



Rapid Seed System Security Assessment (RSSSA)

Methodology Guide

ACKNOWLEDGEMENTS

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INTRODUCTION

The S34D project has developed a set of rapid seed system assessment tools in response to demand for a faster and less resource-intensive process than is called for with the standard Seed System Security Assessment (SSSA) . The tools will provide a quick way to understand the local seed situation if contemplating a seed response to a crisis or planning for more long-term development. All tools included in this kit were also designed to be conducted either by phone or in person.

The rapid SSSA methodology is based on the more comprehensive standard SSSA found on seed.system.org. For more information on SSSA, one should refer to the [SSSA manual](#) and the on-line [seed system SSSA e-learning course](#).

What are the objectives? Prior to any seed intervention, a needs assessment should take place in order to determine existing constraints to farmer seed security and opportunities to address this in an inclusive manner. An assessment that shows farmers are seed secure allows resources to be directed away from seed provision to more pressing needs. The SSSA ultimately determines what assistance farmers might need (or not) and if seed channels are adequately functioning to meet such needs. The response analysis guides the appropriate choice of modality.

What can the tools do? The tools allow users to identify community level seed security issues in terms of access, availability, and quality of preferred farmer seed. The tools enable users to determine if seed security is an issue at farm level, and if so, what elements need to be addressed/reinforced. The tools ensure a gender, youth and persons with disabilities (PWD) lens is applied during the analysis and response decisions.

What the tools cannot do. Because vulnerable farmers in developing countries source 90% of their seed from informal sources, the tools focus on the informal sector and last mile formal seed sector. The tools only tangentially examine research and formal breeding of new varieties. If interested in the upstream formal seed supply chain, we recommend reviewing existing SSSAs and other secondary sources, as well as contacting the national agricultural research institution and CGIAR offices involved in plant breeding in the target country and national level commercial seed producers.

OVERVIEW

Tools

The following prepared tools are provided:

Questionnaire	Minimum Number
Household interview seed security	24
Focus group	4
Grain dealer interview	4
Agro-dealer/input supplier interview	3
Agricultural expert interview	2
Seed producers/seed companies	1
Seed mapping	1/crop

The sample number suggested is a minimum. Increasing the number of interviews will increase the confidence in the results.

One could potentially gather supplementary information from such sources as:

- Research institutions;
- Development organizations; and
- Commercial seed producers.

Key questions for these sources center around:

- Impact of the crisis on seed supply;
- Main constraints to the seed supply chain since the crisis;
- Farmer access to seed; and
- Programming recommendations to improve small farmer access to quality seed (either through formal or informal channels).

Time Frame

For a team of three, the data collection process should take a maximum of 10 days, including 2 days of secondary data review and ag expert interviews; 1 ½-2 days of training, testing, and revising of tools; 2-3 days of data collection; ½ day data interpretation workshop; and 1 day report writing. A larger team will shorten the duration.

Team Members

At a minimum, a team of three can undertake the exercise. Ideally, a team leader with experience in SSSA can oversee the process. If no one with such a background can be found to support the on-the-ground implementation, then SSSA technical experts may be able to provide remote assistance (see list of technical experts on RSSA website). Regardless, an experienced agricultural expert should lead the process in-country. Surveys should be carried out by agricultural project staff or other experienced enumerators familiar with rural livelihoods who speak the local language of the target area.

STEPS

These steps are not intended to be prescriptive; rather, they are intended to serve as guidelines your team can adapt in order to best suit their situation. These steps may overlap.

1. Planning

Secondary data collection – Because the study will focus on a specific zone within a country, information required at the national level will be minimal. If a national level SSSA has been conducted in your country (see seedsystem.org), you can refer to its description of the formal seed system. Since it is also assumed that your organization is already operating in the zone, your organization should already be familiar with the context in the area in terms of agriculture, markets, social structure, gender, youth, PWD, and other vulnerable groups. These issues are covered in the agricultural expert interview. To better understand the gender context that will affect the delivery of this assessment and/or the content in the assessment, it is recommended to review existing gender analyses if available and to hold discussions with project, country program, or local gender experts. It is also recommended to hold discussions with youth and social inclusion staff or local experts. This information will help identify crops to be included that reflect different vulnerable groups (women, youth, PWD), guide adjustment of the tools, and ensure proper sampling.

Agricultural expert interview – Part of the initial information gathering, this interview(s) is to better understand the context and thus make planning for data collection more effective. Since this information lays the groundwork for data collection, you are encouraged to interview another agricultural expert to confirm information gathered. The information collected from the interview will allow for the better targeting of the respondents, narrowing down of crop options, and assistance in identifying the appropriate cropping season for any seed response, *so this interview should be conducted prior to field work planning.*

Community selection – With a small sample size, community and household selection is critical. We suggest sampling a minimum of two communities in the target zone. Selected communities should be representative of the target area and groups in terms of farming systems, wealth, access to markets, livelihoods, and ethnicity. For groups of interest who live in the zone, but who's communities diverge markedly from the others in terms of agricultural systems, wealth, access to markets, livelihoods, and ethnicity, then the sample size should increase to include at least a community from this group.

HH interview sampling – While not collecting a large enough sample for statistically valid results, the sample of households should nevertheless be as representative as possible. With purposeful sampling, we focus on our target group while also trying to ensure representation from different segments in the community (e.g., male-headed/female-headed/child-headed households, adult/youth, wealthier/poorer, ethnic group, larger/smaller landholders). The number of interviews with each group should generally represent their proportion in the community. A minimum of 12 households/community is suggested.

In terms of identifying if a respondent is a person with disabilities, there are 6 questions that are asked and then the project/tool determines what the threshold is to be considered disabled.

- Do you have difficulty seeing?

- Do you have difficulty hearing?
- Do you have difficulty walking?
- Do you have difficulty remembering?
- Do you have difficulty washing all over or dressing?
- Do you have difficulty communicating?

The responses are:

- no
- some
- a lot
- cannot do at all

2. Field Work Preparation

Training – Training will provide an overview to the seed system security assessment tools and provide an opportunity to practice using the tools. A training plan with accompanying PowerPoint presentations is included in the RSSSA website. The training can be modified depending on the local situation.

Training should address the following topics:

- Background to SSSAs – Why SSSAs are important. Why rapid SSSAs? Response options
- The process
- Review of tools
- Practice of tools
- Testing of tools
- Adjustments of tools – discussions of issues, formulation of questions, points of confusion, terms, etc.
- Preparation for exercise (including any work in field)

For additional training information you can consult the [SSSA e-course](#) at seedsystem.org.

Testing – The main household tools should be field-tested prior to undertaking the data collection exercise. The tests provide a training opportunity for staff involved in data collection and allow for examination of the tools under field conditions. Tests can be conducted on households and focus groups in the target group. If there are no significant problems with the tests, then the results can be incorporated into the overall survey results. For telephone interviews, the test will simply involve each enumerator calling two farming households and conducting the household survey and focus group. After the test, meet with staff to review how input is entered into the forms to avoid enumerator errors, examine each tool to clarify any confusing terminology (particularly translation into the local language), and modify questions as appropriate.

For paper versions of the questionnaires, transcription should also be tested to practice transcription, clarify the level of content to be captured with the transcription, determine the speed of transcription, and make sure enumerators produce clear versions of the interview. They can also

take the opportunity to identify any potentially confusing or contradictory responses for possible follow-up calls to the interviewees.

3. Field Work

Data Collection: Virtual Interviews – Although not ideal, if circumstances require, the data collection tools (other than the focus group) can also be conducted by phone. Each survey should be able to be completed within ½ hour. The below table outlines scenarios on conducting interviews depending on whether participants can be interviewed in person.

Interview/Scenario	-Ability to contact HH by phone or in person -Ability to contact Vendors, KII's, others by phone or in person -Small group meetings possible	Ability to contact HH by phone -Ability to contact Vendors, KII's, others by phone -Small group meetings not possible	-No Ability to contact HH by phone -Ability to contact vendors, KIIs others by phone
HH interview with data base	HH interviews either by phone or in person	HH interviews by phone	Conduct HH interview with reduced sample of key farmer informants
FG community	Small FG	Conduct focus group as an individual interviews by phone	Conduct individual interview with key farmer informants using FG guide
FG women	Small FG	Conduct focus group as an individual interview by phone	Conduct individual interview with key farmer informants using FG guide
Grain vendor/large grain trader	Interviews either by phone or in person	Interview by phone	Interview by phone
Agro-dealer/input supplier	Interviews either by phone or in person	Interview by phone	Interview by phone
Agriculture expert	Interviews either by phone or in person	Interview by phone	Interview by phone
Seed company/farmer group seed producer	Interviews either by phone or in person	Interview by phone	Interview by phone

If communities are accessible and person-to-person and small group meetings are possible, then focus groups can be held. If not, the focus group questionnaire can be conducted with individual male and female farmers (preferably farmer leaders).

How should surveys be conducted over telephone? Top tips for ensuring successful telephone surveys include:

1. Be clear with participants at the outset on (i) when and how communication will take place and (ii) how long a survey is likely to take so people do not lose battery/signal and can manage expectations on how long they will be on the call.
2. Delivery matters: enumerators should sound professional.
3. Consider sending a text message in advance and calling at convenient hours.

More top tips can be found here: USAID [Guide for Adopting Remote Monitoring Approaches During COVID-19](#).

Teams should meet at the end of each day to review any issues that have arisen and adjust accordingly.

4. Data Analysis, Interpretation, and Dissemination

Data processing and interpretation – Data cleaning is a three-step process:

- First, prior to leaving an interview, quickly review notes to make sure that all questions have been answered.
- Second, during transcription, the information should be checked for logic. Identify contradictions or confusing responses.
- Third, during data analysis, any outlying information should be confirmed or discarded. If needed and possible, a respondent can be called again to clarify any confusing responses.

The household interview is now digitized on Kobo. The agrodealer and the grain dealer questionnaires are also digitized on the Kobo platform. Data is automatically analyzed in PowerBi and presented in a dashboard. There may be some minor differences between the paper and digital questionnaires.

The other questionnaires are not digitized. Because of the small sample size for each, one can simply transfer responses to Excel and compare them across a spreadsheet. Any quantitative data collected can also be entered into Excel and one can make any appropriate calculations in this platform.

A seed mapping tool has been provided that visualizes the seed supply chain and synthesizes relevant information.

Analysis and Interpretation Workshop – We recommend conducting a workshop after the data has been collected and processed to verify the results, interpret the findings, and make recommendations based on those findings. Participants should include the data collection team but can/should also include those familiar with the agricultural situation in the target zone (Ministry of Agriculture, NGO, others), national level agriculture/seed experts who can put this in a broader context, and decision makers in institutions that may be involved in carrying out any response based on the findings of the RSSA. To support the use of a gender, youth, and/or disability lens, it is recommended that gender, youth and/or social inclusion experts participate in data interpretation and response development.

Response Analysis – The determination of an appropriate response(s) (if any) based on the findings of the data collection and analysis is critical. All too often, seed is automatically handed out after an emergency with little consideration of the modality, appropriate crops and varieties, impact

on existing seed channels, or even if seed is necessary. Below is a summary of factors to consider when determining an appropriate response post-SSSA. More detail can be found in the [SSSA manual](#) and Module 6 (roughly a ½ hour investment) of the on-line [SSSA e-course](#).

KEY CONSIDERATIONS

Seed System Goals

Seed security can be linked to a diverse set of goals. The main goals on which to reflect include:

- Seed systems aimed to increase **food production** (more calories? staggered production?);
- Seed systems to bolster **nutrition**, especially for vulnerable groups focusing on dietary diversity and nutrient-dense crops;
- Seed systems designed to ensure greater system **resilience** (dealing with good/bad seasons and climate-related stresses more generally and aiming for system diversification and stress tolerant crops/varieties);
- Seed systems geared to help farmers increase **income** (perhaps linked to value chains or other agro-enterprises); and
- Seed systems that are **inclusive** of inclusive of all farmers including women, youth, and PWD.

Seven common problems

Chronic

1. Farmers have high storage losses
2. Seed is of poor quality (health, germination rates, etc.)
3. Farmers lack access to new crops/varieties (little innovation and diversity)
4. Farmers lack information on climate-smart and nutritional innovations

Acute

5. Seed/planting material is not available
6. Farmers lack access to stress-tolerant varieties (needed immediately)
7. Farmers need more seed but cannot access (buy)

Potential Responses

All potential responses should consider the gender, youth, and PWD context, and implementation should be designed to address the context to ensure inclusivity in the response mechanism(s) selected.

Problem	Unavailability of appropriate Seed (#1, 2)	
	Formal System	Informal System
Short-term response	Direct Seed Distribution (DSD) [for new stress tolerant varieties, introduce in small packets for farmer testing].	Support local and regional male and female traders to obtain supplies of adapted seed/planting material.
Longer-term response	Support seed production or develop/strengthen supply chain components such as seed outlets (agro-dealers), transport, and market information. Work with extension services to test, promote, and multiply resilient crops and varieties.	Develop local and regional markets with a focus on transport, storage, credit, and seed versus grain quality.

(Details on p 50 of SSSA manual at seedsystem.org)

Problem	Poor or vulnerable farmers do not have access to seed (#3)	
	<i>Access limited because of temporary malfunctioning of markets</i>	<i>Access limited because of reduced assets or poverty</i>
	Formal System	Informal System
Short-term response	In case of temporary transport breakdown, import seed via DSD. In case of security problem, consider Seed Vouchers and Fairs (SVF) or DSD, without protection control.	Seed/DiNER fairs using vouchers or cash in SVF. Vouchers with seed outlets (if close to community). Cash.
Longer-term response	Not applicable.	Poverty reduction programs.

(Details on p 51 of SSSA manual at seedsystem.org)

Problem	Seed of Poor Quality (#4, 5)		
	<i>Lack of appropriate varieties</i>	<i>Poor seed health</i>	
Short-term response	DSD or SVF with strong emphasis on the kind of crop/variety to be on offer. Must be able to counter emerging stress. Both modern and/or farmer varieties may be appropriate.	Formal: Import and distribute healthy treated seed (via DSD or SVF).	Informal: Emergency treatment of farmers or market seed depending on problem.
Longer-term response	Small pack distribution or sale of modern tolerant varieties (small size increases accessibility) and promotion of seed production from the quality seeds distributed.	Reduction of post-harvest losses or deterioration of stored seed through improved storage. Routine use of low-cost seed dressings. Training of grain/seed traders and farmers on production, storage, and handling of seed. In some cases, training of commercial suppliers.	

(Details on p 52 of SSSA manual at seedsystem.org)

Problem	Low Adoption of Resilient and Nutritious Seed (#6,7)	
	Formal	Informal
Short-term response	Sequenced vouchers with agro-dealers with full voucher for first season and partial vouchers for subsequent seasons.	DiNER (Diversity for Nutrition and Enhanced Resilience) fairs with improved varieties already tested in the zone, along with associated technical advice on use. DiNER fairs with nutrient dense crops available and promoted.
Longer-term response	Participatory varietal selection/breeding to identify crops tolerant to emerging stress. May use modern and farmer varieties as base. Promotion and awareness raising of existing modern or farmer varieties that are stress-tolerant.	

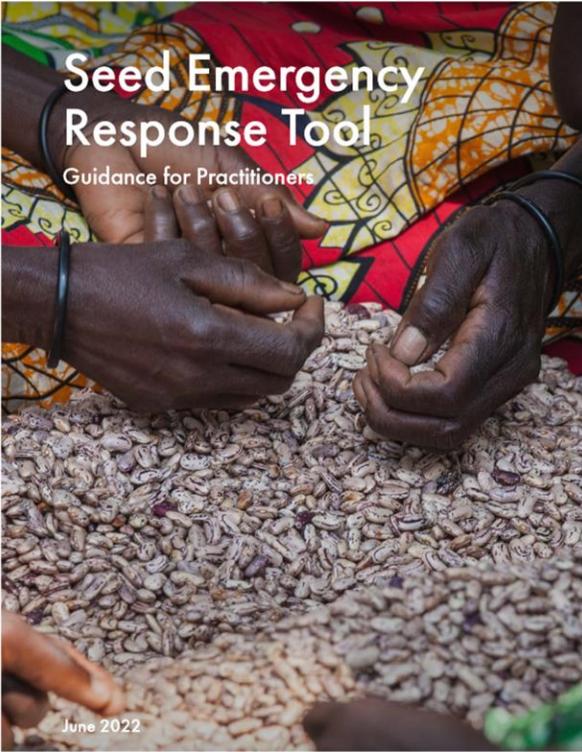
REPORT

A report with conclusions regarding farmer seed security and recommendations based on the response analysis can be shared with stakeholders. Where possible, the report should provide disaggregated data by sex, age and, when feasible, disability. The analysis and responses should consider the sex, age, and disability context and suggest appropriate adaptation in the report.

Report Format

- **Executive Summary**
- **Background**
 - Brief description of the agriculture, gender, youth, and disability context
 - Describe the crisis
 - Selected zone and farming systems
 - Crop production constraints
- **Methodology**
 - Tools
 - Target population, Sampling
 - Target season(s)
 - Target crops
- **Results** (when appropriate, the sections below should present disaggregated data)
 - Seed availability *including seed market mapping*
 - Seed access
 - Seed quality
 - Seed system resilience
 - Gender/Youth/PWD
- **Response Analysis**
 - System constraints
 - Recommendations applying a gender, youth, and PWD lens
- **Annexes**
 - Team and contacts
 - Bibliography
 - Tools

RESOURCES



Seed Emergency Response Tool
Guidance for Practitioners

June 2022

seed system Strengthening smallholder farmer seed systems

AFSD Africa

MERCY CORPS



When Disaster Strikes
A GUIDE TO ASSESSING SEED SYSTEM SECURITY

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Seed System Security Assessment e-Course




Watch on YouTube | AID | OCRS

This e-Learning course walks participants through the Seed System Security Assessment (SSSA) process and then focuses on targeted responses, depending on the key constraints identified.

The 8 modules are highly interactive: participants explore how to: collect key data, decide if farming households are stressed (the demand side); and assess if seed markets are adequately functioning (the supply side). Throughout, hands-on exercises and frequent knowledge checks help verify that participant learning is proceeding well.

The course draws field insights from real SSSAs—conducted in many of the crisis hotspots in the world. One module actually models what happened in three distinct disaster scenarios—presents the evidence—and then has participants reflect on the short- and medium-term response actions required.

While the aim of the e-Learning course is to build basic skills (e.g. how to do an SSSA), it also encourages practical thinking: what