

# AGRICULTURE SYSTEM INTERVENTIONS: IMPORTANT PRINCIPLES FOR USAID/OFDA

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Populations at risk of food insecurity often experience heightened vulnerability for as long as they remain dependent on outside interventions for survival. In rural areas, self-sufficiency usually relies on the ability of farmers to produce sufficient food for themselves and their families. In order for this to occur, farmers must have some measure of seed security, or economic and physical access to adequate quantities of good quality seed prior to the planting season. As with food security, the three variables that are central to the attainment of seed security are availability, access, and utilization.

**Seed availability** refers to the seed supply within the affected district, region, or community. It is described according to the desired type, quantity, and quality of seed or planting material available, as well as where and when it can be obtained. Availability may refer both to the farmer seed system and to the commercial seed sector. In almost all regions of the world, each year farmers retain seed from their harvests. In addition to saving seed, some farmers purchase all or part of their seed on the market, either to supplement their own supply or add diversity to their seed selection. Other methods of obtaining seed include seed exchanges, gifts, and loans.

**Seed access** refers to the ability of farmers to acquire the seed or planting material that is available. In some cases, seed may be readily available on local markets, but subsistence farmers are either unable to purchase the needed seed, or may not be physically able to reach the area where seed can be obtained. In many crisis situations, access will be limited to only a certain portion of the population. As seed prices rise, purchasing power will be reduced for many people in the community and they will no longer be able to purchase what they need for the season.

**Seed utilization** refers to both the ability of farmers to make use of seed, once it is accessed, as well as varietal appropriateness. This implies that farmers have the tools, the land, the knowledge, and the physical ability to plant seed, and also assumes that the seed itself is suitable for the environment and well accepted by community members. In some situations, land tenure may play a role, particularly when refugees or internally displaced persons (IDPs) are trying to farm. In addition, tools may be needed following a major crisis, and training may become important in situations where new planting materials are being introduced.

## Defining the problem

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Each disaster will present a different set of challenges and issues, and may also affect certain populations more than others. The disasters that can threaten seed security and seed systems in a given region range from slow onset (chronic) to rapid onset (acute) to complex. The populations most affected may be farmers who must save seeds from year to year, farmers who are forced to leave their fields in response to conflict, or those households with few or no assets to sell to make it through the toughest months.

Slow onset disasters may recur yearly, and can often be predicted on the basis of climate shifts and weather patterns. Early warning systems can be used to monitor rainfall and soil moisture conditions throughout the planting cycle. Low rainfall or prolonged periods of dryness in the midst of the traditional rainy season can stunt or kill plants during their growth period. Drought and ensuing famine are perhaps the most serious threats to populations which are completely dependent on rain-fed agriculture.

Loss of harvest can also result from acute disasters which are more difficult to predict and, therefore, harder to prepare for. Disease, floods, landslides, extreme cold weather, and even fighting in the midst of conflict situations can all lead to the rapid loss of crops, wiping out a family's assets in a matter of days or even hours. In some cases, economic crises may have serious impacts on seed systems. Anything that disrupts the market structure of a region can have devastating impacts on local economies.

Regardless of the cause of the disaster, seed interventions should always be based on a strong understanding of the affected system. In some cases where one would have assumed that local seed varieties would have been long lost, particularly in conflict situations, farmers managed to save seeds or gain later access to important varieties.

It is also critical to time seed interventions appropriately. In most rain-fed agricultural systems, farmers must prepare fields in advance of the rainy season or just after rains begin. If farmers do not have seed, or are not assured of getting seed to plant, this land preparation will not take place. Thus, even if seeds arrive at the eleventh hour, farmers may not be able to get them into the ground in time. In many regions, the agricultural crops are closely tied to the duration of the rainy season, and just a few weeks of delay in planting may mean that the crops desiccate during seed fill, resulting in poor or no harvest.

## Defining vulnerable populations

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When considering seed systems and food security, the most vulnerable populations fall into several categories: those who do not have access to seed due to lack of assets or coping strategies, those to whom seed is not available or available seed is inappropriate, those who suffer labor constraints in preparing land and maintaining fields, and those who have a lack of access to sufficient land to support their families. Interventions aimed at each of these categories will vary, since options for those without land or sufficient labor will be quite different from those who simply lack market access to purchase seed.

Access to seed can be misleading, since families may access seed at the cost of future harvest, weakening their household financial stability in the process. Buying seeds on credit, obtaining seed by promising a percentage of their harvest, or borrowing seeds from relatives may all increase risk and debt burdens for these families, even if rains are good and harvests are higher than normal. In addition, subsistence farmers who rely on hybrid seeds and fertilizers are particularly at risk since they must purchase inputs each year, often resulting in depleted resources and high debt burdens over time.

Quality of seed is also a critical component in the definition of vulnerability, since poor quality crops or varieties unsuitable to a region will never produce enough harvest for families to become self-reliant. It should be noted that even in countries with strong seed systems regularly accessed by commercial farmers, subsistence farmers may not have access to these markets because of low purchasing power.

Even after a fairly good harvest, families may still be vulnerable to post-harvest losses. Community seed banks are seldom a sustainable solution. However, improving seed storage at the household level to

prevent loss to disease, insects, and rodents will often improve the stock of seed available for the next planting at the household level, providing the action takes into account context specific limitations such as raw materials to build storage unit, space, climate, etc.

Knowledge of the situation of each of these groups and their specific sets of vulnerabilities, as well as a good understanding of the regional seed and agricultural systems, are all necessary to ensure that any intervention promotes long-term food security, while bolstering self sufficiency and sustainability.

## Defining appropriate interventions

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Assessing options for seed interventions requires an understanding of how the seed system normally functions in a given region, as well as the coping strategies available to vulnerable farmers. Knowledge about the severity, duration and distribution of the emergency is important to identifying target regions. Monitoring the climate and other conditions is helpful because the situation may change rapidly.

Interventions used to strengthen seed systems in a country will be determined by the initial needs assessment; if farmers are seed insecure, it is important to understand which variables (availability, access, utilization) are responsible for that insecurity, since addressing the wrong component may actually cause further problems over the long term. Practitioners of seed interventions must understand the roles that each of these components plays in agricultural recovery following a crisis and must use this understanding to target interventions accordingly.

Before any intervention is implemented in a region, it is important to determine the origins of seed supply, factors affecting seed security, and how these factors can be dealt with in a sustainable fashion. Perhaps the most important part of this assessment is to distinguish between problems of availability and problems of access before designing a program to address the seed issue. In many cases, the crisis will affect both of these components, but in some cases only one will be affected.

Farmer seed systems vary somewhat from place to place, but they are resilient and often preferred by farmers. Seed availability is often a factor following a long-term drought or a sudden-onset disaster. In these cases, both stored and planted seeds may be destroyed or lost, leaving farmers without seed to plant, and without the ability to obtain new seed through traditional farmer seed systems. In these cases, seed distributions may be an appropriate intervention

- In many crisis situations, *access* will be limited to only a certain portion of the population. As seed prices go up, the purchasing power will be reduced for many people in the community and they will no longer be able to purchase what they need for the season. Interventions should be targeted toward increasing market access for this segment of the community, rather than the community as a whole. Lack of access to seeds should not be confused with lack of availability, because interventions for lack of access are very different from those for lack of availability. Treating access problems with seed distributions may actually cause more harm than good, since local farmers and traders rely on market sales to maintain their livelihoods.
- When *availability* is determined to be the most significant problem faced by a community, seeds are often distributed to a targeted group of local farmers. In some situations, distribution of hand tools may also be appropriate. Tools should not automatically be included in seed distributions; need for tools must always be assessed separately.

- In other cases, *utilization* may be a serious problem faced by the farming community. Seeds may not be of appropriate quality to produce a good harvest. Access to farming lands may be constrained by conflict or the presence of landmines. In other cases, households may be unable to plant fields due to a lack of labor caused either by national or military service requirements, or by serious illness of the most able-bodied family members (e.g. HIV/AIDS, malaria, etc.).

Regardless of the nature of the problem faced by farmers, the ecological impact of any potential interventions should be carefully examined before deciding on an appropriate action, since many problems will only be exacerbated by inappropriate responses. Potential for conflict, particularly related to land access issues, should also be considered and mitigated against as much as possible.

Interventions set in place by USAID's Office of U.S. Foreign Disaster Assistance (USAID/OFDA) are designed to be timely and immediately useful for vulnerable populations. However, any relief or preparedness interventions undertaken in a region should tie directly into ongoing development programs or should set the stage for further development work. Defining appropriate interventions in emergency situations is not an easy task, since conditions will vary greatly between regions and communities. A great deal of information is needed before determining which interventions may be best suited for the situation. In addition to information gathered through a seed assessment, some questions that OFDA may ask for when evaluating potential interventions may include:

- ❑ What are the indications that USAID/OFDA intervention is needed, and when should USAID/OFDA and other USAID bureaus intervene? Specifically, what is the nature and the complexity of the emergency, and what are its effects on farmer and formal seed systems?
- ❑ How likely is it that the system will recover without interventions? What problems do farmers in the region identify, and what actions have they taken to resolve those problems? In short, will existing coping strategies be sufficient for recovery? How can USAID/OFDA interventions build upon coping strategies of the targeted population?
- ❑ What is the estimated severity and duration of the emergency? What is the recent history of emergencies in the area – are farmers still recovering from a previous disaster? What are the potential losses in farmer assets if conditions remain unchanged or if they worsen?
- ❑ What interventions are being considered for the area, and what are the costs and timeframes involved for donors who must organize and administer particular interventions? How will seed interventions influence or be influenced by other interventions? How will linkages of interventions affect response capabilities? What are the potential effects of the seed interventions being considered? Has there been success with similar approaches in the past?
- ❑ What is the expected length of time that will be needed to rebuild the seed system? Does OFDA have the resources and commitment to continue funding until the need is met? If not, what interventions would best start the process to recovery without causing serious harm when funding ends?
- ❑ How well do the NGO's proposing to work in the region understand local capacity? Are aid workers aware of community groups that currently exist in the area, and do the projects they propose serve to strengthen local systems rather than undermine them?

# AGRICULTURE SYSTEM INTERVENTIONS

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Agriculture system interventions in a region generally should support the actions of the local populations, but which of those actions to support is a difficult question to answer. Interventions must be planned within a systems context, taking into account the people, crops, livestock, natural resource base, government policies, accessibility, market factors, cultural norms, nutrition shortfalls, infrastructure, and the interrelationships among all of these factors. Effective solutions require that interventions cross sectoral boundaries. Even within a farming community, households may be diverse in terms of livestock, available labor, and social networks; interventions may need to address these differences at the household level. Widespread community support is one of the best indicators that an intervention will meet with success.

## Provision of seeds and tools (blanket distribution)

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Blanket distributions of seeds and tools assumes that availability of seeds is a problem within the region of intervention and that transport of seeds into the area by local vendors is either not possible or unlikely. Access may also be a problem, but the primary cause of seed insecurity is the lack of seed available for purchase. In these cases, the intervening agency will purchase seed from another location, and transport it to the area of need for a widescale distribution to farmers. The implementing agency will decide what kinds of seed to distribute, what varieties to distribute, and how much to give to each farmer. Community input may be included in the decision making process, but seed packages will not be tailored to individual farmers.

The *advantages* to blanket seed distribution programs include:

- ❑ Less lead time needed prior to distribution.
- ❑ Seeds get out more rapidly which can be helpful when rains are imminent.
- ❑ When seeds are not readily available on local markets, the seeds can be purchased in other regions or even neighboring countries assuming climatic, cultural, and agricultural conditions are compatible.
- ❑ Quality of seeds can be more rigorously monitored through pre-distribution lot testing.

The *disadvantages* to blanket seed distribution programs include:

- ❑ Lack of farmer choice or input resulting in seeds that may not meet local varietal or taste preferences.
- ❑ Lack of collaboration with local farmer groups, since distribution is not usually used as extension opportunity.
- ❑ If not closely aligned with real seed needs, distributions can distort the local markets.

Other considerations when undertaking a blanket seed distribution program:

- ❑ Seed quality issues: For blanket distributions where seeds are purchased from a certified vendor, seed grower certificates are required by USAID. If these certificates cannot be obtained by the grantee, the grantee is required to document their files to indicate what quality assurance practices were followed in lieu of the certification. These files should be available for inspection if requested by USAID/OFDA.

- ❑ Effects on markets and vendors can be extremely negative if a proper assessment is not done prior to distributions and access is actually the issue.
- ❑ Blanket seed distributions should never be used to test a new variety of seed. Farmers should be familiar with the varieties provided, and families must be accepting of the variety, including taste and performance.
- ❑ Timing is critical. If seeds cannot be provided in time for planting at the start of the rainy season, it may ultimately do more harm than good to distribute seeds late, and the seeds may actually become an expensive form of food aid.

## Provision of seeds and tools (seed fair and voucher distribution)

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Provision of seeds through a seed voucher program assumes that access to seeds is a problem, but that appropriate seeds are available for purchase in the region of intervention. Vulnerable farmers are issued vouchers worth a certain amount of cash value, and are free to use those vouchers to purchase whatever kind of seed they prefer. In some cases, seed fairs may be organized, allowing all vendors to assemble at a given time and place for voucher recipients to spend their vouchers. In other cases, access to the local market may be sufficient. Following the seed purchase, vendors receive the cash value of the vouchers from the implementing agency.

The *advantages* to voucher distribution programs include:

- ❑ Farmers are able to choose what they would like to grow, and this can more closely mirror what they want to consume, what they know their land will produce, or what they have experience cultivating.
- ❑ Farmers are able to choose who to purchase seed from, allowing a local mechanism of quality control.
- ❑ Farmers are generally risk averse with limited resources. With this mechanism, they can get the seeds that they need at a fair price but may also be more likely to try a small amount of a new variety or new crop. This is an excellent method for introducing improved seeds to farmers, since they can choose to try planting a small amount of seed. When linked to demonstration plots, which allow farmers to see the advantages of the improved seed, this is particularly effective.
- ❑ Both national and international agriculture research centers can use seed fairs and vouchers as a means to get their seeds into the local market. This works best when demonstration plots or other farmers have already showcased the research center's crops.

The *disadvantages* to voucher distribution programs include:

- ❑ It may be more difficult to confirm seed quality through traditional testing methods prior to purchase. Since USAID's requirements for seed certification remain unchanged, regardless of distribution method, it is imperative for grantees to document their files to indicate what quality assurance practices were followed.
- ❑ The reimbursement of vendors requires cash transfer, and this may be difficult or dangerous in insecure areas.
- ❑ Planning the seed fairs takes time; this may not be the most appropriate distribution method to use when seeds must get out within a very short period of time.

## Multiplication and distribution of improved seed

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In some cases, the quality of local varieties of seed may degrade over time, a disease or pest may become more prevalent, or regional droughts may become more frequent. Once local varieties are no longer high-yielding in an area, the introduction of improved seeds may become critical to the long-term food security of vulnerable households. These improved seeds may either be new varieties produced by traditional breeding methods for increased yield of pest resistance, or they may be varieties that farmers are accustomed to, but with higher quality and purity levels than the stock they were using.

When considering the introduction of new seeds to a region, it is always a good idea to involve farmers to the greatest extent possible. The use of demonstration plots to showcase the new varieties is a particularly good way of either getting farmers interested in a variety, or determining why such varieties will not be accepted. In some cases, extension training may help to move farmers beyond certain unrealistic expectations.

Once the demand for improved seed exists, multiplication (preferably in irrigated plots) can be undertaken to increase the availability of seeds. Multiplication can be done through farmer cooperatives, commercial seed enterprises, agricultural research stations, or through the U.N. Food and Agriculture Organization (FAO). Distribution of small sample packets or through seed fairs is the preferable means of disseminating these multiplied seeds.

## Provision of traction

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In some cases, the lack of traction (animal or mechanical) may be a significant impediment to planting, particularly if time is short (e.g., end of conflict immediately prior to start of rainy season). In these cases, the provision of traction through tractor subsidies or provision of draft animals may be even more important than seed distributions. It should be noted that provision of subsidies is not a sustainable intervention and should only be considered as a one-time activity if circumstances warrant. Provision of animal traction should only rarely be considered since animal restocking comes with its own sets of issues. (Please see the Livestock Guidelines for more information.)

## Seed banks or seed storage programs

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Because of the poor sustainability of community seed banks, USAID/OFDA encourages partners to look at seed storage programs at the household or farmer group level rather than at the community level. Improvements to traditional seed storage systems are likely to be the most effective means of reducing post-harvest losses. If community seed banks are considered, the following issues should be carefully addressed:

- Sustainability once the NGO leaves the area. Since most NGOs fumigate the seed storage areas at fairly great expense, it is critical to consider how pest and disease control will be handled once the seed bank is turned over to the community.
- Long-term maintenance. Who will be responsible for the normal maintenance of the seed storage area? Who has access to the contents, and under what conditions? How will seed

- bank committees function, and how will oversight of these committees occur over the long term?
- Crop failures. If drought hits the region, how will the bank compensate? How many years of contingency are built into the seed bank's system, and what happens if the bank runs out of seed? Will the doors close, or does the community have a way to rebuild the mechanisms without further NGO intervention?

## Kitchen gardens

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Kitchen gardens are increasingly being considered by implementing organizations to strengthen the link between nutrition and agriculture, and to allow production of high-quality crops close to the home. These are especially advantageous in situations where labor may be limited due to conflict or among populations hard-hit by HIV/AIDS infection. Kitchen gardens have also been used successfully where the amount of land available for planting is limited, either due to land tenure, conflict, pressure on available land resources, or displaced populations residing in host communities without claims to land to farm in. Kitchen gardens are often vegetable-based, which has the advantage of providing short cycle crops that can be hand watered if necessary. Vegetables such as peppers, tomatoes, garlic, onions, and okra can allow for the diversification of nutrient-poor diets, and may yield enough for households to sell some of their production on the local market.

## Training, extension, and education

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Training and education programs, including agricultural extension, may be important to improve productivity in agricultural systems or to increase local understanding of land management. In these situations, extension services may improve productivity, and training may increase overall sustainability of the systems. Programs to fund advanced training can all increase local capacity, improving sustainability and having a long-term impact on the local communities.

Training and extension programs can also be used to introduce farmers to new varieties of crops that might be better suited to a region, either on the basis of improved yield, disease resistance, pest tolerance, or improved nutritional characteristics. Use of demonstration plots, as discussed above, can be an important part of farmer training. In all cases, programs which understand farmer knowledge in a local community and seek to respect, enhance, and build upon that knowledge are often the most successful.

## Irrigation systems

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While seeds should be promoted that best fit a realistic view of the climatic situation in an area, there are numerous examples of small scale irrigation projects that have maximized production of small plots of vegetable crops. These include:

- Drip kits. These consist of large plastic drums for collecting water (either catching rain, pumping into or hand filling the containers), with perforated tubing delivering water to individual plants.



- Treadle pumps. Used near streams, rivers, or ponds, these pumps function by foot action on the part of the farmer. The farmer can pump large volumes of water to fairly large plots of land in a relatively short time.
- Hand watering with watering cans and rain harvesting.

As with all other interventions, it is essential to follow the “Do no harm” philosophy. In the case of any water usage scheme, use by one farmer should not harm water supplies for others by drawing too much from the system. Consideration of all community members is key, not only the project beneficiaries. Equity in programming and use of natural resources helps mitigate conflict.

## Diversification of assets

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Diversification of assets can be an important intervention in areas that are chronically vulnerable to disasters. These programs may involve women's groups and other community groups in planning and implementation and may be particularly important in territories where women have some degree of autonomy. Retraining farmers to use other trades and skills can also help them to provide income for their families during times of hardship.

One of the most promising means of diversifying assets is through the use of livelihood fairs. Much like seed fairs, these livelihood fairs bring vendors together on a specific date, and provide vouchers for vulnerable farmers to access a variety of livelihood options. Depending on region and culture, the fairs may include small livestock, tools, seeds, mosquito nets, plant cuttings, packages of fertilizer (see below), larger animals for groups of farmers to purchase, crafting materials, looms, beekeeping materials, fishnets and fishing equipment, and numerous other options. Voucher holders can then choose what to spend their vouchers on, often leaving the fair with more than one livelihood input.

Additionally, programs encouraging transformation of agricultural products into value added products are key in transitioning from relief to development. For example, the farmer that is able to dry tomatoes and store them to sell on the market when prices are high will be less vulnerable than the farmer who is forced to sell his/her crop immediately after harvest, when the markets are flooded and prices are low.

## Early warning systems linked to early response

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Numerous early warning systems are in place throughout the developing world to warn of imminent or upcoming drought, floods, and other disasters. Response planning to follow early warning is critical in order to intervene appropriately when these systems sound a warning. Response planning mechanisms and interventions should exist within each community and should allow for rapid response on the part of those districts. All planned interventions must be community-based and should take into account the needs and priorities of local groups. The interventions must take all local context and capacities into account.

## Systemic changes to agricultural systems

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In many cases, a switch from long-cycle crops to short-cycle crops can help to provide a more rapid recovery following a food and/or feed deficit. While short-cycle crops often don't yield as much as their long-cycle relatives, they can cut a month or more off the growing cycle, allowing yield to be harvested and available to consumers fairly quickly following a disaster. In agropastoral systems, animals may rely on stalks and residues of crops harvested for grain. For example, some sorghum varieties are short-season, and can be used both as a grain for humans and as an animal feed. In other areas, root crops may be more appropriate than cereals and grains, which require high rainfall and good fertility. Many root crops produce residues that provide high-quality fodder for livestock, and are well adapted to low moisture and low fertility.

In areas where significant fluctuations in the traditional rainy season patterns appear to be consistent from year to year, the crops that have been grown for decades may no longer be appropriate for the region. Maize, for example, requires more water than sorghum or millet crops, which were commonly grown throughout Africa until maize became the staple of choice in many countries. This shift to a crop that is less drought-tolerant has likely impacted household food security in many regions and may be at least partially reversed by crop diversification. Encouraging farmers to incorporate more drought-tolerant staples in their fields will reduce risk and likely increase food security in areas that are prone to rainfall deficiencies.

## Increasing soil fertility

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In many cases where soil nutrients have been depleted due to leaching or continuous cultivation, the addition of even small amounts of fertilizers (organic or inorganic) can increase crop productivity significantly. Provision of fertilizer packets can be done in a similar way as seed provision, through direct distributions or by including them in livelihood or seed fairs for purchase at farmer discretion. (See restrictions on fertilizer purchase described below.) Training in the production and use of organic fertilizers (compost, manure) may allow for a more sustainable means of improving soil fertility over the long-term. These methods are particularly important in areas where fertilizers are prohibitively expensive or unavailable or where farmer indebtedness is a problem. Incorporation of leguminous crops into a rotation (or intercropping system, if sufficient water is available) can also increase soil nitrogen levels, boosting yields. Leguminous crops commonly planted include peanuts/groundnuts, lentils, and haricot beans.

The *advantages* of programs to increase soil fertility include:

- ❑ Use of organic or inorganic fertilizers may boost harvests to the point that farmers are able to feed their families for an additional amount of time, protecting household assets during that period.

The potential *disadvantages* of programs to increase soil fertility include:

- ❑ The hidden risk of such programs is dependency, with farmers so accustomed to the use of inorganic fertilizers that they are willing to go into debt each year to purchase them or delay planting until they can access fertilizers.
- ❑ Improper and/or excessive use of fertilizers can lead to environmental problems such as eutrophication of water sources, salinization of soils, and fertilizer burn.

Other considerations:

- ❑ The proper choice of legume will add nitrogen to the soil, and the crops have the added benefit of providing a good source of dietary protein. Care must be taken, however, when introducing legumes to a region since these plants require the correct soil bacteria to allow nitrogen production, and since farmer acceptance is critical for the successful introduction of any new crop.

### Purchasing fertilizer with USAID/OFDA funds

Fertilizers are considered to be “restricted commodities” under USAID policies, but this does not mean that USAID/OFDA does not provide funding for fertilizers. The following issues relate to the USAID restrictions on fertilizer purchase:

1. Restrictions are placed due to the issues of "Buy America" and price parity (and the impact that large USA fertilizer purchases could have on availability). However, there are **no** limitations on the quantity of fertilizer that can be purchased locally – USAID policies regarding fertilizer (and special approvals) do not apply to locally-purchased fertilizer, only to fertilizer that is purchased elsewhere. (The focus is on where the fertilizer is purchased, not where it's produced). Local purchases do not pose any particular problems administratively or bureaucratically.
2. Regardless of place of origin, specifications (as per the USAID Commodity Eligibility Listing) **must** be followed, but the specifications only deal with inorganic fertilizers. There are no specifications on organic fertilizer.
3. Any non-local purchase of fertilizer must be approved and may be problematic because of the time required to get the special approval.

When USAID/OFDA funds a proposal that includes fertilizers, a special provision is included authorizing the local purchase of fertilizer, and making the grantee responsible for compliance with the specifications in USAID Commodity Eligibility Listing (to the extent that there are specs for the particular type of fertilizer). The specifications are merely meant to ensure the quality of the fertilizer so that it will do what it is intended to do, thereby safeguarding the use of USAID funds.

## Use of pesticides

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Pesticides are considered to be a restricted commodity, and must comply with USAID's environmental regulations (22 CFR 216). Special permission for pesticide purchase must be granted before USAID funds can be used to procure pesticides. In almost all cases, potential grantees will find it easier to find other sources of funding for pesticides and to remove such requests from proposals to USAID/OFDA.