

Seed System Security Assessment (SSSA): An essential tool for improving the effectiveness of agricultural assistance

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Despite widespread – and increasing – use of emergency seed interventions, there is little critical assessment of whether such interventions are needed, or correctly address seed security challenges. Recent advances in Seed System Security Assessment (SSSA) provide important tools for aid practitioners and donors to conduct rapid and cost-effective analysis of seed systems under stress, before aid is disbursed. Experience across several countries shows that SSSAs: help target agricultural assistance; embrace acute and chronic stress; and minimise negative impacts.

Seed Aid ≠ More Seed Security

Emergency agricultural assistance seeks to accelerate farmers' recovery from crises such as drought or short-term conflict, and reduce vulnerability to future stress. Much of this assistance is as emergency seed aid, implemented by NGOs, governments, and international agencies in many developing countries. Emergency seed interventions are widespread and can be highly repetitive. For example, in 2007 the FAO alone reported spending US\$ 358 million on emergency operations, of which US\$ 93 million was directly tied to seed. As another example, Burundi has received seed aid continuously for 30 seasons. Funding for such aid is significant and growing. Seed aid is big business.

Our understanding of the effects of emergency seed programmes has advanced significantly in recent years and shows that specific assessment of seed security is essential, for two main reasons:

1) Seed security is distinct from food security. Current determinations of seed security are nearly always based on food security assessments. While seed security and food security have elements in common, they are quite different states of safety. One can lack food to eat, especially during the hungry season but have enough to sow all plots. Conversely, a household can have enough food but lack access to the *right seed* for planting.

2) Poorly-designed seed aid can do harm. Seed aid has a benign image, but it potentially can increase farmers' vulnerability. Late, or mal-adapted, seed is directly harmful. There is also evidence that repeated aid over multiple seasons breeds farmer dependency, undermines the functioning of local markets and stifles the development of small-scale commercial seed enterprises.

New tools for assessing seed system security (and agricultural resilience)

A Seed System Security Assessment—SSSA—determines the security of farmers' seed systems, considering both acute stress (the emergency) and more chronic, long-term challenges. Such a focus also includes broader analysis of cropping and livelihood systems, with special focus on vulnerability and resilience. The SSSA informs donor, government and NGO responses in agricultural relief and recovery, identifying whether interventions are needed, and guiding the choice of relief and development actions. Practice guides support SSSA implementation and steer the diagnosis towards targeted, concrete action plans (Box 1).



Source: *When disaster strikes* (2008)

Box 1: Seven basic steps in assessing seed system security

1. Identify zones for assessment + possible intervention.
2. Describe normal status of crop and seed systems.
3. Describe broad effects of the disaster on farming systems.
4. Set goals for relief +recovery operations based on farmers' need.
5. Assess the post-crisis functioning of seed channels to determine whether short-term assistance is needed.
6. Identify any chronic stresses requiring longer-term solutions + identify emerging development/market opportunities.
7. Determine appropriate short- and longer-term responses based on analysis of priority constraints, opportunities, and farmers' needs.

Several features render the methodology of particular interest:

1. **Local seed markets become visible.** Tools allow amount, quality, and price of *potential seed* to be assessed.
2. **Insights are socially-disaggregated.** Tools allow for analysis to be differentiated by gender or other key social variables.
3. **New software automates data analysis, generating instant result tables after data entry.** (Box 2)

Box 2: Data in...

1	age	gend	Hhtype	Hhsize	Areacult	CrCuA kgTot	CrCuA NfSow	CrCuA ActSo w	CrCuA MLS	CrCuA MLWh y	CrCuB1 Src	CrCuB1 Ac	
2	40	m	1	8	1	13	12	13	m	25	2	4	d
3	20	f	1	6	2	6	8	6	l	2	1	1	a
4	60	m	1	4	3	8	8	8	s	3	2	4	d
5	30	m	1	8	1	7	6	7	m	21	1	1	a
6	20	f	1	12	2	12	3	12	m	23	2	4	d
7	32	m	1	2	3	12	12	12	s	3	1	4	d
8	45	f	1	4	1	12	4	12	m	28	2	4	d
9	44	f	1	2	2	11.5	6	11.5	L	2	1	6	d
10	52	f	3	3	3	14.2	3.4	14.2	M	30	2	6	g
11	18	m	2	4	1	2.5	0.2	2.5	m	30	1	6	g
12	12	f	1	6	3	26	11	26	M	30			
13		m	1		1	72	60	72	m				
14		m	2		2	50	30	30	m				

.....Analysis and tables automatically out

Women-headed households - responses						
1) Women-headed HHs - CURRENT/MOST RECENT SEASON: MORE,						
Crop	Number of farmers	% of households			Change in se mean %	
		MORE	SAME	LESS		
Maize	16	37.5	25.0	37.5	72.32	
Sorghum	23	43.5	17.4	39.1	29.65	
Millet	8	25.0	25.0	50.0	-7.01	
Sweet potato	2	50.0	0.0	50.0	25.00	
Irish potato	3	0.0	33.3	66.7	-38.89	

Such features render rigorous analysis accessible to in-country teams. This means that there is little excuse for not conducting an assessment.

Good seed security assessments leverage change

Recent SSSAs have been completed in Eastern Kenya, Southern Sudan, Haiti, Northern Mali, Zambia, Zimbabwe, and Ethiopia. As an example, the Zimbabwe SSSA (2009) shows how a relatively quick assessment can lead to dramatic changes in humanitarian response. The assessment took place when donors and NGOs were preparing to distribute seed to 600 000 families (half the farming population) on the basis that the Zim currency was worthless, formal seed stores were not functioning, and that there were residual effects of a drought (in 2008).

In contrast to the dim view above, the assessment found that farmers were generally seed secure, due to robust social networks and local markets, a vigorous black market in hybrid maize seed, and to thriving local-level seed production (e.g. through Farmer Field Schools). The Zimbabwe SSSA concluded *that the massive direct seed aid to farmers would actually hurt recovery*. It would compete with agro-dealers and 'short circuit' a natural business progression between seed houses, agro-dealers, rural traders and the farmers. The SSSA proposed interventions which would increase farmers' purchasing power and inject cash into local economies. So while 2008-2009 saw US\$150 million spent on direct aid, the SSSA spurred a move to market-led aid responses (including vouchers, input fairs, and support to local enterprises) by 2010.

Policy recommendations

Immediate priorities are to get SSSA used in the field to ensure informed response.

- **Promote comprehensive SSSA in disaster 'hotspots'** where many organizations deliver repeated seed-related assistance, e.g. eastern DR Congo, parts of Afghanistan.
- **Build capacity to conduct quick annual assessments.** Practitioners need to build capacity to assess farmers' seed security needs during crises. These skills can be developed efficiently through cross-organization learning alliances.
- **Provide incentives to conduct SSSAs.** Donors can drive the use of SSSAs as a tool for decision-making and planning. At the extreme, proposals for seed system-related interventions should not be funded unless an SSSA has taken place.
- **Require automatic reviews after three consecutive seasons of same emergency response.** Repeated aid may indicate poor understanding of seed systems, or lead to real long-term damage.
- **Stop use of assessments whose major aim is fund-raising.** Seed aid is big business and assessments whose main rationale is to generate funds will be biased.

Key background

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Sperling, L., Cooper, H.D., and Remington, T. 2008. Moving towards more effective seed aid. *J. Development Studies*. **44 (4)**: 586-612.

Tools

Sperling, L. 2008. When disaster strikes: a guide for assessing seed security. Cali: CIAT.

www.ciat.cgiar.org/work/Africa/Documents/sssa_manual_ciat.pdf (also in French)

Sperling, L., Remington, T., and Haugen, J.M. 2006. Seed aid for seed security: Advice for practitioners, Practice Briefs 1-10.

www.ciat.cgiar.org/africa/practice_briefs.htm (also in French and Portuguese)

SSSA examples

Zimbabwe 2009: www.ciat.cgiar.org/work/Africa/Documents/SSSA%20Zimbabwe%202009%20final%20report.pdf

Haiti- 2010. www.ciat.cgiar.org/work/Africa/Documents/SSSA_Haiti_2010_final_report_August_2010.pdf

Southern Sudan 2011. www.ciat.cgiar.org/work/Africa/Documents/sssa_southern_sudan.pdf

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