



National Soybean Research Center
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REQUEST FOR PROPOSAL (RFP)

Feed the Future Innovation Lab for Soybean Value Chain Research (SVCR IL) (Soybean Innovation Lab – SIL)

Managing Program

The Breeder Management System

About SIL

The Feed the Future (FTF) Innovation Lab for Soybean Value Chain Research (SVCR IL) is part of the strategic investment by the U.S. Government to make transformative change in the food systems of target partner countries. FTF is the overarching U.S. government initiative on global hunger and food security. FTF programs work in close partnership with target countries to develop innovative agriculture advancements that break the poverty and hunger cycles. For further overview of the U.S. FTF initiative, please visit www.feedthefuture.gov. SIL, initiated in 2013, currently is funded through 2027. SIL operates in 26 countries and 140 locations.

Background

SIL's breeding program holds as its goal to establish sustainable soybean breeding programs that will support Africa's growing soybean complex. This includes:

- A sustained release of improved varieties demanded by the industry
- Mechanization introduction and training to improve program productivity
- Improved management system to benchmark and promote continuous improvement and accountability
- Establishment of a Product Life Cycle (PLC) and formal stage gate analysis, such as return on investment
- Development of standard operating procedures for advancing lines
- Introduction of training and deployment of digital notetaking, database management, and statistical analyses
- Introduction of genomic technologies with the implementation of marker-assisted selection, genotyping of varieties and experimental lines, and implementation of genomic prediction and selection.
- Improvement of phenotyping technologies
- Introgression of new germplasm to improve genetic diversity

Geographic Focus

This Request for Proposals spans Africa, with a focus on sub-Saharan Africa.

Applicant Eligibility

This RFP will support the Consultative Group for International Agricultural Research (CGIAR) institutions, Non-governmental organizations (NGOs), the private sector, university institutions, and members of the National Agriculture Research System (NARS) institutions, as defined by FAO (<http://www.fao.org/3/Y4349E/y4349e05.html>): “NARS are defined, in a given country, as encompassing all institutions public or private devoting full time or partially their activities to agricultural research and committed to a national research agenda”.

Applicants must be actively involved in soybean breeding research and development, with a demonstrated track record of scaled impact (outreach, adoption, diffusion, or commercial sales). Projects funded under this RFP must be led by a principal investigator (PI) already based at the lead institution.

Funding Amount

The maximum amount awarded for proposal development grants is up to \$25,000, including indirect costs. All budget requests should be commensurate with the scope and proposed deliverables of the project.

Time length

The duration of the grant is for up to one year. Smaller, more target project periods with more limited budgets or shorter timelines are also acceptable.

Capacity Strengthening

The research team winning the award will undergo training and then employ the Innovation-to-Impact (i2i) learning platform and management system, which will support their implementation of the Product Life Cycle (PLC) framework. Capacity building is a critical theme that must be addressed by each project. Research proposals should demonstrate capacity building plans both at the individual level and at an institutional level.

Cross cutting themes

The cross-cutting themes of gender and youth responsiveness and resilience are a central focus of SIL. As noted above, target product profiles selected must seek to address gender and youth-based constraints and show potential for economic inclusion for women and youth. Applicants must designate a team member with the relevant background and expertise in gender and youth inclusion to guide the team in these focus areas.

Finally, applicants, should be prepared to join SIL community on monthly researcher conference calls, biannual advisory board meetings, and annual researcher retreats.

Proposal Submission Deadline

SIL will continue the support of this program over the next five years through an annual competitive grant program. Only proposals that adhere to the following guidelines will be fully considered. Proposals need to be emailed to soybeaninnovationlab@illinois.edu by March 31, 2023, and the maximum proposal length is two single spaced pages not including the budget. Proposals must be written in English. Questions about this RFP should be emailed to soybeaninnovationlab@illinois.edu.

Proposal Instructions

Successful proposals need to follow the following outline:

1. Introduction

- a. Describe your program
 - i. Goals
 1. Long term
 2. Over the next year
 - ii. Successes
 - iii. Challenges
 - iv. Sources of support
- b. Please quantitatively benchmark in table form your breeding program over the last five years
 1. # of successful cross combinations.
 2. # of experimental lines developed.
 3. # progeny rows or observation rows planted.
 4. # of yield plots grown.
 5. # of locations the yield plots have been grown.
 6. # of varieties released.

2. Program Description

- a. What will take place?
- b. Theory of Change?
- c. What will be the outcomes?
 - i. How will your program improve as a result of the funding?
 - ii. How will you measure the impact from this grant on your breeding program in terms of:
 1. # of successful cross combinations.
 2. # of experimental lines developed.
 3. # progeny rows or observation rows planted.
 4. # of yield plots grown
 5. # of locations the yield plots have been grown.
 6. # of varieties released.
- d. Describe your materials and methods when using the grant funds.
 - i. This should match your budget and budget justification.
- e. Describe what is planned to be accomplished at each stage of the breeding program.
 - i. This needs to include a season-by-season description of each stage of the effort as breeding populations are advanced.
 - ii. Use the template below (Appendix 1) as a guide.
- f. Describe how you will measure progress.
- g. Be specific and outline key metrics.

- i. Project deliverables – Include a separate section for project deliverables that includes outcomes, milestones, and deliverables. Include a timeline for attainment of objectives and production of deliverables that include final milestones with specific and measurable outcomes.
- h. Cross cutting issues – Include a section describing activities, teams to address gender and youth issues.
- i. Select suitable performance indicators from the FTF Handbook of Indicators that are applicable to the activities of your project and data collection plan. <https://agrilinks.org/post/feed-future-indicator-handbook>.
- j. What is the monitoring, evaluation, learning and adapt plan?
- k. Describe a plan for how the program will be sustained without donor funding.

3. Budget

- a. The budget needs to include separate budget lines for salaries, benefits, supplies, services, domestic travel, international travel, and indirect costs.
- b. Your budget total needs to include indirect costs.
- c. Please provide a budget justification and a list of leveraged support for the program.

Appendix 1.

Template for outlining activities in the breeding pipeline that is requested in 2b. Information has been added to the template as an example. Modify the table to fit your breeding system.

| Year | Season | Activity | Number |
|-----------|-----------|---|---|
| 2023 | May-Oct | Make crosses | 50 combinations |
| 2023-2024 | Oct-Jan | Grow F1s | 2 F1s from each of the 50 cross combinations |
| 2024 | Jan-April | Grow F2 populations, harvest one pod from each plant for single-pod descent | 2 F2 populations of 100 plants from each of 50 cross combinations |
| 2024 | May-Oct | Grow F3 populations, harvest one pod from each plant | 2 F3 populations of 100 plants from each of 50 cross combinations |
| 2024-2025 | Oct-Jan | Grow F4 populations, harvest one pod from each plant | 2 F4 populations of 100 plants from each of 50 cross combinations |
| 2025 | Jan-April | Grow F5 populations, harvest each plant separately | 75 plants from each of 50 cross combinations |
| 2025 | May-Oct | Grow plant rows in single row 1-meter long plots, harvest selected rows | 3000 rows, harvest 200 lines |
| 2026 | May-Oct | Grow 2-row yield plots with 2 reps in 2 environments | Test 175 lines for a total of 700 plots |
| 2027 | May-Oct | Grow 4-row yield plots with 3 reps in 4 environments | Test 50 lines for a total of 600 plots |
| 2028 | May-Oct | Grow 4-row yield plots with 3 reps in 4 environments | Test 20 lines for a total of 240 plots |
| 2029 | May-Oct | Grow 4-row yield plots with 3 reps in 4 environments, add to Pan African trials, release best lines | Test 10 lines for a total of 120 plots |
| 2030 | | Release lines | |