

INNOVATION LAB FOR CLIMATE RESILIENT MILLET

Feed the Future Innovation Labs draw on the expertise of top U.S. colleges and universities in collaboration with developing country research and educational institutions to tackle some of the world's greatest challenges in agriculture, food security, and nutrition. Led by U.S. universities, the Feed the Future Innovation Labs are on the cutting edge of efforts to research, develop, and take to scale safe and effective technologies that address current and future challenges posed by a changing climate and the need to feed a growing global population.

Why Millet?

Many of the world's poor live in rural areas and rely on agriculture for a living. Millet is a staple food, particularly among the poorest rural households and among the poorest countries. It has grown in importance in Africa where the area planted doubled in the last 20 years. Millet's growing value in the food and feed industry offers opportunities for income generation and this economic value is evident in the growth in production in both Africa and Asia. Millet is grown almost entirely in hot, drought-prone arid, and semi-arid regions. Seasonal variations in rainfall and extreme high temperatures are the most important factors limiting millet yields, making millet production increasingly perilous for these rural families. There is an immense need to protect the staple diets of these poor families by providing varieties that can better tolerate drought and heat stress.

Focus Activities:

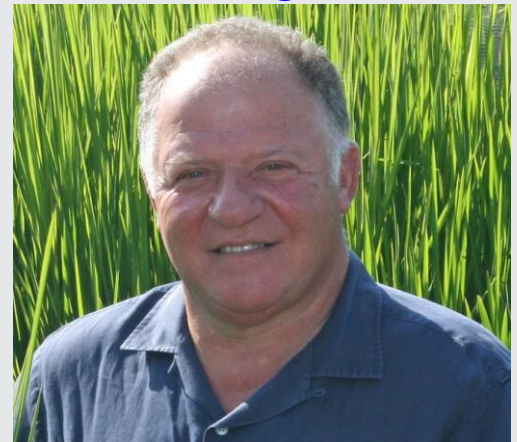
This Innovation Lab is harnessing genomic and advanced molecular tools and proprietary technologies for climate resilience from U.S.-based (Arcadia Biosciences) and India-based (Krishidhan Seeds) companies to develop heat- and drought tolerant millet varieties for smallholder farmers.

Impact:

Since 2012, the Climate resilient Millet Lab developed methods for the genetic transformation of elite pearl millet varieties, mapped drought tolerant Quantitative Trait Loci (QTLs) and screened water-use-efficient millet germplasm.

Collaborating across borders to enhance Millet

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Collaborators:

Dr. Vincent Vadez
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India

Focus countries: India, Mali, Nigeria

Award: \$1,800,000- 4 years

Led by UC Davis since: 2012