

CLIMATE RESILIENCE through Sweetpotato CReSP

What is CReSP?

Climate Resilience through Sweetpotato (CReSP) is a global initiative coordinated by the International Potato Center (CIP) to harness the power of sweetpotato for enabling farming families to improve their livelihoods and nutrition in the face of climatic changes. CReSP brings together partners in research, extension, production and policy to facilitate better access to climate smart and nutritious sweetpotato varieties and improve their utilization among vulnerable populations where and when needed. CReSP connects proven technologies, good practice delivery

approaches, and evidence of performance and impact to ensure that sweetpotato contributes effectively to broad and integrated adaptation strategies that serve the demand of millions of people affected by declining farm productivity or climate change induced disasters.

CReSP is currently working in Mozambique, Ethiopia, and Malawi to strengthen preparedness and responses to droughts and floods, and is set to expand to Bangladesh, Madagascar, and Haiti where sweetpotato can greatly contribute to climate resilient agriculture and disaster risk reduction. The vision of CReSP is sweetpotato strengthening the resilience of food systems for the poor, and contributing to the nutrition security of 50 million people in high vulnerability regions in Africa, Asia, and Latin America.

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SWEETPOTATO technologies

Breeding climate resilient, nutritious varieties



PARTNERSHIPS for Delivery

Quality planting material and training for farmers; guidelines for delivery



EVIDENCE of Impact

information for planning and policy



How does sweetpotato enhance climate resilience?

Sweetpotato, the world's sixth

most important food crop, is a robust and highly adaptable crop grown in more than 100 countries under a wide range of agro-ecological conditions and as part of many different agri-food systems. Among its advantages are the quality and range of locally adapted varieties available for dissemination, their relatively stable yields under changing rainfall, temperatures and soil conditions, their quick establishment and early maturity, and their low maintenance needs. Across all these parameters, it is essential to select the right varieties and agronomic

practices to realize sweetpotato's full potential under specific conditions. In most countries, women directly control sweetpotato production and utilization, increasing the likelihood that families realize full economic and nutritional benefits from this crop. Biofortified Orange-fleshed sweetpotato (OFSP) is highly effective in reducing Vitamin A deficiency among children and women, thereby contributing to fighting chronic malnutrition and child stunting. OFSP varieties have now been adapted to drier, hotter, and more saline conditions thus extending their use in climate change affected regions in Africa and Asia. These advances make it possible for sweetpotato to contribute more effectively to the integrated approaches that can build climate resilience and support disaster risk reduction.





Local farmers harvest Orange-fleshed sweetpotato in char land along the banks of the Brahmaputra River in Northern Bangladesh

How does CReSP work?

CReSP works through partnerships to bring the benefits of sweetpotato to millions of vulnerable people. Practically, CReSP connects and supports partners working across the entire landscape of climate resilient technologies, delivery, and policy. They include

- researchers developing locally adapted sweetpotato varieties responding to the needs of their countries,
- commercial seed multipliers and public sector extension services delivering planting material and training to smallholder farmers,
- nutrition agencies providing nutrition education and counseling to vulnerable families so that they can better utilize sweetpotato for child nutrition,
- farmers and traders marketing seasonal surplus production to meet demand in diversified markets,
- disaster risk reduction programs integrating sweetpotato into their preparedness and response plans.

CIP and Government of Mozambique supported over 150,000 households with planting material

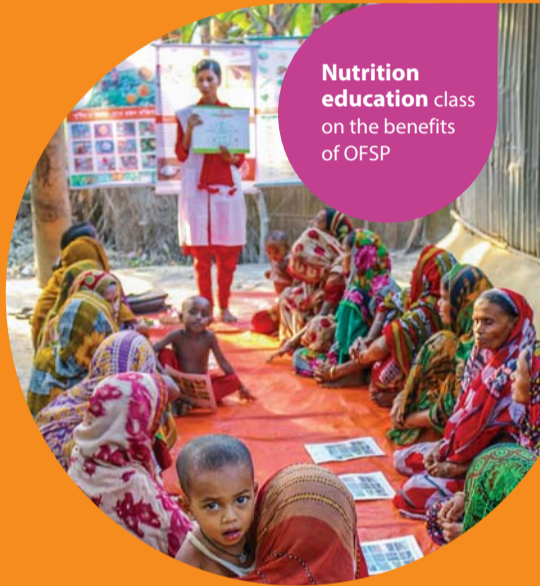
What is the emerging evidence?

In **Mozambique**, CIP and IIAM (Agricultural Research Institute of Mozambique) have developed over 20 climate smart OFSP varieties for different parts of the country. In response to the 2011 drought, CIP and Government of the Mozambique supported over 150,000 households with planting material. As a long-term outcome, over 80 percent of households in intervention communities produce and consume nutritious OFSP today. Utilizing lessons on variety selection, planning, and delivery from this response, the Government of Mozambique has incorporated

OFSP as a priority technology into national policy and is delivering OFSP to a further 150,000 households affected by the 2015/16 drought. Similarly in **Malawi**, CIP has been working with the Government and with private sector Nankwali Farm and NGO's to multiply and deliver OFSP to over 200,000 households affected by floods and droughts, and the national Root and Tuber Crops Development Trust is now supporting this effort. In the **Philippines**, following typhoon Haiyan, sweetpotato roots continued to supply food amidst the general devastation to the food production system, and sweetpotato planting material provided a quick first harvest for affected populations.

What is the vision for expansion?

Just as in Southern Africa and the Philippines, sweetpotato can strengthen the resilience of food systems for the poor, and improve the nutrition security of millions of people in many more countries. In 2016, CIP and the Government of **Ethiopia** have started distribution of sweetpotato in drought-affected areas in Tigray and Southern Nations, Nationalities, and Peoples' Region (SNNPR) regions. In **Bangladesh** and **Madagascar**, governments are increasing their demand for sweetpotato technologies to help build more climate-resilient food production systems, whereas in **Haiti** civil society agencies are incorporating sweetpotato as part of their disaster response strategies. CReSP provides a platform for responding to these different demands in a joint-up and efficient manner, making available proven technologies, good practice delivery guidelines, and a rigorous evidence base to support continued learning and adaptation.



Nutrition education class on the benefits of OFSP



A man carries harvested Orange-fleshed A sweetpotato along the banks of the Brahmaputra River in Northern Bangladesh

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What CReSP can deliver

	CReSP activities and outputs		
CReSP pathways for impact	Sweetpotato technologies	Partnerships for delivery	Evidence of impact
Support breeding for climate resilience	Resilient, locally adapted varieties	Regional breeding platforms and networks	Adoption surveys; varietal evaluations
Climate smart production systems strengthening	Appropriate planting material systems and production technologies	Sustainable planting material businesses and coordination of technical and information services	Production surveys and assessments of input markets and service delivery
Nutrition and food security programming	Nutritious varieties (OFSP); nutritious processed food	Partnerships with nutrition and public health programs; commercial food value chains	Technical support for nutrition surveys; food systems assessments
Disaster Risk Reduction interventions	DRR technology packages and delivery methods	Technical support to DRR agencies for using sweetpotato effectively	Vulnerability assessments

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