communities.
3. Institutional strengthening in the Ministry of Agriculture and Livestock so that there is better coordination of information between research and extension.
4. Strengthen the regulatory framework of seed production and marketing to maintain the credibility of the seed industry protecting both users and producers.

3.6.4 Action Plan for Promotion of Crop Diversification and New Varieties

Barrier	Root cause(s)	Proposed Measure(s)	Justification	Relevant Agency	When	Funding Sources	Indicators for Success	Possible Risks
Low farmer confidence in improved seed	Inadequate enforcement of regulation	<ul style="list-style-type: none"> Give the Seed Certification Council Institute (SCCI) powers to prosecute offenders Have more staff at SCCI to enforce regulations 	<ul style="list-style-type: none"> To ensure that seed sellers are selling genuine seed and retain confidence in improved seed To ensure that seed sellers are selling genuine seed 	<ul style="list-style-type: none"> Min of Agric. ZNFU, SCCI, Min of Justice Min of Agriculture, ZNFU, SCCI 	<ul style="list-style-type: none"> From 2014 & Ongoing 2014 & Ongoing 	<ul style="list-style-type: none"> Budgets of relevant agencies As above 	<ul style="list-style-type: none"> Number of prosecutions of offenders Staffing levels at the SCCI 	<ul style="list-style-type: none"> Lack of actions due to bureaucracy Inadequate funds to implement proposal
		<ul style="list-style-type: none"> Intensive and sustained awareness programs on quality seed 	<ul style="list-style-type: none"> For awareness creation & sensitization 	<ul style="list-style-type: none"> Min of Agriculture, ZNFU, NAIS, SCCI 	<ul style="list-style-type: none"> 2014 & Ongoing 	<ul style="list-style-type: none"> As above 	<ul style="list-style-type: none"> Number of farmers receiving agric information through established channels 	<ul style="list-style-type: none"> Lack of funds
Inadequate accessibility to improved seed by farmers	Low number of outlets supplying improved seed	<ul style="list-style-type: none"> Capacity building initiatives along the seed value chain 	<ul style="list-style-type: none"> Will provide strong linkages in seed value chain from production to supply outlets 	<ul style="list-style-type: none"> Min of Agriculture, ZNFU 	<ul style="list-style-type: none"> 2014 & Ongoing 	<ul style="list-style-type: none"> As Above 	<ul style="list-style-type: none"> Number of new outlets selling genuine seed 	<ul style="list-style-type: none"> Difficult to regulate the market
	Inadequate markets for hybrid seed	<ul style="list-style-type: none"> Promote value addition and consumption of traditional crops and raise demand for hybrid seed Promote export of traditional crops to regional and international markets 	<ul style="list-style-type: none"> There is need to raise the consumption and demand of traditional crops if demand for hybrid seed would rise To raise the demand for traditional crops 	<ul style="list-style-type: none"> Min of Agriculture, GART Min of Agriculture, Min of Commerce, GART 	<ul style="list-style-type: none"> 2014 & Ongoing 2014 & Ongoing 	<ul style="list-style-type: none"> As above Budgets of relevant agencies 	<ul style="list-style-type: none"> Traditional crops are popularized and consumed Value of exports of traditional crops 	<ul style="list-style-type: none"> Changing tastes a long term outcome Low trade related capacity

Barrier	Root cause(s)	Proposed Measure(s)	Justification	Relevant Agency	When	Funding Sources	Indicators for Success	Possible Risks
Inadequate accessibility to improved seed by farmers	Poor storage facilities in remote areas	<ul style="list-style-type: none"> Provide storage facilities across the country 	<ul style="list-style-type: none"> To enhance seed safety 	<ul style="list-style-type: none"> Min of Agriculture, ZNFU 	<ul style="list-style-type: none"> 2014 & ongoing 	<ul style="list-style-type: none"> Budgets of relevant agencies As above 	<ul style="list-style-type: none"> Number of storage facilities established 	<ul style="list-style-type: none"> Inadequate funds
	High price of hybrid seed	<ul style="list-style-type: none"> Build capacity and devise incentives for cottage seed production so hybrid seed can be produced within their communities Encourage seed companies to use cheaper methods such as the 2-way cross method 	<ul style="list-style-type: none"> To have hybrid seed produced within communities and make it cheaper to farmers To make seed cheaper 	<ul style="list-style-type: none"> Min of Agriculture, MOF Min of Agriculture, seed companies 	<ul style="list-style-type: none"> 2014 & Ongoing 2014 & Ongoing 	<ul style="list-style-type: none"> Budgets of relevant agencies As above 	<ul style="list-style-type: none"> Seed production subsidized under FISP Reduction in the price of seed paid by farmers 	<ul style="list-style-type: none"> Difficult to regulate markets Seed companies do not pass on cost reduction to farmers
		<ul style="list-style-type: none"> Encourage seed companies to introduce accelerated seed development like double haploid technique which takes 3 years 	<ul style="list-style-type: none"> To make more seed types come on stream quicker 	<ul style="list-style-type: none"> Min of Agriculture, seed companies 	<ul style="list-style-type: none"> 2014-18 	<ul style="list-style-type: none"> Budgets of relevant agencies 	<ul style="list-style-type: none"> Number of seed types developed and disseminated within project period 	<ul style="list-style-type: none"> Seed companies prefer to stick to their old methods of seed production