Fact sheet

Seed Systems

About Seed Systems

Good quality seed is a critical starting point for ensuring good yields. Most countries have both formal and informal seed production and distribution elements (Figure 1). While new seed is often introduced through the Government, the common source of seed then often becomes farmers own seed or farmer exchange. As a result, many times, seed purity, health and viability are lost and farmers end up planting poor seed.

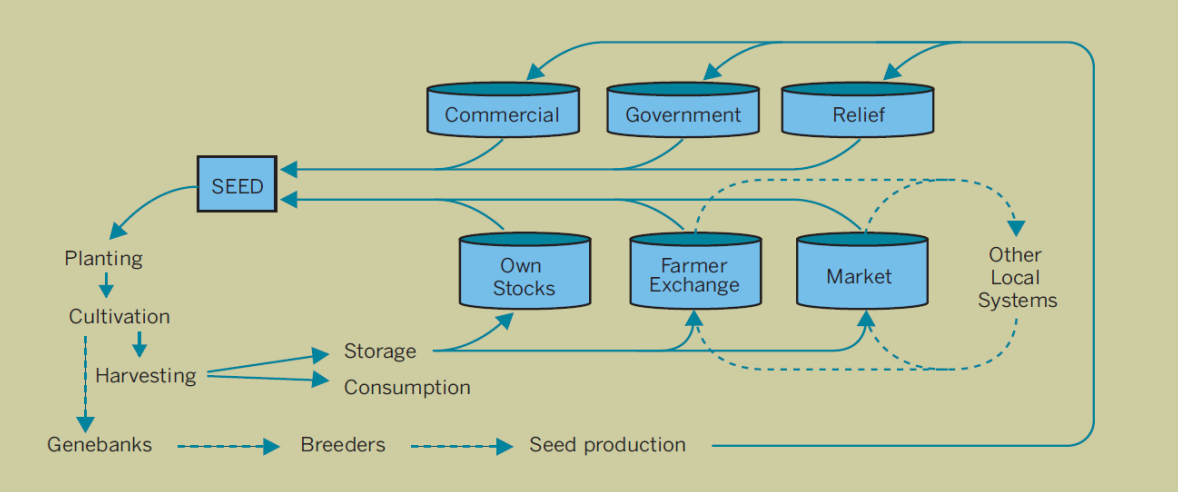

FIGURE 1: Channels through which farmers source seed are depicted by the cylinders. Own seed stocks, exchange with other farmers and purchase through local grain markets constitute informal channels. Commercial seed stockists, government or research outlets and relief supplies constitute formal channels. Adapted from Almekinders and Louwaars (1999), appearing in Sperling, Cooper and Remington, forthcoming).

(Figure from CRS)

Improving seed and seed systems

There are six primary ELEMENTS TO consider in an effective seed system.

Step	Primary elements to review
1. Seed source and seed rates	How much seed do farmers use and where do they get their seed? Do they keep their own? Buy from other farmers or buy from seed suppliers, or…? **Note:** If farmer seed rates are very high, it may indicate a problem of seed quality – although farmers sometimes use higher seed rates to ensure a good stand (due to other factors such as pests, etc.)
2. Production	For each major seed source, identify seed management and movement practices. Who handles the seed? What is the purity of parent material? What are the field, harvest, processing and packaging practices?
3. Quality assessment	How is seed quality (germination, varietal purity, size, absence of diseases and insects, etc.) assessed and maintained both in the field and after harvest?
4. Storage*	Who stores seed, how long and what are the storage conditions? **Note:** Increased temperature and moisture during storage reduce germination and viability of seed. Insects can often damage seed.
5. Distribution	Who is involved and how is seed stored and handled during transport?
6. Planting	How is seed stored prior to planting?

* Hermetic (sealed air-tight) storage is a good way to store seed when dried.

All Seeds are not the same

Hybrid seeds (such as many maize varieties) often exhibit higher vigor and yields – if adapted to the area. These seeds require special seed multiplication conditions. For Hybrids, the pollen from one plant is used to fertilize a different plant to give the hybrid seed.

Reference: CRS. Seed Aid for Seed Security. 6. Practice Brief.

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