Small seed packs, efficient approach to reach hard to reach in drought prone areas: experiences from Kenya

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Abstract

This study aimed to increase farmers' access to certified bean seed in marginal/drought prone areas of Kenya. Beans are important food crop in Kenya and grown mainly by small scale farmers in drought prone areas. Access to certified seed of improved bean varieties is mainly through relief. Despite the presence of more than 70 seed companies operating in Kenya, only two companies market bean seed particularly to government and humanitarian organizations rather creating a sustainable seed market. One of the mentioned reasons is lack of business profitability and unreliable market in bean seed. In partnership with a seed company, NGO and public organizations, CIAT-PABRA/KARI set up marketing trials to establish the affordability, marketability of small seed packs (100-2000g) and how to sustain their supply. It was noted that during farmers' meeting and field days, farmers particularly women prefer 100g (USD 0.13) and 250g (USD 0.66) while buying from agro-dealers shops, farmers prefer between 500g (USD 1.05) ,1000 g (USD 1.91) and 2000g (USD 2.63) . While public organizations and CARD (NGO) sold 50% and 35% of their stocks respectively, the seed company through its agro-dealership sold almost 90% of its stocks. Small seed packs are useful tool to access certified seed (of improved bean varieties to a large range of farmers (rich and poor and men or women) and also provide an opportunity to build private sector capacity in the dry land . For instance Dryland seed company has already started using small packs for beans, cowpeas, mungo beans and maize in 500g, 1kg and 2kg rather five kg packs.

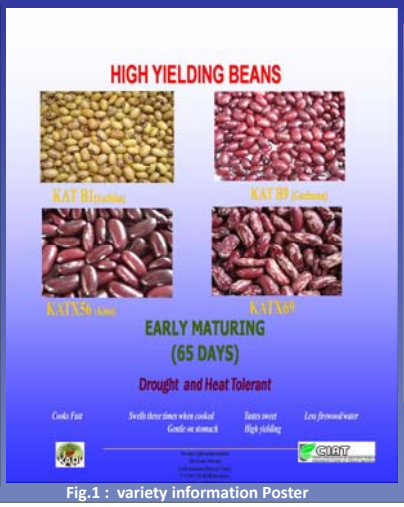

Fig.1 : variety information Poster

Process of marketing small seed packs

1. Certified seeds were packed in 100g, 250g, 500g, 1000g and 2000g, and heat-sealed with clear plastic packets.
2. Variety information has been printed on posters and leaflets to assist promotion (see Fig. 1) .
3. CARD sold seed through a few selected agro-dealers and through seed fairs on cash
4. KARI sold its seed through (1) farmers meetings (2) seed fairs (3) open market and its office
5. Dry Land Seed Co (DLSCo) sold seed through its established agro-dealers' networks (some times on loan)

Formal bean seed systems in Kenya:

Kenya is also one of the few countries in sub Saharan Africa with a relatively well developed commercial seed sector. However, while about 70 seed companies operate countrywide, only four market bean seed– and these concentrate on old varieties, released before the 1980s and . Their supply which is about 2% of national bean seed requirement , target particularly organizations (GOs/GOs) supplying relief seed mainly in drought prone areas packing in minimum of 2kg . This leave them with little room to build an effective bean seed demand . Seed companies see little profit in beans seed and unreliable market, as compared to trade in crops such as maize or garden vegetables because farmers recycle bean seed for as many as 5-7 seasons (!). The Kenya Agricultural Research Institute (KARI) released four varieties which are greatly appreciated by farmers and consumers due to their outstanding food and market traits and their ability to produce well in high stress, even drought prone zones. The issue is how to efficiently and sustainably reach 100,000s of farmers in semi arid areas with these drought varieties .

Use of small seed bean packs to target farmers in dry lands

The small pack approach (100 g or less) had been successfully pioneered in Rwanda by CIAT in the early 1990s. Farmers were unusually interested in the new varieties,and were ready to pay for small, risk-free amounts of certified seed. The action research solved a number of challenges : how to make new varieties, and high quality seed available to farmers; how to make them affordable., and how to make them geographically accessible. The concept was not taken up by commercial sector due to lack of active seed companies in Rwanda.

In Kenya, novel public- private sector partnerships agreed to test the new marketing approach– geared to smallholder farmers, and those particularly living in high stress drought- prone areas. **The Kenya Agricultural Research Seed Unit (**KSU) , **Dryland Seed Co Ltd** (DLSCO) and **CARD** – a local NGOs participated in the test whose objectives were:

1. To identify the farmers preferred bean seed packs
2. To assess the efficiency of different seed channels
3. To stimulate the commercial seed company to use the approach .

Where were small packs sold?

The small seed packs were marketed in drought prone bean growing areas of Kenya (East , West and Central Rift Valley)

Who were the buyers of small packs?

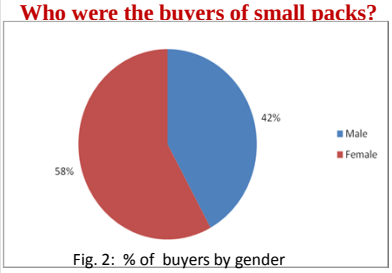

Fig. 2: % of buyers by gender

Fig. 3: A female farmer buying multiple varieties from local agro-dealer supplied by DLSCo

Results

The relative seed sale per channel varied based on the seller (Table 1) . It was higher with DLSCo due to the use of existing marketing structures and strategies compared to KARI and CARD. Famers were willing to pay for quality seed especially if they are marketed through trusted source and existing marketing channels

Table 1: Amount of seed sold per pack size and seed channels

Seed channels KARI	Pack size in gms				Total amount of seed sold	Total amount sold (kg)	% of seed sold vs stock
	100	250	500	1000	2000		
KARI	1200	800	1600	700	500	2022.1	50
CARD	41	57	28	12	33	150.35	35
Dry Land Seed Co	5500	0	6400	4000	3500	14750	90

Lessons learnt

1. The majority of buyers were women especially for smaller packs (see Fig. 2 &3)
2. The experience encouraged DLSCo to sell affordable bean packs and extend to other legume crop (cowpeas , pigeon pea
3. Farmers prefer to buy the 100g and 250g particularly during field days and meetings
4. Farmers prefer who buy seed from the shops prefer 500 and 1000 gs)
5. Even in semi –arid land areas, farmers are willing to pay for quality seeds at conditions that
    1. Variety responds to their need (adapted and marketable)
    2. Seed is of new variety and packed in affordable pack
    3. Seed is closer to farmers and from reliable stockists (working with seed company)

Take home messages

1. Small packs make high quality seed, from trusted sources available to small holder farmers predominantly women.
2. With limited cash, farmers had access to multiple varieties as they can afford several packs of different varieties (see Fig.3).
3. Stimulating private sector interest in marketing small packs is more efficient (90% sales) in accessing seeds to farmers and provides an opportunity to private sector to broaden then their clients (uncovered demand) and to introduce new varieties particularly across crops.

Acknowledgement:

- BMGF, SDC , CIDA and Government of Kenya for their support to PABRA
- Kenya Bean Research Programme, Dryland Seed Company Ltd., and other bean value chain actors.

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