



**EVALUATION OF OFDA
EMERGENCY SEED RELIEF
DROUGHT RESPONSE
ETHIOPIA, 2003-04**

**Prepared for
USAID/OFDA**

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EXECUTIVE SUMMARY

1. This OFDA program provided emergency relief to drought victims in Ethiopia, and at the same time explored new/different approaches to seed relief, and was remarkably well-organized, coordinated, monitored, and implemented. Using the grassroots approach, it had a significant impact on beneficiaries who were extremely vulnerable. This should be considered a star in OFDA's portfolio, and some of its experiences used in other places, with appropriate modifications.
2. Within USAID/Ethiopia's long-term strategy, OFDA provided \$6.2 million in disaster assistance toward the estimated \$10 million seed shortfall. Implementing partners of CARE, CISP, CRS, FHI, GAA, SCF/UK, Oxfam, and WVI used this to assist 347,790 drought-affected households in Afar, Amhara, Oromiya, SNNP, and Somali regions. A high percentage of funds reached beneficiaries, as partner NGO's operated with comparatively low overhead.
3. Surveys by PA leaders generally (but not always!) turned up enough seed locally, even in the drought. Seed is available, but not to resource-poor needy families.
4. OFDA's aid aimed at the "poorest of the poor", disaster-vulnerable families with no seed or ability to purchase it. Seed relief helped them produce food crops without the onus of 100%-interest loans or renting out their land and receiving half the crop.
5. Seed relief distribution approaches were (1) cash for seed; (2) coupons for seed; (3) seed fairs; and (4) in-kind seed distribution. Due to more-or-less uniform procedures, effective targeting of beneficiaries, dedicated implementation and management by NGO's, close monitoring, ongoing guidance and communication, and close cooperation and participation of concerned government officers and all stakeholders, all methods used fit local needs and were successful.
6. Under local conditions of seed vendors not close to beneficiaries and/or seed supply not adequate, seed fairs with coupons seemed most cost-time-efficient. Coupons-for-seed purchase from selected local vendors is equally effective, where vendors have adequate seedstocks. Local purchases also put money into the local economy, empower poor farmers in decision-making, and encourage local seed supply. These approaches require less handling/cost/time/losses, and are quite effective. However, close and complete monitoring, record-keeping and reporting are essential.
7. The "poorest of the poor" were identified locally by a committee of their peers in open meetings. All persons were satisfied and supported final selections.
8. This relief helped beneficiaries survive this drought, but does not help overcome vulnerability in future disasters. Needed is technical assistance, funding, and NGO guidance for many (enough to have a real impact!) local good-seed supply units operated by farmer groups in the informal sector (not a highly-structured formal seed system). They can produce/condition/supply seed to local-area farmers, provide seed and income for poor families, initiate local agri-business, improve local food security, and be a ready, self-sustainable means of providing seed in future emergencies.

ACKNOWLEDGEMENT

This report is based on information obtained from contacts and references listed in the Annex. Grateful acknowledgement is made to all these persons for their efforts and support. And, more importantly, for their efforts to help improve the lives of rural people in Ethiopia.

ACRONYMS

AIQCD	Agricultural Input Quality Control, Department, MOA
CARE	Cooperative for Assistance & Relief Everywhere
CISP	Comitato Internazionale per lo Sviluppo dei Popoli (International Committee for the Development of Peoples)
CRS	Catholic Relief Services
DA	Development Agent, MOA, Govt. of Dem. Republ. Of Ethiopia
DART	Disaster Assistance Response Team
DPPC	Disaster Prevention and Preparedness Commission (GDFRE)
EOC	Ethiopian Orthodox Church
FAO	Food and Agriculture Organization, United Nations
FHI	Food for the Hungry International
FY	Fiscal Year
GAA	German Agro Action
GDFRE	Government of the Democratic Federal Republic of Ethiopia
ICARDA	International Center for Agricultural Research in the Dry Areas
MOA	Ministry of Agriculture and Rural Development, GDFRE
MT	metric ton
OFDA	Office of Foreign Disaster Assistance, USAID
PA	Peasants Association, Ethiopia
REST	Relief Society of Tigray
SCF/UK	Save the Children Fund/United Kingdom
USAID	U.S. Agency for International Development
WV	World Vision

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1.0. SEED RELIEF IN ETHIOPIA’S CURRENT DROUGHT CRISIS

1.1. Situation

In the 2002-03 occurrence of the cycle of disastrous droughts in parts of Ethiopia, the affected population (2003) was estimated at 13.2 million. Estimated total food aid requirements in 2003 were 1.8 million MT. Affected population in 2004 was estimated at 7.2 million, with total food aid requirements of 964,690 MT (UN/GDFRE).

Poverty is endemic; some 80+% of the population depends on agriculture and is extremely susceptible to drought. Some 96% of farmland is in small holdings. Many are subsistence farmers averaging 0.25 - 0.75 ha, to support a family averaging 5 persons. Even normally, some of the “poorest of the poor” subsistence farmers can produce only 40% of their annual nutritional requirements. This includes families headed by women or elderly, and those with few male adult worker members. They have no assets to carry them over a drought, and little or no skills to earn a living in a market with little or no job opportunities and low harvest-time prices for farm produce. To try to survive, they are forced to sell whatever assets they have (livestock, tools, etc., even wood from their houses). This lowest-asset group is most at-risk in droughts, and was targeted by OFDA for seed relief.

1.2. Seed Needs

National seed needs have been estimated as some 480,000 MT. Of this, some 96% is from the informal seed sector, “grain” seed produced by local farmers (who use the seed or trade it with neighbors) without specific “seed quality control”. While this seed is not certified, it usually germinates adequately to produce a stand, and is a variety, mixture, or landrace which has shown adaptation under local conditions. Farmers (at least lower-income farmers not accustomed to hybrid or certified seed and optimum input use) prefer local seed of proven adaptation, often from fields they have seen.

Despite the drought, there always appear to be local seed supplies, held by farmers who can produce a surplus. But, “poorest of the poor” are without resources, cannot purchase seed, are in an extremely precarious situation, and may consume their seed as food grain. They cannot plant a crop even when the drought ends, and have no means of survival.

1.3. USAID/OFDA Assistance

The “poorest of the poor”, subsistence farm families most-at-risk segment of the rural population (variable percentage depending on locality, estimated at 5-20%) was targeted by USAID/OFDA for drought-emergency seed relief, to enable them to plant crops and “get back on their feet” without suffering further consequences of drought.

In FY 2003 and FY 2004, USAID/OFDA provided more than \$50 million in humanitarian assistance through emergency health and nutrition, agriculture, water, sanitation, and livelihoods activities. Of this, some \$15 million was in emergency

agriculture programs implemented by NGO's in drought-stricken areas, the majority in SNNP, Oromiya, and Tigray regions. This included \$6.2 million for seed, in response to GDFRE's estimated \$10 million seed shortfall. Implementing partners of CARE, CISP, CRS, FHI, GAA, SCF/UK, Oxfam, and WVI used this for emergency seed distributions. USAID's intervention assisted approximately 347,790 drought-affected households in Afar, Amhara, Oromiya, SNNP, and Somali regions. This is a small part of the affected population, but is the most needy.

2.0. EVALUATION METHODOLOGY

2.1. Methods

To evaluate the effectiveness and impact of seed assistance methods, available documents were reviewed, and field interviews conducted to obtain perceptions and evaluations of NGO's who distributed seed aid, farmers who were and were not beneficiaries, government officials, and others.

As this focused on seed and methods of providing seed aid, an effort was made to keep the evaluation in practical, "applied to the beneficiary" terms. Several earlier internal evaluations include details and figures, so these are not repeated here.

It must be emphasized that this was, and given the constraints could only be, a subjective evaluation of delivery approaches to limited seed relief. It does not and could not address the basic causes and needs. Abject poverty and food insecurity still exist, and will until the root causes are addressed in a massive way.

3.0. APPRAISAL OF OFDA'S SEED RELIEF

3.1. What Happens If There Is No Seed?

Was seed aid necessary? In drought-affected areas, the "poorest of the poor" had no resources and had to eat their seed, if they were able to save any. Without seed aid and/or other aid:

1. They could not plant their own crops, so no crop would be planted or they must rent out their land.
2. If they rent out their land, they receive less than 50% of the crop produced.
3. They must take loans, with 100% interest, repayable at harvest when crop prices are lowest.
4. They sell any assets (livestock, tools, house wood), and sink lower in poverty.
5. Able-bodied males migrate looking for work, scarce in a depressed economy.
6. Some cut trees and sell wood or charcoal, further depleting forest cover and causing more erosion which is already serious.
7. Already-poor nutrition would be even poorer, as evidenced by children in therapeutic and supplementary feeding programs.
8. "We would starve and die".

Every person interviewed was emphatic that seed aid was critically needed, and had a tremendous impact. With it, they could produce some of their own food requirements. “You have to see what the impact of OFDA’s aid was. OFDA saved the people, and empowered them.” One farmer beneficiary said “without seed aid, there was no job available. I could not plant a crop or rent my land. I would have to walk 20 km to the mountains, cut wood, back-pack it back, and sell it for 3 Birr (36 cents) a load”.

3.2. Stakeholders and Their Participation

Seed aid involved a chain of stakeholders. OFDA provided funding. Government agencies, from national to local levels, were involved in all aspects from policy to targeting beneficiaries to delivery to monitoring. NGO’s with local experience, staff and facilities were implementers and evaluators and were critical to success. Local vendors, traders and farmers supplied seed. Local groups/leaders were primary beneficiary targeters, helped monitor and implement seed relief. The identified poorest of the poor received seed relief and orientation/training. All stakeholders were involved to the maximum, and cooperation and coordination appeared to be quite good. Few disagreements were reported, and these were reportedly resolved effectively and quickly. There was some initial apprehension about cash aid, but all concerned were pleased with end results.

3.3. Organization of Seed Relief

Seed relief was well-organized, efficient and transparent, especially given local emergency conditions and infrastructure. Individuals, committees and groups were closely involved, from national to local levels. Stakeholders appeared well-informed and aware of what others were doing.

3.4. Management, Orientation and Monitoring

These aspects appeared to be well-organized and effective, in large part due to the dedication and efforts of stakeholder personnel, particularly the NGO’s. Management, from targeting beneficiaries to identifying recipients to financial records, appears to be quite good. At all stages, there was orientation and guidance for all involved, from local people who selected beneficiaries to workers at distribution points, and beneficiaries. Close, detailed and frequent monitoring and follow-up occurred at all levels, and all were aware that it would take place.

3.5. Seed Handling and Delivery

The cash and coupons, seed fairs, and local vendors eliminated many of the costs, losses, risks, and delays of physical handling and delivery of large stocks of seed. Even the few cases of in-kind seed distribution were handled well, given local conditions.

3.6. Seed Relief Distribution Methods

3.6.1. Methods Used

Four methods were used by OFDA's NGO implementing partners to get seed to the "poorest of the poor" farm families.

- (1) **Cash for seed:** General procedures: Cash was given to farmers for seed, as grants, along with training and orientation. Farmers could then buy seed (or something else!) from a vendor of their choice. Most often, cash was provided in the form of coupons, to ensure that beneficiaries used approved sources and bought good seed. Separate cash relief grants given to needy families were often partly used for seed.

Advantages: Puts money into and stimulates the local economy, by using local seed vendors. Seed is located near where it is needed; logistical problems of handling/transport are avoided. Most (but not all) felt that it was easier to implement, as monitoring and record-keeping were less costly and time-consuming than seed distribution. It provided flexibility and empowered choice for beneficiaries, who can select varieties and vendors. Markets near every kebele (village), and vendors (often farmers who produce a surplus) sell local varieties, and reduce the crop risk/distrust of beneficiaries. Requires less advance arrangement, and most report that it requires less overall effort and is more cost-effective.

Disadvantages: Money may be spent for other things, but some felt that this is not undesirable, as beneficiaries may have more pressing needs. There were a few reports that sometimes the village leader controlled (and may have misdirected) cash grants. If much cash is infused into the local economy, dealers may inflate prices; however, a small percentage of farmers received aid, so respondents reported no significant price increase. Careful monitoring and follow-up is essential. Procedures for withdrawing money from banks and handling money were sometimes time-consuming and tedious. Security arrangements had to be made, but government officials were always present, with armed police. Cash grants do not facilitate introducing improved varieties; however, subsistence farmers do not readily accept varieties until they are proven under local farm conditions.

Evaluation: Grants, as used in this assistance program, help farmers directly and are an excellent aid method. Cash infusions stimulate the local economy, and bring poor farmers into it. Purchasing seed empowers the farmer, and stimulates decision-making (farmers here have been accustomed to docile acceptance of guidelines). Loans (not used here except in seed bank programs) defeat the purpose, as prices are high at planting time, then low at harvest when farmer repay loans (they must repay/sell too much grain and may actually lose). Seed banks avoid this, as farmers repay seed/grain rather than cash.

In the cash relief system used here, both the husband and wife were involved, and the cash was often given to the wife. It was generally felt that women (previously ignored in such matters) were more efficient in ensuring that money was spent properly. In cash for

seed relief, this approach was not used, but both husband and wife were involved and made aware, with mutual decision-making encouraged.

The cash system (including coupons) was felt by most NGO's and beneficiaries to be more effective, easier to handle, requiring less effort, faster, and more beneficial to the local economy. Its effectiveness is indicated by the report (from REST) that the GDFRE is beginning to request that aid be in cash.

- (2) **Coupons:** General procedures: Coupons, to be redeemed for seed, are given to beneficiaries, who can spend them at any pre-approved, registered participating vendor. The vendor takes the coupons to the NGO and redeems them for cash. (Note: the term "voucher" is not preferred locally).

Advantages: Using local vendors stimulates the local economy, and eliminates seed-handling logistical problems/delays. Using coupons limits purchases to approved vendors, helps ensure good seed of locally-adapted varieties, and ensures that farmers buy seed. Potential for mis-use (as is possible with cash) is largely eliminated. Gives the beneficiary a wider choice of vendors and seed; allows him to bargain with vendors, as in cash purchase. Also empowers the beneficiary, in decision-making in purchases.

Disadvantages: Requires more administrative work and orientation for beneficiaries. However, in all methods, NGO's and government officers went to considerable lengths to orient/advise/train beneficiaries, so this is not entirely extra effort.

Evaluation: The coupon purchase system has all the advantages of cash purchase, while eliminating most potential mis-use of cash.

- (3) **Seed fairs:** General procedures: Local specific "seed markets" organized, at locations so beneficiaries do not have to walk more than 1.5-2 hours. Pre-approved vendors bring pre-tested seed to sell. Vendors and their seed are registered. Beneficiaries are advised in advance, and given coupons to make purchases. Farmers can visit any approved vendors, and purchase from vendor(s) of their choice.

Advantages: Useful when local vendors are not close enough to the farmers, seed is not readily available locally, or some control over vendors is needed. Combined with coupons, it avoids the pitfalls of cash purchases.

Disadvantages: Seed may be required at different times, so more than one fair per year may be required. Several fairs may be needed at about the same time, so more personnel, organization and monitoring are required.

Evaluation: An excellent method of implementing seed relief where local merchants are inadequate. However, if enough seed is available from local vendors, it may be easier to give beneficiaries coupons and let them patronize selected local vendors.

- (4) **Seed distribution in kind:** General procedures: Involves buying seed and physically delivering it to beneficiaries. It requires issuing tenders for large quantities of seed (thus usually to outside agencies), inspecting bidders and their seed, contracting large supplies, transporting/storing/handling it to get it to beneficiaries, and distributing different quantities to beneficiaries.

Advantages: Bulk buying can reduce cost of seed, and control seed kinds received by farmers. Can introduce new varieties (if proven and accepted locally); useful where adequate seed stocks are not available.

Disadvantages: Farmers may not like the varieties received, which may not be locally adapted (government/formal seed sector agencies push hybrids, unsuited for subsistence low-input-use farmers who plant back their grain). There are reports of farmers trading “aid seed” in the market for “local seed”. Delivery logistics may be time-consuming and expensive. Seed is subject to loss from insects, rats, torn bags, lost bags, rain damage in transit, mis-use, etc. Trucks, storages, moving/handling systems, can damage seed or seed quality, increase costs, and require more investment, management and maintenance. No “ideal” seed storage was seen (best is new seed banks, *e.g.*, OSHO), although it is simple to design and construct good storages with minimum operating costs. Requires staff, facilities, storage, handling, transport, and delivery arrangements to get seed to farmers when/where needed. Reportedly, sometimes farmers have to provide bags, or seed were granted at cities so beneficiaries had to travel and then take seed home, incurring more expenses. This method also does not support the local economy or develop local seed suppliers.

Evaluation: While commonly-used in the past, seed aid in-kind involves logistical efforts, is costly in time and work, could involve varieties not well-adapted, and appears to be outmoded by the more efficient methods listed above. However, carefully implemented, it can be useful where seed is not readily available locally, or to introduce proven new varieties.

3.6.2. Overall Rating of Distribution Methods

Success in getting seed to beneficiaries was achieved with all methods, and each has proponents, depending on local situations. If local vendors/seed are available, either the cash or the coupon system, combined with seed fairs where good vendors are not near beneficiaries, appears to be most useful.

In direct relief, both NGO implementing partners and beneficiaries preferred the cash grant. In seed relief, the coupon system was equally effective and eliminated some weaknesses, but required more effort. Coupons were effective because local seed sources are available, and a monitoring system is used. Coupons are easier and faster to implement, speed up delivery to farmers, and required less logistical effort/cost/facilities. And, farmers liked it because it gave them a choice in selecting seed.

3.7. **Vendors (Sellers of Seed)**

It was commonly reported that surveys showed that there was almost always seed available locally, of locally adapted crops. It was simply not available to poor families who were beneficiaries of this program. For seed fairs and coupon programs, potential vendors were surveyed, and their seed checked, sampled and tested. Only those with higher quality seed were accepted. Some vendors were local merchants (who purchased seed from local farmers), but often vendors were farmers themselves. Vendors were registered, given ID's for seed fairs, and checked in and out, along with their seed amounts and kinds. Records were kept of seed sold, coupons received, and other data required for monitoring and control.

3.8. Security and Reliability

Handling and distributing cash requires security, and must be transparent to minimize mis-appropriation. In some environments, it may have dangers. Here, there were no reported problems, as involved government officers arranged for police protection. The Ethiopian rural social structure seems remarkably orderly, cooperative and transparent so a cash system could be quite effective. Close monitoring also helped ensure accurate handling and use of funds.

3.9. Impact on Local Market

Market/Commerce Development: Using cash or coupons at local vendors provided locally-acceptable varieties, and stimulated local seed supply and agri-business. The seed fair, cash grant, and coupon systems developed contacts between beneficiaries and local vendors, which are not done with in-kind supply, even with bulk purchase from local sources. Additional funds from farmers increase local commerce due to “revolving” the cash from farmers.

Effect of Cash Inputs: If the cash/coupon grant inflow exceeds the local market's ability to supply seed, it may cause undue price rise. However, in this program, the input was comparatively small (reportedly 5-10% of the population, and small landholders) and there was no significant price increase. Implementing NGO's monitored local markets and prices (reported as weekly), and reported a stimulating effect, with no price increase due to increased cash input.

Seed In-Kind Inputs: Bringing in seed from outside sources can compete with and/or disrupt development of local seed supply.

Building a Self-Sustaining Local Seed Supply: A frequently-expressed need is to develop local good-seed suppliers and help the local economy, with ability to provide special inputs to help at-risk needy families in emergencies. The “seed bank” approach is a move in this direction, but is neither complete nor extensive enough to be adequate.

3.10. Criteria for Targeting Beneficiaries and Seed Kinds

3.10.1. Level Where Targeting Occurs

Needy woredas/kebeles were identified by woreda officials, and reported “up the channels” to policy levels, where final selection was made, according to budgets. Targeting beneficiaries was done at the local level, where targeters personally knew local people and could select most-needy beneficiaries. It was reported that some needy families were “too proud” to admit their need, while some less needy persons tried to receive relief, but this was resolved at the local level.

Each Kebele DA (Development Agent) office reportedly has 3 agricultural DA’s (in addition to those of other government units): 1 for Natural Resources, 1 for Livestock, and 1 for Crops. A fourth is reportedly being added, for Marketing. The local DA office maintains detailed records on local people, and has regular contacts with them, primarily through the PA.

3.10.2. Targeting/Identifying Beneficiaries

Only “poorest of the poor” local families were selected for seed aid. Selection criteria included small land holdings, weakest assets (not having livestock or oxen), headed by women or elderly, and/or lacking adult male workers. To receive seed, beneficiaries had to have land, in some cases ready to plant. In one case, seed relief was given to widows and elderly without land so seed relief could help them in cooperative efforts. A problem in selecting beneficiaries is selection-committee favoritism for close relations; however, although sometimes nominated for assistance, these were reportedly eliminated if other committee members did not consider them among the “most needy”. Also, woreda officials and NGO staff reviewed nominated beneficiaries (see below for targeting process).

3.10.3. Targeting Seed Kinds

Within local communities, the beneficiary selection committee also identified seed kinds to be supported, based on local crop/variety adaptation, MOA expert advice, and nutritional needs. Crops selected were traditionally grown locally, or needed (as, forage crops). This ensures that farmers know appropriate cultural practices. The cash and coupon systems also allowed flexibility in choice of seed by beneficiaries.

Varieties selected by beneficiaries were those proven under local conditions. Poor farmers have no “risk capital” and are averse to experiments; these seed beneficiaries had absolutely no risk-taking ability.

Perhaps the most common comment was that “local varieties (landraces) are more suited to local conditions, and efforts were to ensure access to seed of these varieties”. This was one reason why cash/coupon grant was overwhelmingly-preferred. Poor adaptation of higher-yielding improved hybrids to local drought/subsistence (low input) cropping was often expressed.

3.10.4. Coordination and Implementation

There appears to be a very good coordination system, largely implemented by the NGO's. The GFDRE has a multi-tiered administrative system which reaches down to the kebele (community) level. NGO and other disaster relief programs are coordinated with and through the overall plan of the DPPC (Disaster Prevention and Preparedness Commission). Relief is also coordinated with the Ministry of Agriculture and Rural Development (MOA), and other "line" ministries at different administrative levels.

NGO's apparently go to great lengths to ensure full cooperation with all levels of government agencies. A rough chart (not official!) of coordination and implementation relations is in Annex 1.C.

GFDRE reportedly is implementing some decentralization of government functions. Communication and coordination moves both up and down, bringing "grassroots" needs to the policy level, and taking policies to the grassroots level. Needs are determined at local levels and forwarded up through channels.

3.10.5. Seed Supply Infrastructure

There is an Ethiopian "complete formal seed sector infrastructure". However, the formal sector, consisting of ESE and a few private-sector units, are focused on profitable operations, with no interest in emergency relief needs (although some seed came from ESE). In fact, reportedly ESE was contracted by CIMMYT to produce some non-hybrid maize seed for emergency use, and ESE charged a price for the seed plus a premium for "yield differences". The ESE manager was not available for an interview during this evaluation.

For emergency-relief seed, there is no available technical production, supply or quality-control infrastructure. For delivery infrastructure, the stakeholders essentially used the infrastructure shown in Annex 1.C.

NGO implementers have local staff, and maintain close contact with government staff and rural families, through this and other relief and development programs.

3.10.6. Information Flow

Information flow, both "up" and "down", appears to be good. NGO's reported close contact with government officials, local groups (PA's), and farm families. Regular meetings and individual contacts are held at all levels, for pre-orientation before implementation, monitoring during implementation, and follow-up. In using coupons, some "drama games or enactments on how to spend your coupons" were held.

3.11. Role of Local Communities in Targeting Beneficiaries

3.11.1. Local Groups

Every community has a local “Peasant Association” (PA), to organize people into a coherent group (and facilitate government contacts and efforts). Reportedly, there are 516 woredas (districts), with an average of 20 kebeles per woreda, and each kebele has a PA. PA’s are “an extension of government efforts”, and have the major role in selecting beneficiaries. Ethiopia apparently has a strong tradition of participation in local groups bringing people together. Reportedly, local groups are organized sufficiently strongly so that group leaders can sign contracts obligating all group members.

3.11.2. Role of Local Communities in Identifying Beneficiaries

Beneficiaries are selected entirely by members of the local community. Major input in selecting beneficiaries is the local PA, with detailed personal knowledge of local families.

3.11.3. Beneficiary Targeting/Selection Process

A committee of local people personally familiar with local families, selects beneficiaries. The committee includes local PA leaders, village and PA elders, church leaders, schoolteachers, the local DA, etc.

The selection process is transparent. The committee is advised of selection criteria and possible number of beneficiaries, and meets to select needy families who fit selection criteria, in open sessions attended by all interested persons. Potential beneficiaries can speak to support their selection. Reportedly, discussions in selecting beneficiaries are “heated and extensive”. However, everything is in the open, with general participation, so that even those eliminated from receiving relief reportedly support the final selection.

The selected list is forwarded “up the ladder” to the woreda level, where the number of beneficiaries is reduced if budget requires. Woreda then forwards it to higher levels which may also challenge/reduce nominations. As requests move up through government channels, reduction of number of selected beneficiaries has been reported, apparently to fit overall plans/funding.

3.11.4. Variations in Needs Assessments

Differences in needs evaluations by different agencies have been reported, particularly at higher levels. As needs assessments move up government channels, they may be revised to levels different from those identified locally, to meet specified requirements. Also, reported differences in seed needs identified by NGO’s and local agencies, as compared to those by other agencies (government, NGO, FAO), were apparently due to different population groups used as the base.

3.12. Quality and Kind of Seed Distributed

3.12.1. Availability of Seed

Ethiopia has the basic infrastructure (seed policy, seed law, research, variety policy, etc.) for a national seed system. The AIQCD (Agricultural Input Quality Control Department, MOA) was established to ensure quality of inputs supplied to farmers, including seed. The Ethiopian Seed Enterprise (ESE, government) produces seed of some 16 field and vegetable crops. However, seed supply and farmer seed-use promotion systems are not yet working effectively, and high-quality certified seed is available in limited amounts and locations, at higher prices. There is reportedly a more-or-less assured market for the small amount of high-quality seed from ESE and private-sector seedsmen, so aggressive production/market expansion to lower-income farmers is not evident. Some 96% of national seed usage is of the “informal sector”, grain/seed produced by farmers and used for seed. Some produce special “seed plots”.

3.12.2. Seed Distributed

A number of improved varieties and hybrids have been released in Ethiopia. However, certified seed of specific varietal purity is not generally available on local markets.

In most cases, especially where cash and coupon grants were used, seed was whatever was on the local market: local varieties/landraces, grain/seed produced by farmers who are not trained or specialized in seed production. These (usually the larger or better local farmers) produce crops which can be used for seed. This “seed” may be purchased (and hand-cleaned) by local vendors and then sold. Some variety names were mentioned, but there was generally no way of knowing varietal purity of the seed.

Beneficiaries selected seed, based on their knowledge and local availability. Reportedly, farmers are often suspicious of seed from other areas, and prefer local landraces of proven ability to “survive and produce at least something” under local farm conditions. They even prefer seed from fields they have seen growing. This is logical, as Ethiopia has three distinct cropping ecologies with different varieties adapted to each. Most maize hybrids are reportedly adapted to highlands, not the lowland drought-prone areas.

3.12.3. Quality of Seed Distributed

NGO’s monitored seed price in local markets and inspected seed quality, mostly by visual inspection, sometimes by purity and germination tests by local DA “experts”. They then selected vendors with the best seed, and invited them to seed fairs or arranged for them to accept seed vouchers, in an effort to ensure that beneficiaries received good seed. The informal-sector seed available to farmers and seed relief is—in formal terms—untested. However, it is relatively simple, under Ethiopia’s climate, to conduct basic testing of seed germination and purity.

In general, quality of relief seed was “the best of whatever was available, informal sector farmer-grown grain/seed”. It was of fairly good quality, as it produced crop stands. There were no specific reports of failure to get a stand. One interviewed beneficiary claimed that he got a poor stand of teff, but the field showed good stands in “normal” places, with poor stand in washed places.

Local seed vendors do not have basic cleaning equipment; they hire women (reportedly paid as little as 1 Birr/day) to pick out impurities by hand. A “good job of cleaning” is done, but is slow, requires more time, and seed quality could be better. Low-cost hand-operated seed air-screen cleaners are available internationally, but not in Ethiopia; these could speed up having seed ready, and improve its quality.

3.12.4. Local Evaluation of Seed Quality

It was commonly reported that “farmers are aware of seed quality, and are able to determine it”, and that “local government experts can determine seed quality exactly”. In many cases, this must be categorized as wishful thinking. Farmer “quality evaluations” generally relate to “grain quality”, not “seed quality”, and do not accurately physical purity, genetic quality, germinability or vigor.

Few if any local experts are trained or equipped in seed quality evaluation. They can make rough estimations, but these are not considered reliable in the “formal” seed trade.

ESE has a central seed testing lab, plus a satellite testing lab at each of its 9 processing centers, but these are primarily internal quality control. Few other labs are reported to have seed testing capability (one visited, at Harar, had basic facilities of a non-operational Seedburo germinator and no purity workboard).

- **3.13. Timeliness and Site of Distribution**

Site: Seed fairs, cash and coupon systems helped get seed aid close to beneficiaries, as most have nearby markets. In general, seed fairs were held where beneficiaries did not have to walk more than 1.5-2 hours to reach the fair. Each beneficiary received only a small quantity of seed, so it was not an excessive burden to carry it home. One seed fair vendor reportedly offered that if 20 or more beneficiaries from the same village purchased from him, he would take them home in his truck. Reportedly, some seed in-kind deliveries were made in the woreda city, causing problems for families to get seed back home.

Timeliness: It takes some time to deliver either seed or cash, but cash/coupon approaches seemed to take less. Money-handling and banking procedures, in some cases, caused some delay, but these were overcome by close communication/coordination, and extending the working time. In general, aid was timely. But, if rains stop soon, some fields will not mature properly. It would be better (and more seed available) if an early warning system could alert the need so cash/coupons could reach beneficiaries 2-3 months before the optimum planting season.

However, it must be noted that in all cases, seed reportedly reached beneficiaries in time to plant at favorable times (assuming a normal rainy season!). This was due to the organization and efforts of the implementers (NGO’s, government agencies, PA’s, etc.).

3.14. Comparative Efficiency

This program, in effect, was a pilot demonstration of the advantages of coupons (as a form of cash for local purchase) combined with seed fairs or selected local vendors. This clearly required less planning, implementation, and management, in spite of requiring increased monitoring and record-keeping. It was more cost-effective, gave beneficiaries a choice in selecting seed, helped develop local markets, helped empower women, created linkages between “poorest” families and seed vendors, and mostly ensured locally-adapted seed. No physical handling of seed was involved, and the program was not responsible for seed losses or damage.

The cash grant was a close second, lacking only assurance that beneficiaries would actually purchase seed from good vendors.

The fundamental difference with these methods (as compared to in-kind supply) is that they avoid physical seed handling, give the beneficiary a choice, and encourage local supply. Their efficiency is indicated by a report from one NGO that some 92% of the funding went to beneficiaries.

In-kind seed relief is less efficient and more cost effective. It requires the implementer to purchase seed (although bulk purchases can lower purchase cost), handle it, ensure its quality and integrity, transport/store/allocate/deliver it to beneficiaries, etc., and invest in facilities and staff. Also, seed may be purchased from areas whose varieties are not adapted to the beneficiary area.

Beneficiaries generally preferred cash, as it was more flexible in how/when/where they spend their aid, gave them more bargaining ability when purchasing, and they could choose their own varieties and seed kind. However, to ensure beneficial use requires pre-aid orientation and post-aid monitoring by implementers. The coupon system was equally effective, and the seed fair combined with coupons was well-favored. Least-liked was in-kind supply, as it eliminated beneficiary choice and did not develop local markets.

3.15. Comparative Cost-Effectiveness

Implementing NGO’s favored cash/coupons as more cost/time-efficient, whether using local vendors or seed fairs. And, more beneficiaries could be served, as funds which would (for in-kind supply) go to delivery systems could go to seed relief. Cash/coupons are favored, even when considering monitoring and orientation requirements.

Some comparative observations on in-kind food distribution/delivery were possible during this review. Noting poor road conditions, slow travel, truck breakdowns, handling/storage efforts, etc., the main advantage of cash/coupons is that they eliminate seed handling and delivery operations.

3.16. Effectiveness in Reducing Food Insecurity

Due to the contacts, organization, communication, and dedication of the implementing NGO's, all methods effectively helped beneficiaries reduce food insecurity. However, cash/coupons combined with seed fairs and local vendors was clearly easier to implement and more cost/time-effective. Seed reached beneficiaries in time for proper planting, while requiring less lead time. Seed relief will significantly reduce food insecurity—if rains are normal or favorable this crop season. Even if the stop before crops mature, a significant amount of fodder will be produced.

3.17. Impact on Beneficiaries

“Before this assistance, many adult workers migrated looking for work. Without seed, they can't plant food crops, so they rent out their land (and get little in return) or borrow money for seed (100% interest, pay at harvest when grain prices are lowest).”

Cash for seed/relief (it is difficult to separate the effects of the two) has had a significant impact on both the targeted “poorest of the poor” and their villages. Social and economic impacts mentioned include:

Seed relief:

1. Farmers can grow their own crops, whereas otherwise they would rent out land and receive much less.
2. Increased crop area planted because seed is available. Land would otherwise not be cultivated. In one case, “76% of drought-affected people could now plant their own food crops”.
3. Better production, higher yields due to good seed and timely, full-rate planting.
4. Some cash crops could be grown, and increase/create income.
5. Better varieties given to farmers (by seed in-kind, GAA) introduce them to improved varieties, and give them a start of improved varieties.
6. Reduce need for food aid (in one woreda, it was reported that food aid needed was reduced by 93%; GAA).
7. Eliminate cost of interest on loans (reportedly 100% interest, paid at harvest).
8. Develop village infrastructure (seed banks), encourage seed supply and vendors.
9. Beneficiaries establish contacts with vendors.
10. Cash and coupon systems increase local market activity.
11. Better health and nutrition due to more food production.
12. Farmers and PA's can use seed bank experience to create food grain banks.
13. Beneficiaries learn to help themselves, make decisions and build capacity.
14. Cooperation and channels develop between donors, implementers and needy.

Cash grant relief (different from seed relief, but similar in beneficiaries/effects):

15. Increase net income, by paying debts in cash, not sell crops at harvest at low prices.
16. Allow farmers to participate in group pooling to purchase assets such as oxen.
17. Improve medical care, by allowing them to see doctors/hospitals.
18. Reduce migration of men looking for work.
19. Increase women's role in family and village affairs, involving them where they had not been consulted before.

20. Farmers learn women are helpful and good in money management, and will “in future consult them and make mutual spending decisions”.
21. Develop community cooperation and participation in group efforts.
22. Improve housing.

All interviewees pointed out similar benefits; the main variation was in degree of benefit, which was uniformly high and positive. “You must go see yourself how this aid has changed their lives”.

Often mentioned, especially by people other than beneficiaries, was “creating dependency on assistance”. This, in some cases, is a realistic concern; for example, “farmers have received assistance in Hararghe for 20 years.” However, interviewees had the feeling, post-program, that aid-dependency was not created, but additional lessons were given, such as money management and involving wives in financial decisions. Assistance helped reduce aid dependency (need for food, leaving land fallow, debts, sharecropping, etc.).

3.18. Spin-off Benefits

Local non-beneficiaries (better-off farmers) were apparently not complaining of benefits given to poorer farm families. Relief methods used usually procured seed from local sources, so other community members (at least, farmers and traders) also benefited from funds spent in the community by beneficiaries. Funds were spent locally, instead of bringing in seed from the “outside” and competing with local vendors. Local business was stimulated, contacts established between buyers and sellers, and new methods demonstrated to help create local agri-business.

3.19. Relevance/Appropriateness to Local Needs

Urgent local need was to provide seed so the poorest families could plant food crops and avoid the heavy losses associated with loans or renting out their land. This seed relief program was designed by implementers familiar with local needs, with major participation and inputs by local people, and thus met real local needs and priorities. Seed was provided in a practical manner, tailored to poor farmer needs and local market supply. The program was appropriate, realistic and effective, in terms of local needs.

3.20. Kind of Seed Supplied

Affected poorest farm populations have little or no risk-taking ability. They should not be given seed which may pose a production risk under local conditions, even if it has greater yield potential under high fertility. Drought relief should provide seed varieties best-adapted to local conditions of low input use and limited water, even if yield potential (under optimum conditions, which do not exist in poor farmer fields) is lower.

Under “ideal” cropping conditions, hybrids usually give highest yields, and should be used. However, they are seldom suited to low-input, unfavorable conditions, where local landraces/varieties may yield less but are less likely to be complete failures.

Because of high yields in research under optimum conditions, some recommend hybrids for all conditions, but this is not realistic. Under low-input subsistence farmer conditions, hybrids may fail, while lower-yielding local varieties still produce something, and thus are less risky. Hybrid seed are more expensive, and in seed/package loans, may force the subsistence farmer into greater expense. Low crop prices at harvest, when the farmer must repay debts, may require using several times as much grain to pay for such seed. A subsistence farmer comes out ahead to spend less on local-variety seed which costs less and, while yielding less, leaves him with more net produce. Also, when the farmer replants part of his grain in the next crop year, hybrids do not maintain their quality. Hybrids should not be recommended for poor farmer beneficiaries under potential drought conditions. Also, high applications of chemical fertilizers may “burn” and damage crops under drought conditions, and should not be recommended. OFDA partners usually provided non-hybrid seed varieties more suited to low-input conditions and replanting.

3.21. Sustainability/Connectedness for the Long Term

3.21.1. Lack of Long-Term Benefits

This program is emergency seed supply, a one-time injection. It will not continue after OFDA funding ends, and only helps carry assisted families over to the next harvest. If the drought continues or another drought comes, poor farmers still do not have food security or increased resilience. Even if rains are favorable, they must sell crops at harvest to pay land taxes and any other debts. They did, however, avoid further asset depletion or more chaotic losses. Emergency injection of seed/inputs does not address the need to develop a local self-help system for the long-run and “lift needy people out of the cycle of poverty and need for external relief, and help them to be self-sustainable”. Coupons/cash grants have more local impact, as they patronize local enterprises and seed production, helping build local markets.

3.21.2. Short- vs. Long-Term Needs

OFDA seed relief had a strong impact on the immediate needs of the “poorest of the poor”, and helped them start food crops without further asset depletion. However, this is short-term emergency assistance. To provide for long-term needs and escape further relief needs, emergency assistance needs to be combined with, or followed by, long-term developmental assistance.

The only way to create long-term, residual benefits is to create a dual or follow-up system to (1) first, cope with the emergency and (2) then help long-term development so they will be more self-sustaining and less likely to need future emergency assistance. In seed

supply, this can be done best by helping local farmer groups produce better-quality “informal sector” seed and make it available to needy farmers.

3.21.3. Effect on Household Assets

This seed relief to the “poorest of the poor”, who had little in the way of household assets, prevented further asset erosion or debts in order to purchase seed. Thus, its impact on their small household assets was positive.

3.22. Coverage of Affected Areas and Populations

OFDA-funded seed distribution reached the poorest in rural populations in most of the severely drought-affected areas. A comment received in regard to the effective coverage of the seed aid was that “this was of critical importance, there are so many people who are poor and in need; many more people could have been significantly benefited by greater funding”.

3.23. Coherence/Fit into Overall USAID Objectives

USAID’s 20-year goal is to reduce chronic food insecurity, through transitory emergency food supply and long-term development. It seeks to balance immediate emergency response with reducing future need for emergency response through prevention, preparedness, recovery and mitigation (“decreasing the vulnerability of at-risk people”). To reduce chronic food insecurity, USAID seeks to enhance the capacity to respond effectively to emergency food crises with local resources. This involves improved family health, enhancing quality and equity in primary education, increasing productivity of rural households, mitigating the effects of disaster, more effective governance as civil society, and improved agro-pastoral livelihoods in southern Ethiopia.

OFDA’s seed intervention (as the basic input to help vulnerable people produce their own food) complemented and was an integral part of USAID’s overall humanitarian and development strategy in Ethiopia.

3.24. “Seed Banks”

Some NGO’s established “seed banks”, better separate seed storages; OSHO established 26 seed banks in one area. These are community-operated storages where farmers safely keep seed until needed, with assurance that it will not be accidentally consumed or damaged, as may happen when seed is stored at home. A bank can serve farmers from more than one village, according to the local need and the bank’s capacity.

When farmers produce a crop, they can store part of it in the seed bank for future use as seed. The seed bank is a first step toward establishing a badly-needed system to produce quality seed for general distribution to farmers.

Seed banks also provide a reasonable-cost form of repayment for emergency seed relief received, and is a means of accumulating seed for future needs.

OSHO used a standard design in constructing seed banks, with three sizes: small (10 x 8 m x 3.5 m high), medium (12.25 x 8 m x 3.5 m high), and large (16 x 8 m x 3.5 m high). The design is quite suitable, but needs minor modifications in:

1. Installing a vapor barrier over existing floor, then covering it with a finish concrete floor.
2. Stacking bags on pallets (not directly on the floor) to provide good ventilation and prevent loss of germination in bags stacked directly on the floor.

3.25. Integration With Other Development Needs

Many needs must be met before food security and self-sustainability can be achieved. OFDA's implementing partners have implemented seed relief as a part of overall development and emergency relief. For example, the same NGO implementing partner may establish local seed banks, distribute emergency seed relief, assist in establishing and maintaining schools and health posts, clean water, sanitation, irrigation water, road building, etc. This integrated approach fosters rehabilitation and long-term improvement.

4.0. EVALUATION AND RECOMMENDATIONS

4.1. Summary Evaluation

OFDA seed relief has been "a lifesaver" and has had significant impact on beneficiaries. Although short-term, the entire program has been timely, effective, essential to the survival of many beneficiaries, and cost-efficient.

This program must be ranked as one of the major stars of USAID/OFDA's portfolio.

Detailed evaluation points are:

1. Seed aid is important and essential, helping beneficiaries produce their own food.
2. It was coordinated into overall assistance, through government approval and coordination from the local level to DPPC at the national level.
3. Using good NGO's working with local groups in collaboration with local DA's and government agencies is the most effective approach.
4. A high percentage of aid funding apparently reached beneficiaries.
5. Recipients were selected so only the most needy, "poorest of the poor", received aid.
6. Local people/groups, who know recipients, were key in selecting beneficiaries.
7. The selection process was transparent, accurate, unbiased, and accepted locally.
8. Needs evaluation, and "early warning" by government, could probably be improved.
9. Seed aid distribution is effective, but could be more effective if delivered 2-3 months in advance of planting time.

10. Aid as cash or coupons is easier to administer, with less logistical effort, allows recipients to select best-suited seed, is more cost-effective, and provides input into the local economy.
11. Formal-sector seed is more expensive, not necessarily adapted locally, and not widely available. Seed available for relief is mostly informal-sector, grain-for-seed. An improved local “informal” seed system would help rural development.
12. OFDA-funded seed aid is emergency-focused, not a long-term self-sustaining system. Its sustainability is limited to “keeping the beneficiaries alive”, helping protect their limited assets and continue cropping for one year. But, it is a key part of the overall long-term USAID strategy.
13. Impact on beneficiaries is quite high, as seed aid enables them to produce food in the next crop (if it rains!), whereas without this relief, they probably could not.

4.2. Why the Program Was Successful

Several reasons stand out, as to why this program was so successful. Among these are:

1. The people (NGO’s!) who implemented the program were unusually dedicated, conscientious and hardworking. Clearly, many of them consider serving mankind as their life’s calling.
2. Advance preparation, despite the short time available, was detailed, pragmatic, and considered local situations.
3. Everyone involved had advance and continued information, training and guidance. NGO staff received pre-orientation and training; Government (woreda, etc.) staff were trained; beneficiaries, PA leaders/members, local officials and respected persons, received advance training, even to a dramatization of spending seed coupons.
4. Training, updating, workshops, etc., were conducted often during implementation.
5. Formats for records, reports, procedures, etc., were prepared in advance, and people familiarized with why/how to use them.
6. Monitoring (extremely important in a cash/coupon system!) was constant, detailed, comprehensive and effective.
7. Procedures used by all NGO’s were more-or-less standardized and formalized, with variations to fit local conditions.
8. Everyone, especially government officials, were made to feel that they were an important part of the program, and had a personal stake in its success. (lack of this is why many development projects fail!).
9. Needs, planning, etc., began “at the grassroots level” and moved upward (not downward!), so that real needs were the basic considerations.

4.3. Immediate Future Needs

Superficial examination of crops during this evaluation indicates a “green drought”—some crops now appear green, but at-risk of not being able to produce normally because of the rain period. This season’s rains appear to be spotty, and in places inadequate. It appears that emergency relief will be needed for the coming crop year.

4.4. Problems

There were few problems; those reported appear to have been:

1. In some cases, OFDA's RFP or fund-delivery was delayed.
2. Insufficient funds to serve all needy people.
3. Beneficiaries were "saved for today, but then they have to face tomorrow from the same level".
4. Emergency aid was not "transitioned" directly into a development effort which would help create self-sufficiency in inevitable future droughts.
5. Seed was not of "formal seed industry", but "farmer informal seed industry". (This is not really a problem, as farmers generally got a stand of a variety/landrace that was locally adapted).

4.5. Recommendations on Emergency Seed Aid

As the cycle of droughts seems to be increasing in frequency, the following relatively minor recommendations are offered.

- 4.5.1. Future Emergency Seed Relief: Should be continued as required. Droughts will continue to occur and seed is basic to producing food, but seed is likely to be lacking for the "poorest of the poor" under drought conditions.
- 4.5.2. Early Warning: Identification of need should be done early, so seed relief is available 2-3 months before planting time, when seed is available at lower prices, and NGO's can work in a more orderly fashion.
- 4.5.3. Identification and Assessment of Need: Should be well-coordinated and complete, so no needy family is left out.
- 4.5.4. Administering Relief: NGO's with local contacts, coordinated with local DA's and government plans, are an efficient delivery means and should be used, to ensure success.
- 4.5.5. Selecting Beneficiaries: The present method of local people selecting beneficiaries, with assistance from DA's and NGO's, is probably the best means.
- 4.5.6. Form of Relief: Seed aid should be preferably as coupons (a controllable form of cash), or alternatively as cash, to minimize delivery cost and problems, give farmers a choice, and support local market/economy. Seed aid should be a grant, and loans avoided (except for kg-per-kg replacement in seed banks).
- 4.5.7. Organizing Supply: delivery by selected NGO's should be continued, to benefit from the infrastructure they provide of leadership, guidance and organization. This should be extended to develop long-term local seed supply.
- 4.5.8. Seed Quality: Should be properly tested and monitored, farmers and local workers trained in seed quality measures, and long-term "informal sector" seed quality improvement should be implemented (see below).
- 4.5.9. Monitoring and Reporting: Present system should be continued, comprehensive, with spread-sheet comparisons/summaries in more standardized format with information more easily gleaned, permits analysis and comparison, and facilitates audit.

5.0. FROM EMERGENCY RELIEF TO SELF-SUFFICIENCY

5.1. Long-Term Need

There is still significant, serious poverty and food insecurity. Transitioning smoothly and simply from emergency aid to self-sustainability is critical. The need is recognized, and included in USAID's strategy. "USAID's Administrator has been a longtime advocate of finding solutions to address the underlying causes of food insecurity in order to break the cycle of famine that exists in the Horn of Africa" (Clark and Westrick, 2004).

Ethiopia has had a continuing cycle of droughts; continuing aid will likely be required and should be planned and available in a self-help form. Even without drought, poor subsistence farmers should have access to yield-improving seed.

5.2. Self-Help and Self-Sustaining System

Almost every person interviewed mentioned, in one way or another, some aspect of the urgent need to develop a system to produce/supply good (informal sector, at the farmer level) seed by local farmers, for local consumption.

To promote food self-sufficiency, a local, self-sustaining informal-sector seed supply system must be developed, with a loosely-organized form of providing good seed in normal years, and emergency seed in droughts. This should not be a high-technology formal-sector seed system. It must be local, informal-sector farmer-oriented, providing better seed locally. Each "unit" should be operated locally, but many units should be established, on a scale sufficient to help the many who need better seed or may be affected by drought.

A means of linking disaster assistance with local development assistance must be implemented, for optimum long-term use of resources, help ensure food security, and develop rural economies.

Some OFDA-assisted programs seem to have begun initial moves in this direction. A practical, recommended approach is modeled below, built from comments received during this evaluation.

5.3. "Creating Sustainable Food Security Through Dependable Seed Supply"

Many expressed the need to **combine emergency relief with a transition into long-term development** to "lift beneficiaries out of poverty so they can help themselves without dependency on external emergency relief". Seed is basic to rural self-help and development; an assured local supply of good seed is the first step toward food security and self-help.

Building on what was discussed in Ethiopia, the following combined transition of emergency relief into development assistance is recommended. This is also based on the worldwide trend toward focusing on the broader informal sector rather than on the limited formal sector.

Development Component:

1. USAID establish and fund a 4-year development project to “create an improved informal seed supply system in Ethiopia, stimulate rural agri-business and ensure local self-help seed and food supply in emergencies”.
2. Implement the project with (A) technical assistance and guidance by a competent technical contractor (for example, ICARDA is ideally equipped and positioned), to provide the technical component for (B) implementation by the same competent NGO’s who provided emergency seed assistance, (3) working with PA’s and government officials (especially local Agriculture DA’s) to (4) create local PA-based seed agri-business for seed production and supply.
3. Primary implementation would be spearheaded by more capable NGO’s such as those with seed relief experience.
4. Select (by DA’s, PA’s, NGO’s, etc.) suitable PA’s in which to establish improved informal “seed agri-business units” (SABU). This involves better farmers producing/cleaning good seed, and making it available to vendors, farmers, relief agencies, poor farmers, etc.
5. To succeed, the project must be large enough to make it an embarrassment to government if it fails! Number of SABU’s established must be adequate to have a significant impact and ensure full government and NGO support. For example, Ethiopia has 516 woredas, averaging 20 PA’s each = 10,320 PA’s; minimum of 250 PA’s (preferably 500) should be in this project.
6. Train DA’s and PA leaders in how to train farmers to produce good informal sector seed (training manual is already available [one is attached hereto in Annex], as is experience in training courses). Provide them with individual and group training materials in Amharic, Oromo, etc. (a staff member of ICARDA Seed Unit is a native Amharic speaker); help them train farmers.
7. Organize in each selected PA a “seed agri-business unit” (SABU) of farmer members. SABU Directors would be PA leaders, DA, NGO representative, farmer members, etc. Workers used in SABU operations would be from poorer families in the PA. In some cases, all production of a PA could qualify as seed.
8. Equip the PA with (1) a small “seed bank” safe storage constructed of locally-available materials with local labor; (2) a small hand-powered seed air-screen cleaner for rapid and adequate seed cleaning; (3) simple bagger; (4) minimum seed testing tools (no germinator—forceps, lens, etc.).
9. Help MOA set up, train basic seed testing facilities to serve farmers, seed suppliers.
10. Arrange with ESE/research agencies to provide seedstocks for SABU multiplication and help SABU’s to grow and improve and ultimately become part of the formal seed system.
11. NGO’s and DA’s work closely with SABU’s, guide, assist and support them.

12. Teach SABU's to make basic "market surveys" to determine amount/kind to produce. Even with market surveys, they can produce significant amounts of good seed with the only extra cost being additional labor. Unsold seed could still be used as grain.
13. SABU's sell seed to farmers, merchants, vendors, other PA's, etc. Poor relief-eligible members of the PA would receive seed (and additional cash) for labor in roguing fields, cleaning, handling, etc. Sales can be for cash or for grain exchange; a 1.5 or 2.0 grain::1.0 seed ratio should cover basic costs.

Emergency Relief Component:

14. SABU's could take care of their own poor PA members by giving them seed in exchange for work.
15. In a general drought emergency, OFDA and other donors could finance purchase of seed from the nearest SABU's, through and supervised by NGO's, for distribution locally to affected PA's/DA's to needy families.

Seed Production:

16. With local cropping and labor, and minimum equipment and storage provided by the project, each SABU could handle 100 MT or more of seed (easily double or triple this, in actual practice), in the operating format of a modified seed bank. Thus, 250 units could provide 25,000 MT of seed of locally adapted varieties, at local sites.

Cost:

17. Such a permanent solution to emergency seed relief could be established in a one-time expenditure of little more than the reported cost of relief for one drought.