

Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet

REQUEST FOR EXPRESSIONS OF INTEREST: Sorghum pathology in West Africa

CALENDAR

Activity	Date
Date of issuance of request for expressions of interest	November 12, 2018
Applicant webinar on West Africa objectives and needs	November 28, 2018 – 10:00 CST (U.S.)

This request for expressions of interest is issued by the Management Entity of the Feed the Future Food Innovation Lab for Collaborative Research on Sorghum and Millet based at Kansas State University. The Sorghum and Millet Innovation Lab (SMIL) is funded by the U.S. Agency for International Development under cooperative agreement AID-OAA-A-13-00047.

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INTRODUCTION

BACKGROUND

Kansas State University was awarded a five-year extension to its cooperative agreement to serve as the management entity of the *Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet*. The Sorghum and Millet Innovation Lab is now inviting expressions of interest on sorghum pathology combined with human and institutional capacity building. Research must focus on Senegal and Niger but may also have associated activities in other Sahelian nations. Project activities may be proposed from two years to four and one-half years (until July 20, 2023). A webinar will be held on **November 28, 2018 at 10:00AM CST** to describe the objectives of the project and answer questions. Following the webinar, project concept notes will be accepted for review.

The pathology project will be developed through a “co-creation” effort in collaboration between the applicants, the Sorghum and Millet Innovation Lab, the West African Center for Adaptation to Drought Stress (Centre d’étude pour l’amélioration de l’adaptation à la sécheresse (CERAAS)) and USAID in response to identified needs and objectives proposed by CERAAS. The pathology project will work closely with plant breeders and geneticists to identify and develop strategies to reduce yield loss in the three most important pathology issues facing the region. It will build upon

advances described in the five-year final report of the Sorghum and Millet Innovation Lab (available [Final Five-Year Report 2013-2018 \(12 MB\)](#) - ([Low res version - 5 MB](#))).¹

Applicants should submit their expressions of interest by **November 27, 2018** at <https://goo.gl/forms/SI7bFqTeH4ZFTRH2> in order to participate in the applicant webinar on West Africa objectives and needs.

TECHNICAL AREAS OF INQUIRY IN SORGHUM PATHOLOGY

In West and Central Africa, sorghum (*Sorghum bicolor*) is subject to attack by numerous diseases. The most damaging diseases on sorghum are anthracnose (caused by *Colletotrichum graminicola*) and grain mold caused by a complex of fungi. Sorghum anthracnose is prevalent whenever sorghum is grown in a warm and humid environment. It is widely prevalent and considered of primary importance in all parts of West and Central Africa. Grain yield losses from 41- 67% were reported in Mali, with yield losses associated with a reduction in grain weight and the formation of fewer grains due to grain abortion from panicle infection. Anthracnose research has led to a better understanding of pathogenic and genotypic diversity, epidemiology and disease management strategies.

Grain mold is one of the principal constraints to sorghum [*Sorghum bicolor* (L.) Moench] productivity and grain quality in areas where moist conditions occur later in the growing season. Management strategies for controlling the grain mold disease complex include planting genotypes that mature during periods of dry weather. The use of resistant genotypes offers the best means for controlling the disease complex.

Long smut of sorghum, caused by *Sporisorium ehrenbergii* Vánky (syn. *Tolyposporium ehrenbergii* (Kühn) Patouillard), is an important fungal disease in Niger, especially in areas with low soil moisture due to poor rainfall and high temperature. In Nigeria, the severity of the disease due to persistent drought resulted in yield losses ranging from 20 to 60%. Host plant resistance is the most effective control method. However, no sorghum genotype immune to long smut has been identified. Thus, continuous evaluation to identify new sources of resistance to grain mold and long smut is needed for successful management.

CROSS-CUTTING THEMES

The environment and nutrition themes should be incorporated where applicable and gender issues must be addressed in all projects. USAID policy requires that gender issues be addressed in all funded projects. Concept notes should present a brief gender inclusion strategy and how gender considerations will be addressed in the overall project planning and implementation. Specific mention of how other cross-cutting themes will be integrated into the overall design of the implementation strategies is desirable.

PROJECT FUNDING

Funding will be made consistent with project objectives and activities. Funding is available through July 22, 2023 for all projects and will begin in 2019. One project will be awarded.

¹ Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet. 2018. Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet Five-Year Final Report. Sorghum and Millet Innovation Lab, Kansas State University, Manhattan, KS, 186 pp. Available: http://www.k-state.edu/smil/about/reports/SMIL_Final_Report_2013-2018_FINAL_Low_res.pdf

CONCEPT NOTE INFORMATION

ELIGIBILITY

The Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet, funded by the Bureau of Food Security, USAID, is authorized under Title XII of the Foreign Assistance Act of 1961 (as amended). U.S. colleges/universities (as defined under Section 296-d) are invited to submit concept notes as lead institutions for a project involving a consortium of collaborating host country and public and private U.S. research institutions. In particular, qualified minority-serving institutions are encouraged to submit pre-proposals, including but not limited to, Historically Black Colleges and Universities, Predominantly Black Institutions, Hispanic Serving Institutions, Tribal Colleges and Universities, and Asian American Native Alaskan and Pacific Islander Serving Institutions.

Concept notes are also encouraged from non-U.S. colleges/universities, the public and private sectors including not-for-profit and nongovernmental organizations. If these proposals are not linked with a U.S. institution, the proposal must still address human and institutional capacity development.

IMPORTANCE OF HUMAN RESOURCE AND INSTITUTIONAL CAPACITY DEVELOPMENT

Human and institutional capacity building (HICD) continues to be a core objective and concept notes should indicate how this will be strengthened at CERAAS and regional NARS. There should be a demonstration of meaningful collaboration in research and training between a lead institution and one or more host country institutions (public research institutions, universities, NGOs, etc.). Other partners such as U.S. universities and public and private sector research institutions (research hospitals, USDA/ARS, etc.) may also be subcontracted. Collaboration with multiple host country institutions is encouraged.

WEBINAR

A webinar will be hosted by the Sorghum and Millet Innovation Lab and CERAAS on **November 28, 2018 from 10:00AM to 11:30 AM CST** via Zoom to present the opportunity and answer questions. Expressions of interest and registration for the webinar may be made by November 27, 2018 at <https://goo.gl/forms/S17bFqTeH4ZFTeRH2>. The webinar will be available for review at: <http://www.k-state.edu/smil/opportunities/index.html>.

SUBMISSION DEADLINE

Submission information will be made available during the Zoom webinar and online at <http://www.k-state.edu/smil/opportunities/index.html> after November 28th.