

SEED SYSTEM SECURITY ASSESSMENT

ZIMBABWE

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Comments and updates are welcome by the SSSA team. Please contact the assessment coordinator at l.sperling@cgiar.org.

EXECUTIVE SUMMARY

This report presents the results of a Seed System Security Assessment in Zimbabwe, implemented during July 2009.

A seed system security assessment (SSSA) reviews the functioning of seed systems which farmers use, both formal and informal. It assesses whether seed of adequate quality is available and whether farmers can access it. The approach also promotes strategic thinking about the relief, recovery or development vision needed. For instance, during the stress period, should aid aim to restore the system as it was, *ex ante*, or aim to strengthen it? A SSSA goes well beyond a conventional seed needs assessment as it hones in on specific seed security problems communities face, and then steers response to actions which alleviate specific constraints, and often improve systems. (For full description of method, see http://www.ciat.cgiar.org/africa/pdf/sss_manual_ciat.pdf).

Four sites were chosen for the assessment : Murehwa , ward 14 (natural region IIB); Bikita, ward 15,(natural region III); Tsholotsho, ward 12 (natural region IV); and Beitbridge, ward 10 (natural region V). The sites include zones where participating non-governmental organizations (NGOs) were prepared to address seed security-related constraints and opportunities. The four selected sites also represent well the cross-section of the regions in which Zimbabwean agriculture and seed aid continue to unfold. Murehwa is a prime maize zone in a higher potential region, Tsholotsho and Bikita are largely small grain zones, in which maize is also grown. Beitbridge is at the edge of where agriculture is viable.

The full report presents the seed security findings and recommendations specific to each site, as well as findings and recommendations which emerged across sites. In this summary, we focus on the across-site results as these may have broader relevance to areas in Zimbabwe where seed security responses are currently being planned.

Note that this assessment coincided with a period when preparations by donors and NGOs were well advanced for distributing substantial seed (mainly hybrid maize) and fertilizer aid to at least 600,000 farming families, or about half of the Zimbabwe farming population. At the same time, rural businesses, including agro-dealers that had closed shop during the price control enforcement, were beginning to revive. The synopsis of the findings are that (i) farmers are generally seed secure and have developed resilient community seed sourcing mechanisms during stress periods when seed was not available or affordable and that (ii) massive direct seed aid to farmers will hurt agro-dealers and 'short circuit' a natural business progression relationship between seed houses, agro-dealers, rural traders and the farmers. The team recognizes the need for assistance, particularly in terms of increasing farmer and community buying power and injecting currency into local economies. However, we propose delivery mechanisms that give farmers the opportunity to choose (and strategize) and which that do not hurt rural business or agro-dealers and eventually hurt farmers – e.g. aid interventions such as vouchers and subsidies for transport. These interventions require logistical prudence but are geared towards assisting the recovery process that has already begun. Farming families depend on rural traders not only for seed and fertilizer purchases, but also as buyers for their farm produce.

Select SSSA findings are summarized in the section directly below. Recommendations then follow.

SEED SYSTEM SECURITY ASSESSMENT HIGHLIGHTS

Smallholder farmers in Zimbabwe use both formal and informal seed channels for procuring their seed, and both merit explicit attention in any seed security assessment.

Formal seed sector

- Zimbabwe has been long known for having an unusually well developed national seed industry: when functioning well, over 15 companies produced and marketed seed of over 20 different crops. (Key companies include SeedCo, Pannar, Pioneer, Agri Seeds, National tested Seeds.)
- Maize is, by far, the most important focus of breeding and seed sector efforts and the only important food crop for which small farmers are dependent on the formal seed industry. Some 101 maize hybrid varieties were released in the period 1970-2007, and 8 open pollinated varieties (OPVs) during the years 2003-2008. Despite, increasing breeding efforts on OPVs, the Zimbabwe seed industry still focuses heavily on hybrids. At the time of the SSSA, a single company, Agri Seeds, had OPVs (ZM521) on offer.
- In the past, commercial seed companies have also sold seed of other crops, but these have been a minor focus relative to maize. Some of the commercial crops for which seed has been previously sold include: wheat, barley, sunflower, soybeans and cotton. Staple food crops for which seed of improved varieties was also previously sold include sorghum, pearl millet, cowpeas and groundnuts.

Trends pre-liberalization

- Between 2006/07 and the beginning of 2009, the formal seed sector nearly shut down due to price controls, inflation currency constraints, and an unfavorable policy/regulatory environment. Seed production within country was extremely limited, and essentially all retail seed outlets closed. More specifically:
 - Seed companies had concerns about price. Prices (especially for maize and wheat) were fixed by the government, which made it un-profitable for the out-growers to produce seed and sell it to the companies. There are also concerns that any seed produced could be requisitioned by government, at any time, to support large scale inputs distribution programs.
 - With land reform and the loss of the large-scale commercial farmers, seed companies have had to establish new networks of out-growers. These new seed producers have required time to gain the necessary experience and expertise. They also farm much smaller amounts of land, which means seed companies have had to contract more growers, and this has significantly increased their transaction costs.
 - Before the introduction of the use of the US dollar, the inflationary environment made doing business in general extremely challenging. For example, the price of 25 kgs of maize was 4313 Zimbabwe dollars in July 2003 and 250000000 Zimbabwe dollars in July 2008.

Current trends- with liberalization

- With liberalization of the regulatory/policy environment and introduction of US\$/ZAR (Rand) in the first quarter of 2009, most seed houses have been expanding grower networks and are re-opening retail outlets.
 - Seed houses have been significantly scaling up production in-country, For instance, in the 2008/09 season, Pioneer produced at least 4000 mt of hybrids in-country , and Agri Seeds between 5000 -6000 mt (up from 1200 mt in 2007/08). It is not possible to get precise figures on total supplies available for the upcoming season, as: a) seed companies prefer not to divulge figures on stocks now in country; and b) certified supplies for sale to Zimbabwe farmers can come from seed house branches in neighboring countries, particularly South Africa and to a lesser extent Zambia. Discussions with seed houses suggest that they can import very significant quantities with only 4-weeks' notice.
 - Agro-dealers were open in every city, town and growth center visited during the assessment. New outlets even opened during the course of the field assessment, indicating that the next few months could be a dynamic period of transition: e.g. a SeedCo outlet opened its doors in Murewha on July 10, 2009. Anticipating expanded business, not only were agro-dealers selling seed and fertilizer, but so were general delivery stores, and many non-specialty shops, such as grocers and clothes stores, which would put 5-10 bags of inputs on offer.
 - The amount of stocks available for sale in July 2009 was impressive for the time of year, many months before sowing and well before farmers' main period seed purchases in September and October . At that time, established agro-dealers had generally upwards of 15T maize for immediate sale, with the majority indicating that these were just initial stocks, which could be replenished when, or if, depleted.
 - Dealers generally assessed farmer buying patterns as quite positive. In Masvingo, for example, Masvingo Farm Supplies (MFS) had sold 8T maize immediately upon opening in March 2009, while N. Richards, had sold 15T in one week mid-July and had ordered another 15T to arrive the following week. Anticipating farmers' limited access to US\$ currency, dealers are making available smaller packets on inputs: two, and particularly five and 10kg packs of maize and fertilizer, along with the normal 20 and 25 kg packs.
 - Innovative efforts have been catalyzed to extend the reach of agro-dealers. Starting from 1995, CARE International in Zimbabwe has supported an 'Agribusiness Entrepreneur Network (AGENT) program, a network of community-based agents which sell agri-inputs and allied products to smallholder farmers. The program has trained over 800 agents and at its height covered five provinces and 33 districts. Basically, the work brings a network of retail shops much closer to its rural buyers. Currently the program is active in Masvingo and the Midlands and has 106 trader agents. CARE not only provides services to farmers through supporting such trader agents, but equally enhances agents' own business skills, loan prospects and entrepreneurial opportunities.
 - Agro-dealers were optimistic but expressed concerns over staying open during this critical period. Masvingo Farm Supplies (MFS), the largest agro-dealer in the province (Masvingo), provides a compelling example. At its peak, MFS had 14 branches and moved over 210T of maize seed each season, serving over 100,000 commercial and communal farmers with agricultural inputs. August 2008, MFS

closed its doors and let all 150 employees go. They re-opened March 2009, with 15 staff only, but now have hopes for renewal.

- Many dealers expressed dismay over the upcoming free direct seed distributions (DSD). Even if free seed is provided only in November 2009, hearing about the prospect of such aid can change farmers' buying patterns immediately---even five months earlier, in July 2009. Evidence for such anticipatory behavior came from the Murehwa site, where in 2008/09, 50% of farmers in the district planted maize late, as they delayed sowing until the free fertilizer came, in mid December
- In terms of bolstering agro-dealers, two immediate challenges became apparent during the SSSA;
 - To get inputs for sale into the regions, to agro-dealers (versus only to centralized relief agencies procurers);
 - To encourage farmers to buy inputs now, knowing that free seed and fertilizer will be distributed in massive quantities later in the year.

In brief, the formal seed sector in Zimbabwe has been very badly affected by the massive inflation that existed over the last 10 years, and by a very difficult economic and policy environment that prevailed during the same time period, and which has been particularly unfavorable in the last three years. However, in the first half of 2009 things have greatly improved (legalization of use of the US dollar for trade in-country and removal of restrictions on input and output markets). Most of the major seed companies are also still functioning in Zimbabwe, albeit at much reduced levels compared with 10 years ago. So there is now an important opportunity to re-establish the formal seed sector and related retail market networks in the country. This potential recovery is still fragile, and needs to be encouraged with appropriate support. The right kind of relief programs at this time – ones that promote rather than compete with the formal seed sector and retail networks – could be extremely valuable in jump-starting the recovery.

Informal sector

Sorghum, pearl millet, groundnuts, cowpeas, Bambara nuts, sugar beans and sweet potato constitute the bulk of crops that are important in the informal seed sector in Zimbabwe. Others include open pollinated maize varieties, soybeans, sunflower, white beans and finger millet. Except for maize, the informal sector supplies over 95% of the seed Zimbabwe farmers sow. Informal sector crops are also key for production stability and nutrition, and many are loosely identified as 'women's crops'. Due to the collapse of the economy and the resultant shortage of maize seed in formal markets, hybrid maize has also made inroads into the informal markets. Hybrid maize bought in 10kg, 20kg, 25kg or 50kg packs is repackaged into smaller packets of 2kg and 5 kg and sold in the informal venue – from trucks or open market stalls, or from others who have obtained it, e.g. employees of some seed companies who were paid in seed bags, rather than currency.

Overall, the assessment team found the informal sector function well: being both resilient and dynamic. There was an impressive amount of processing within communities, to add value to basic agricultural products and especially to generate income. All major crops could potentially undergo transformation into saleable products. Also a number of processes have served to keep the informal sector dynamic and supplied with an injection of new varieties:

processes such as participatory variety selection, on-farm trials, cross-border trade, seed fairs.

The 2008/09 season: overview

- Informal sector supplies are abundant after the 2008/09 season.
 - The 2008-09 harvest was a good one, as assessed by all four farming communities, and supported by the Ministry of Agriculture Crop and Livestock Assessment Mission. Following on a 'bad' year, maize production 2008-09 was 160% more than that of 2007-08; and the 2008-09 combined small grains was 190% more than the previous year (and 110% more than the recent five-year national production average) (Ministry of Agriculture, Mechanisation and Irrigation Development, 2009).
 - Social networks of exchange remain strong and continued to function during the 2008-09 season, providing 10 to 38% of the seed sown of maize, groundnut, finger millet, cowpea, sorghum, pearl millet and Bambara nut. It is impressive that such extensive gift-giving took place, just after the 'bad season of 2007-08.
 - Open markets in all sites visited had good supplies of a large variety of crops, many of which constitute 'potential seed'. Part of the abundance was attributed to a good harvest and part due to improved access to fuel and transport facilities which helped agricultural produce move. Overall, the quality of potential seed on offer generally looked good to excellent: the legumes in particular were full grained, generally sorted to a single variety (except cowpea), free from inert material and with little evidence of damage in storage.
- The big surprise in the informal sector was an abundance, not a lack. This abundance was most apparent where local level seed production has been given special technical and organizational support, particularly in the Tsholotsho region. In Tsholotsho, Farmer Field Schools (FFS) produced 155 mt pearl millet, groundnut, sorghum and cowpea during the 2008/09 season. These FFS groups ask that outside agencies purchase their FFS-produced seed—rather than give outside seed aid. While FFS groups have mastered the seed production techniques, they need help in identifying markets and to build their agro-business expertise more generally.

The 2008/09 season: specific seed sources

- Individual farmer assessments of the 2008/09 season, showed the majority in the SSSA sample appreciated the varieties they sowed—and the seed condition.
- In terms of seed sources for the 2008/09 season, seed obtained from farmers own stocks or through social networks was key across crops; agro-dealers and local shops were particularly important sources for maize seed, and local markets for the legumes, especially groundnut and Bambara nut. Development interventions were a significant seed source only for maize (13.6% of total seed supply) and much of this was obtained through the government program of Operation Maguta. Within the SSSA sample, food aid and seed aid together provided just over 1/10 of the maize seed (and some of this was probably also Operation Maguta). Figures are 2.4% and 8.1% for food aid and seed aid respectively.

In sum, farmers used a diversity of channels and multiple strategies to access their seed for the 2008/09 season: most involved use of their own local channels and even during this economically volatile period, farmers found ways to barter and buy at significant levels. Development and emergency aid together provided only a quarter of the total maize seed sown in 2008/09.

Community Assessment of seed security and prospects for the 2009/10 season

Community groups assessed their own seed security for their three most important crops (as prioritized by the community). Seed security was defined as either having the seed already in hand, or being able to access the seed with some certainty (though purchase, barter, gift, or other).

- Communities themselves were quite positive in their overall seed security assessment. For small grain seed, all could meet 100% of their seed needs. In two of the four sites, communities signaled groundnuts as a potential problem for about a quarter of families, depending on the supplies to on offer in open markets at sowing time (and groundnut was the only crop for which communities signaled ongoing availability problems—due to challenges associated with its seed multiplication.) The community assessment for maize seed security was very good: 90-100% of households have in stock or indicate they can access the seed they need, mainly through direct purchase.
- Such community assessments correlated to a high degree with the quantitative findings from the 165 individual interviews. In quantitative assessments, farmers indicated they had clear possibilities for obtaining 100% of their seed requirements for all crops, except for groundnut (in which they quantified they could reach 93% of their requirements)
- For the 2009/10 season farmers indicate they will use the following sources to obtain seed
 - For the small grains, farmers are counting mainly on their own stocks, supplemented by purchase at local markets. For the legumes, again, home-saved stocks and open markets will be used, with local markets being a main source particularly for Bambara nut. Cowpea, in Murehwa is an exception as the crop is relatively new and farmers still expect outside assistance from the NGO, World Vision especially for new varieties.
 - For maize, farmers have retained some stocks (recycled and carryover), but aim to purchase the bulk of the seed from agro-dealers: they sense such a strategy possible. Farmers are optimistic they can obtain cash needed for maize purchase. At the time of the assessment, it was not possible to confirm that all cash needed for maize purchase by farming families was available as the sale of the 2008/09 crops was ongoing: it is mainly from harvest sales that farmers expect to generate seed money.
 - Relatively few farmers are counting on emergency aid for seed for 2009/10. This could likely change as during the course of the assessment in July, newspapers were already starting to advertise the upcoming free distributions.

- Reviewing the overall evidence (qualitative and quantitative data), the SSSA team would be slightly more conservative than the community in assessing seed security. Particularly for maize, we would put figures of 'maize needy', at around 10% or a high of 15% , with the bulk of the needy coinciding with those who are chronically poor. (So the issue would be purchasing power, not lack of seed *per se*.)

This 10-15% figure for maize-related aid is based on a assumption that other farmers will have the opportunity to themselves acquire needed inputs. This implies that input supplies of seed and fertilizer will continue to reach rural shops in important quantities.

Fertilizer and costs of inputs

Fertilizer assessments were not done extensively. Communities themselves raised access to fertilizer rather than to maize seed *per se*, as the major constraint, mainly due to its unusually high cost

- During the July 2009 assessment, fertilizer supplies were starting to be put in both agro-dealer and general delivery stores. Neither agro-dealers nor farmers cited availability as a central issue with fertilizer. Rather price was the compelling constraint and particularly the terms of trade. Using barter economy rates, the price has gone up five-fold in but two to three years. For instance, in Murehwa a 50kg bag used to cost 3 buckets of sweet potatoes; in July 2009, it cost the equivalent of 15 buckets.
- Quick calculations of costs of inputs give a sense of the current, exorbitantly high, costs of inputs—in relation to funds received for harvest sale. Direct inputs to plant an acre of maize—only the seed and fertilizer—will cost the farmer at least \$112 US. On the open local market, farmers will receive but \$166 US, he/she harvests at least 1500 kgs.

Money/Purchasing power

The overwhelming issues in terms of seed security—did not directly relate to seed at all. The critical issues across sites revolved around money and purchasing power. Prices for inputs were high, and farmers felt they were not getting adequate costs for their produce (which at the time of the assessment was just at the point of sale—to generate needed liquidity

- The change to the new was welcomed by many as it has relatively stable value and help to stimulate the return of goods onto shelves.
- However the move to the US\$ has also brought a number of distinct disadvantages. As there is basically no change available (nothing under US\$1), prices are being inflated up to the higher units. Also, getting currency notes, the FOREX, either to farmers individually, or into local commerce, has taken more time than will be expected. Farmers also do not have an intrinsic sense of the currency and particularly how their produce should be valued in the new FOREX. Even open market traders were quite unsure on how the currency change itself will affect prices for inputs as sowing season arrives.

In brief: the issues related to money are multiple, and distinct. They include:

- lack of actual currency notes in rural areas (individually, and in commerce)
- lack of change (small money) associated with the currency- which in itself leads to higher unit costs (as merchants round up)
- lack of farmer purchasing power, especially in relation to low prices received for produce
- Unfamiliarity with value of currency, including uncertainty of how the new notes in themselves will affect open market prices

Seed security summary

In terms of seed *per se*, the only critical issue found during the SSSA is related to formal seed and input sector functioning. Given the last few years of policy challenges (especially price control, and currency value breakdown), this sector will take time to recover. However, even during the short period of the field SSSA, agro-dealers were starting to open their doors, general delivery dealers were starting to stock packets and even non-specialty stores (food stores, clothes shops) were starting to stock 5 and 10 bags here and there. Evidence clearly shows that this sector is starting to put supplies on offer--and farmers already buying. One immediate challenge related to the formal sector supply, and specifically to agro-dealers, is to make sure they remain open and do not fold again.

Fertilizer assessments were not done extensively. Communities themselves raised access to fertilizer rather than to maize seed *per se*, as the major constraint, mainly due to its unusually high cost. SSSA team calculations reinforce the community assessment of the relatively high costs of production, and especially of fertilizer, in relation to remuneration received for maize sale.

The SSSA found that the overriding problem around the issue of seed security, and the functioning of seed systems more broadly, had little to do directly with seed at all. Immediate and key constraints revolve around money and purchasing power: the terms of trade for farmers have escalated enormously; farmers were just starting to market produce and were concerned about low remunerations ; there is little actual cash (and particularly \$US currency notes) in rural economies.

As the next section moves toward making recommendations, we underline here the prime challenges for addressing seed security concerns at this highly fluctuating time in Zimbabwe:

- ❖ To restart and reinforce the formal sector supply—supporting not undermining fledging efforts; and
- ❖ To inject cash into local economies

These two big challenges should help shape immediate seed security interventions across and within the sites of assessment.

SPECIFIC RECOMMENDATIONS

A full set of recommendations appears in section VIII of this report. Recommendations are divided into those for the very short term (now), versus recommendations for the short to medium term (i.e., within the next few seasons). In this summary, we focus on recommendations specific to formal and informal seed sector functioning, and to methods of seed security assessment.

Formal Seed Sector Strengthening During Emergency and Early Recovery

Agro-dealers are critical conduits through which farmers obtain maize seed, fertilizer and other specialized agricultural inputs. They can only serve small farmers if: a) they continue to exist, b) have supplies, c) are situated in some proximity to farming communities, and d) offer products at prices which farmers can afford. The Relief Seed Business is threatening to compromise attributes a and b, and incentives or subsidies have to be put in place to address issues c and d.

Very short term

6. **Recommendation:** In the immediate months, all efforts must be made to sustain, not undermine, agro-dealer business during this tenuous financial period. A good number are just starting to re-open their doors, and it is a 'make or break' period for them.

Specific recommendations linked to 6

- 6.1 If emergency maize and/or fertilizer are to be given as part of relief programs such distributions should be done via a voucher system linking farmers to agro-dealers stores or to agro-dealers selling at seed fairs.

Such a move will help support business recovery, get farmers access to preferred varieties and inputs, and help to inject cash into the local economy.

- 6.2 Agro-dealers need to be encouraged to sell closer to farming communities, and growth center areas. Transport costs mean that rural farmers may pay 30-50% more for the same bag of seed sold in the bigger towns. In the short-term, aid organizations might consider adding a transport cost into any voucher program.
- 6.3 Agro-dealers linked to seed aid programs should be encouraged to package seed and fertilizer products in sizes farmers have potential to access. While the assessment team saw 1 kg packages of both (re-packed) we suggest seed sizes of 5 and 10 kg (with 2 kg on offer in small quantity) and fertilizer in 5 and 10 kg packs and upwards.
- 6.4 Efforts should be made (by donors? government? UN agencies?) to ensure that regional and local agro-dealers can receive adequate stocks to sell. This might be an issue of reorienting the overall supply away from bulk relief

aid purchase. Mechanisms should also be explored for helping local dealers to receive stocks on consignment or through some credit guarantee arrangement.

Short to medium term

7. **Recommendation:** The 'normal' network of those selling certified maize seed, fertilizer, and other specified inputs needs to be expanded and brought closer to farming communities on a continued basis. Formal agro-dealers may not find it lucrative to set up shop in less populated and removed areas. Programs such as CARE's 'trader agents' in Masvingo have served in the past to broaden agro-supplier coverage. (Note: similar programs have unfolded in neighboring Zambia, The Profit Program) Recommendation: The traders agent networks, such as those supported by CARE, should re-vitalized and replicated so as to serve even those in more remote areas.
8. **As a general recommendation, across the board:** Incentives need to be put in place to encourage agro dealers and trader agent suppliers to become more small farmer client oriented. Client-oriented means putting seed on offer early (July/August rather than October/November), offering farmers preferred crops varieties and fertilizers, packing in affordable sizes, and selling at points accessible to local farming populations.

INFORMAL SEED SECTOR STRENGTHENING DURING EMERGENCY AND EARLY RECOVERY

The informal seed sector provides the majority of Zimbabwe farmers' seed: small grains, pulses and tubers. (Important exceptions are seed of maize, wheat and horticultural crops). The informal sector needs to be strengthened so as to provide farmers easy access to improved varieties, deliver a good quality seed, and to professionalize the processes of seed production, marketing and rural agro-enterprise more generally. A healthier informal seed sector will translate into a much healthier rural economy.

Very short term

9. **Recommendation:** emergency support programs linking with the informal as well as formal sector should concentrate on alleviating seed access problems. Seed fairs with vouchers, vouchers linking farmers to agro-dealers (cited in point 7) and direct cash transfers are all examples of possible aid options which might give farmers increased access to crops and varieties of their choice.

Specific recommendations linked to 9

- 9.1 In terms of seed-related issues, *seed voucher and fair operations might best be designed to respond to specific needs of farmers at this moment in time.* Access to groundnut seed, and seed of new, especially early maturing varieties, have been cited at various sites as key farmer-sought inputs. Seed fairs might make extra efforts to engage local and regional agro-dealer

suppliers to put on offer modern varieties. Formal sector suppliers might require a transport premium to take part in these rural events.

- 9.2. Non-seed agricultural inputs also were cited at the forefront of farmer needs in the assessment: fertilizer, labor, draught power. Seed fairs might insure that both basal and top dressing fertilizer bags appear on offer in any fair event, and in farmer-friendly sizes. Use of vouchers to gain access to labor and draught power might also be explored.
- 9.3. Graduated vouchers might be usefully employed in the upcoming emergency programs. Basically, graduated vouchers give varied levels of aid and help to distinguish between the very poor, and those who need a bit of extra help in this time of financial and currency fluctuation. Graduated vouchers can help lessen dependencies, as only those near the bottom of the spectrum should receive substantial free support. Average income farmers (again, somewhat cash insecure) might receive vouchers to cover but parts of their agricultural needs.
- 9.4. Giving cash aid as direct assistance might seem unwise at this point in Zimbabwe, where the whole economy is severely cash-strapped. However, small cash trials could help farmers access their own priority needs, which may include agricultural inputs.

Short to medium term

There is a strong need and opportunity to professionalize and strengthen informal sector seed production.

10. Farmer groups (and individual entrepreneurs) require support to ensure good quality seed supplies of what are referred to as the non-commercial or orphan crops (basically everything but maize, wheat and horticultural crops). This support implies efforts on multiple thrusts, and needs to be done professionally. Seed production will not succeed unless it is tied to real demand and sustainable market development.
Recommendation: Significant effort and funds should be allotted to increase informal seed production capacity and marketing channels.

Specific recommendations linked to 10

- 10.1 Local community groups need enhanced capacity in the techniques of seed production. Farmer Field School experience shows that better isolation distances, variety sorting, improved agronomic practices, improved storing and storage techniques can lead to greater availability of good quality seed at the local level. Groundnut seed, in particular, requires enhanced local level capacities.
- 10.2 Farmer groups, whether for seed or food sale, should only be encouraged to produce crops if clear markets have been identified, and general agro-enterprise/ marketing skills enhanced. Market skill enhancement and market identification has to be the driving force shaping local production initiatives.

- 10.3 New, modern, farmer-acceptable, and market preferred crops and varieties have to feed on a continuing basis into local production systems, both to boost yields and enhance marketing possibilities. Across sites, only new maize varieties enter farming system with regularity—except when special aid of development programs bring in new cowpea or sweet potato or pearl millet types. Recommendation: Links have to be professionalized and sustained to promote variety innovation at the local level. Farmer Field Schools (FFS), Participatory Variety selection, new variety small packet sales might all help to raise awareness of and access to new needed varietal materials.
- 10.4 Production of foundation seed has to be intensified across of range of non-commercial crops, to form the base of an extensive, decentralized, seed production system. The production of such foundation seed should squarely rest with the national research institution `DR&SS. (This is not an appropriate or sustainable international agricultural center function).

In brief, we are recommending the development of a market driven local seed production model, which scales up foundation seed and then decentralizes seed production in scores of zones country- wide. Supply has to respond to demand, meaning that hard to produce crops (e.g. groundnut) and new desired varieties have to drive the production process.

11. Local markets are important for farmers' seed supply, particularly for the pulses. More attention should be given to encouraging that these open seed/grain markets supply the kinds of potential seed farmers need. As a point of departure, seed/grain traders could be powerful partners in helping to move *new modern varieties* widely, within and among farming communities. **Recommendation:** Strategies should be tested for directly linking formal sector seed supply with informal trader seed/grain sellers. Among the approaches that might be tested and evaluated are a) the distribution of variety samples (to stimulate demand); and b) the sale of small packets of modern varieties and improved seed at open market venues.

PROMOTING ACCURATE SEED SYSTEM SECURITY ASSESSMENTS

Classic seed need assessments inevitably conclude that 'seed is needed' and that the response should take the form of direct seed distribution. While innovative at their inception (as they distinguished seed aid need from food aid need), such assessments are now outdated, inadequate and should be significantly modified, and urgently. Understanding of what happens to seed systems during disaster has become markedly more refined in the last five years and we have learned that *distinguishing among seed security constraints is key for recovery*. Further, analyses have shown that systems need to be analyzed to gear appropriate seed-related responses: seed systems, farming systems, markets and livelihood systems more generally.

Short to medium term

12. **Recommendation:** Seed security assessment methods have to be significantly revamped.

Specific recommendations linked to 12.

- 12.1 ` National and regional formats for assessing seed security status should shift from those which calculate simplistic 'seed needs' to frameworks which recognize different types of seed security problems, and which tailor responses accordingly. These problems might include diverse constraints of seed availability, seed access and seed quality, which are distinguished by their presence in the short and in the long term. The Crop and Food Assessments missions might be among the priority tools to be revised to contain a specific seed security component.
- 12.2 Seed security assessment capacity needs to be built at regional and local levels. Technical tools already exist to help NGO and government agricultural officials move forward on seed security assessments. An explicit technical process needs to be put in place to:
- raise awareness of seed security versus food security issues
 - set up local level seed security indicators
 - train local level staff (NGO and government) in seed security field assessments
- 12.3 Given the complexity of the stresses in Zimbabwe, "emergency" seed aid related work has to think strategically and longer-term. Assessments related to seed security, can and should incorporate more developmental elements, including Issues related to system stability, opening and strengthening of markets, and equity concerns.

This expanded focus suggests that the 'skill set of those assessing seed security' has to be considerably broadened. Minimally SSSA requires inputs from formal and informal seed sector specialists, farming system specialists, marketing professionals, and gender/ livelihood analysts. Nutritional expertise might be considered as an added bonus.

Specific recommendation: Multidisciplinary teams should be mobilized for seed system security assessments.

- 12.4 More generally, a political environment for 'real seed security assessment' has to be established. This is no easy task. *Technical advances in methods alone will not lead to more accurate assessments.*

Strong seed security frameworks at a national level and strong leadership, ensuring that seed security assessment is given focus (as distinct from food security and other non-food item assessment), can enable seed aid assistance in Zimbabwe to become more demand and problem driven. More accurate assessments will bolster the ability of seed-related assistance to address farmers' compelling seed security problems and to seize on important, emerging opportunities.