

Guiding Principles for Seed Provision in Response to High Food Prices

Introduction

Seed is a farmer's most essential input, no more so than in times of crisis. In order for seed provided to vulnerable rural households to be effective there are a number of principles that should be considered by the organizations involved in these initiatives.

Operational aspects: describes on how seed relief initiatives should be undertaken. Some of these aspects overlap with the guidelines for seed relief that were adopted by the Seed relief workshop conducted in 2003. (See annex1)

Technical aspects: suggestion on strictly technical aspects of seed including crop species and crop varieties, seed quality attributes, seed labelling to verify seed quality, etc.

1. Coordination (operational)

Objective: Efforts to improve seed security in response to high food prices require coordination between national governments, local officials, FAO, NGOs and other partners to achieve maximum effectiveness.

Guidance: A coordination mechanism should exist so that the organizations involved in emergency activities can coordinate their activities, avoid duplication, set standards, and collaborate where possible.

2. Assessment (operational)

Objective: The provision of seed should be based on an appropriate assessment of the need

Guidance: Assessment should be jointly carried out by the host country government, FAO, NGO partners and others that include seed security assessment

3. Choice of intervention (operational)

Objective: There are a number of possible seed-related interventions. These include: Food aid to protect seed; Direct Seed Distribution (including the variant of Local Committee purchasing); Provision of vouchers / Cash to farmers; Seed Fairs (+/- Vouchers); Local seed Production; Support to local grain traders and markets; Access / development of better varieties; and Improving farmers' seed quality.

Guidance: Selection of the appropriate intervention should be guided by objective criteria including assessment, previous initiatives and what is appropriate for the situation.

4. Targeting of beneficiaries (operational)

Objective: Beneficiaries should receive seed based on agreed criteria of vulnerability.

5. Choice of varieties (technical)

Objective: Seed provided to farmers should be of the crops species and crop varieties adapted to local conditions and preferred by farmers

Guidance:

- The relevant officials in the government should approve of the crops and varieties being provided to farmers, varieties provided should be released varieties,

improved varieties that have been tested for not less than two seasons or well-know traditional varieties.

- Farmers in the area of the emergency should also provide guidance on the crops and varieties that they need.
- The crops and varieties should be adapted to the local agro ecologies and known and preferred by the farmers with the right organoleptic characteristics for local consumption and the market.
- Emergency interventions are not the time to introduce new untested crop varieties to vulnerable farmers.

6. Seed Quality standards (technical)

Objective: Seed should be of an “appropriate” quality standard

Guidance: Seed of low quality will not improve seed security. Setting standards that are too high could exclude sourcing seed from local source. Reasonable standards should be established. Whenever national seed quality standards are already in place, they should be used, especially if they higher than QDS. Seed standards lower than QDS should not be used. In FAO emergency the QDS quality standards are used as a minimum standard for seed (see Annex 2). The QDS standards a starting point for determining appropriate standards. FAO is insisting on standards above QDS for vegetable and other crop seed kinds from commercial seed companies to ensure that the seed does not deteriorate before it reaches the farmers and prevent dumping of substandard seed in developing countries by seed companies.

7. Seed Labelling (technical)

Objective: Labels should provide essential information concerning the crop variety in an appropriate way.

Guidance:

- a. **Language:** information in the national and or local language
- b. **Quality:** the quality of the seed should be indicated on the label
- c. **Variety information:** essential variety information include name/local name of basic variety information

8. Sampling (technical)

Objective: The quality of seed should be determined from appropriately drawn seed sample so that the quality can be verified and also to ensure that quality seed is being provided to farmers

Guidance: Seed should be sampled based on the ISTA seed sampling procedures to obtain representative samples. This should be done at the time of purchase and if there is a delay in distribution it should be done prior to delivery to farmers.

9. Quality verification (technical)

Objective: Representative samples of the seed should be tested to verify the quality

Guidance: Seed testing should be carried out of at the time of purchase and later as necessary. Seed testing should be done by qualified national laboratories using ISTA procedures.

10. Packaging (technical)

Objective: Packaging should be of the right size and appropriate material.

Guidance: Careful consideration should be given to the quantity of seed being provided to each farmer and that it is packed in bags that are sturdy.

11. Seed Importation (technical)

Objective: If seed is imported it should comply with the normal import regulations

Guidance: There are regulations on the importation of seed. The crop species and varieties should be approved by the government, a phyto sanitary certification should be included. An import permit may be necessary as well.

12. Vegetative Planting Materials (technical)

Objective: Particular care should be taken that vegetative planting materials are of the right crop species and variety and free from dangerous pests and disease

Guidance: Vegetatively propagated crops are often important for food security in emergency areas. Planting materials of these crops should be considered for emergency operations if the following conditions can be fulfilled.

- Planting materials of the appropriate crop varieties can be sourced
- The planting materials must be inspected by appropriate technical staff to ensure that they do not contain pests and diseases. Pest and disease spread is a major concern with live planting materials
- The planting materials can be quickly transported to the vulnerable farmers so that the materials are in good condition when they are planted by the farmers.

13. Seed Impact Assessment

Objective: The provision of seed should be followed to determine that vulnerable households received the right crop species and varieties, to verify that the seed helped the household to produce a good crop and become more food secure. Also assessment will help determine lessons learned on how seed interventions can be improved.

Guiding principles for Seed Relief:

- Needs assessment should underpin any decisions to undertake seed relief and guide the choice among possible interventions. Such needs assessment should be holistic, putting seed security in the context of livelihood security;
- Seed relief interventions have to be clearly matched to the context (for example, a crisis caused by drought may require very different actions from a crisis caused by war). By supporting food production, seed relief should decrease dependence on repeated food aid;
- Seed relief activities should aim to both (i) be effective with the immediate objective of facilitating access to appropriate planting material; and (ii) contribute to the restoration, rehabilitation or improvement of agricultural systems in the longer term;
- Ideally, considerations of seed system sustainability should be built into seed interventions from the beginning. As a minimum, seed aid should do no harm to farming systems. Thus emergency relief activities should support local seed system development, ideally by integrating long term needs into the design of the project;
- Seed relief activities should be built upon a solid understanding of all the seed systems farmers use and the role they have in supporting livelihoods. The local system is usually more important to farmers' seed security and has been shown to be quite resilient. Depending on the context, the focus in case of an emergency should normally be on keeping the local seed system operational. One practical problem is that seed systems are often not sufficiently understood, especially in emergency situations. Hence there is a need for more emphasis on understanding seed systems, their role in supporting livelihoods, and needs assessment;
- Seed relief interventions should facilitate choice by farmers of crops and varieties. Seed relief interventions should aim to improve, or at least maintain seed quality, and aim to facilitate access to crops and varieties that are adapted to environmental conditions and farmers' needs, including nutritional needs;
- Monitoring and evaluation should be built into all seed relief interventions, to facilitate learning by doing and thereby to improve interventions;
- An information system should be put in place to improve institutional learning and as a repository of information gained from cumulative experience. Such information systems should be institutionalized at national levels, to the possible extent;
- A strategy to move from the acute emergency response to a capacity building or development phase should be included in the design of the intervention.

These are the guiding principles that were developed at the FAO workshop in May 2003
“Towards Effective and Sustainable Seed Relief Activities”

Seed Quality Standards for Emergency Procurement Based on FAO Quality Declared Seed (QDS)

CEREALS	Varietal purity¹ (min. %)	Analytical purity² (min. %)	Germination (min. %)³	Moisture content (max. %)⁴
Maize	98	98	80	13
Pearl Millet	98	98	70	13
Rice	98	98	75	13
Sorghum	98	98	70	13
Wheat	98	98	80	13
FOOD LEGUMES				
Beans	98	98	70	10
Broad beans	98	98	70	10
Chickpeas	98	98	75	10
Cowpeas	98	98	75	10
Dry Peas	98	98	75	10
Groundnuts	98	98	70	10
Lentils	98	98	70	10
Mungbeans	98	98	75	10
Soyabeans	98	98	70	10
OIL CROPS				
Sesame	98	98	70	10
Sunflower	98	98	70	10
INDUSTRIAL CROPS				
Cotton	98	98	70	10
Castor Bean	98	98	70	10

In determining seed quality the working seed sample is separated into 3 fractions, pure seed, seed of other crops (includes weed seed), and inert matter. In the QDS specifications, seed of other crops, weed seed and inert matter should be at an acceptable maximum level.

¹**Varietal purity:** the percentage of the pure seed that will produce plants that exhibit the characteristics of that specific crop variety. This can only be determined through DNA fingerprinting and/or field inspection of seed crop plots.

²**Analytical purity:** the percentage of the seed that is of the same crop species but not necessarily the same crop variety. The balance can include inert matter, weed seed, damaged seed. While regular seed testing procedures may not, in all cases, distinguish between different varieties of the same species, the seeds of different crop (species) can be identified in the seed laboratory by close examination of the seed.

³**Germination:** the percentage of the seed with the ability to germinate and that can develop into plants under appropriate field conditions of optimum moisture, aeration and temperature.

⁴**Maximum moisture content** recommended for safe storage and good germination. Values may vary with crop types (starchy vs. oil/proteinous seeds) and according to local conditions, in particular with environmental relative humidity and temperature.

Seed Quality Standards for Emergency Procurement

Based on FAO Quality Declared Seed (QDS)

VEGETABLES	Varietal purity ¹ (min. %)	Analytical purity ² (min. %)	Germination (min. %) ³		Moisture content (max. %) ⁴
			Local Tender	International Tender	
Amaranthus	98	95	70	80	8
Beetroot	98	95	70	80	8
Cabbage	98	98	70	80	8
Carrot	98	97	70	80	8
Cauliflower	98	98	70	80	8
Celery	98	97	70	80	8
Chinese Cabbage	98	98	70	80	8
Cucumber	98	98	70	80	8
Eggplant	98	98	70	80	8
Leek	98	97	70	80	8
Lettuce	98	97	70	80	8
Melon	98	98	70	80	8
New Zealand Spinach	98	97	70	80	8
Okra	98	98	70	80	8
Onion	98	97	70	80	8
Parsley	98	95	70	80	8
Radish	98	98	75	80	8
Spinach	98	97	70	80	8
Squash	98	98	70	80	8
Sweet Pepper &Chilis	98	98	70	80	8
Swiss Chard	98	95	70	80	8
Tomato	98	98	75	80	8
Turnip	98	98	70	80	8
Watermelon	98	98	70	80	8

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³**Germination:** the percentage of the seed with the ability to germinate and that can develop into plants under appropriate field conditions of optimum moisture, aeration and temperature. For international procurements of vegetable seed the minimum germination should be 80%.

⁴**Maximum moisture content** recommended for safe storage and good germination. Values may vary according with crop types (starchy vs. oil/proteinous seeds) and according to local conditions, in particular with environmental relative humidity and temperature. Local standards should be applied.