



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 – Year 3

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 changes 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 a further overview of the U.S. FTF initiative, please visit www.feedthefuture.gov. SIL, initiated in 2013, is currently funded through 2027. SIL operates in 35 countries and 200+ locations.

Background

SIL's breeding program holds 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 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 each project must address. 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, the 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 the 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 **September 20, 2024**, 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 your breeding program over the last five years in table format and explain how your metrics have improved over time. This information is required by USAID to allow them to track how their money is invested and how it has an impact.

Metric	2020	2021	2022	2023	2024
# of locations plots were planted					
# of yield plots planted					
# of progeny rows or observation rows planted					
# of experimental lines developed					
# of cross combinations					
operate an off-season nursery? (y/n)					
# of varieties released					
# of lines in on-farm trials					

Further explanation of what is requested for each row.

of locations plots were planted – this is how many unique field locations the program planted research plots. Your main research station would be one location, and each outlying location would be an additional location.

of yield plots planted – this would be the total number of plots grown across your field test sites where you measure grain yield. For example, if you have a 30-entry test grown in three reps in each of three locations, this would be 270 plots.

of progeny rows or observation rows planted – this is the number of plots grown that yield is not measured. Progeny rows are plots with unique experimental lines that have just been developed through selfing individual plants. Observation plots are any other non-yield plots.

of experimental lines developed – This is the number of unique experimental lines that were developed during the year. These would be typically developed through selfing of inbred plants and then grown in a progeny row.

of cross combinations - this is the number of unique cross combinations that F1 seed was successfully produced. For example, if you made the crosses Parent 1 x Parent 2, Parent 1 x Parent 3, and Parent 2 x Parent 3 and you were able to generate F1 seed from each combination, you would have produced three combinations.

Operate an off season nursery (y/n) – Yes (y) would mean that you are growing more than on season / year to develop inbred lines in your program.

of varieties released – This is the number of varieties that have been approved by a government for release during the year. This can include varieties your program developed or varieties from other programs that you helped guide through the release process.

of lines in on-farm trials – This is the number of experimental lines or varieties that are in on-farm trials as a final step before release. This can include lines and varieties developed by your program or other programs that you have identified and are guiding through the release process.

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?
- d. Describe your materials and methods when using the grant funds.
 - i. Traits and geographic regions that will be targeted by the breeding effort.
- 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. Be specific and outline key metrics.
 - i. Expected deliverables from the project including a plan for releasing and marketing varieties.
- g. Cross cutting issues – Include a section describing activities, teams to address gender and youth issues.
- h. 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>.
- i. What is the monitoring, evaluation, learning and adapt plan?
- j. Describe a plan for how the program will be sustained when funding from SIL ends.

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 are requested in 2e. 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	