

ENHANCING SEED AVAILABILITY VIA SMALL SEED PACKS



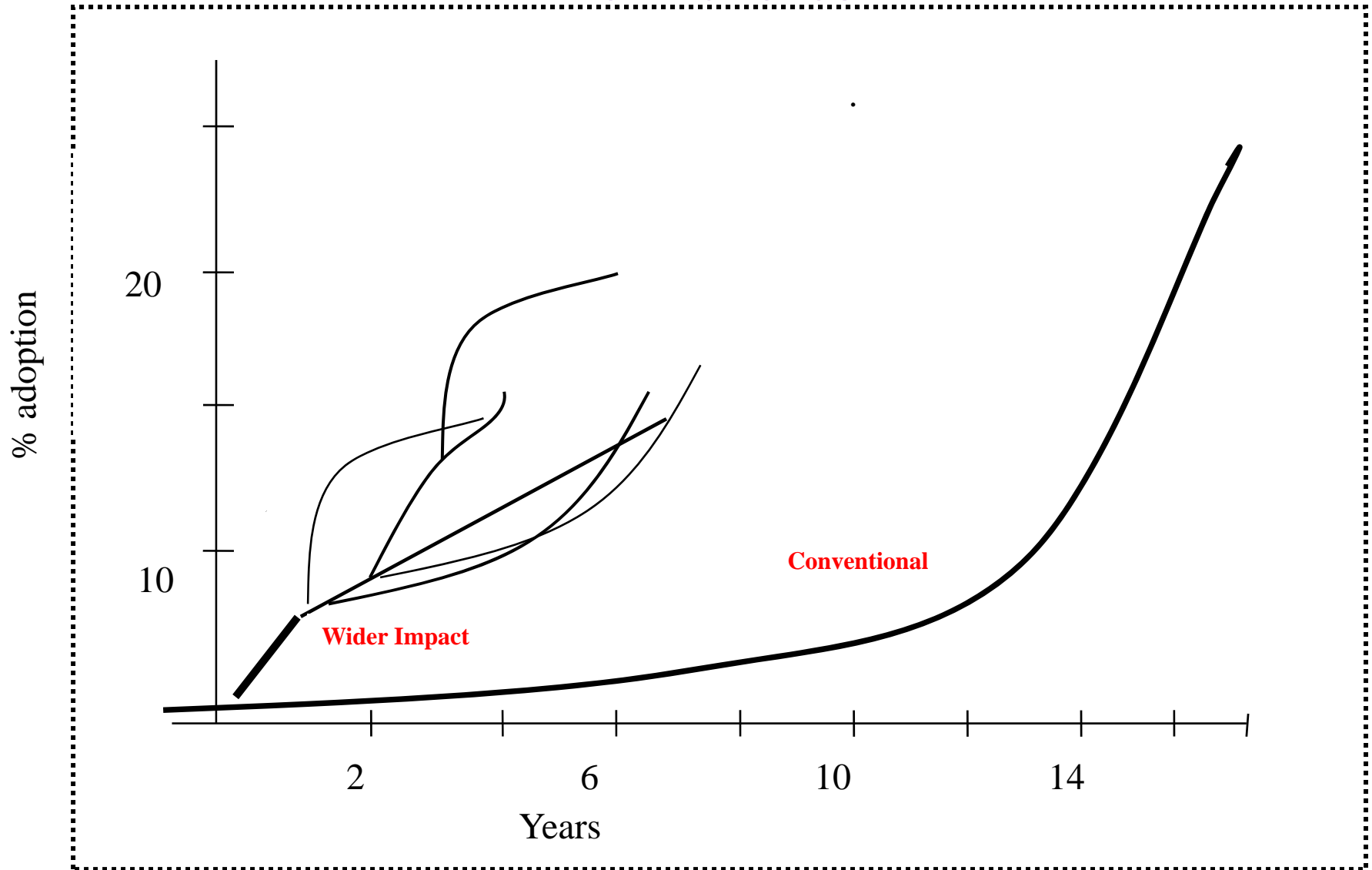
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What is the problem

- Productivity constrained by moisture and heat stress, declining soil fertility, poor crop mgt practices, limited access to quality seeds and markets
- There is low bean productivity in medium potential and drought prone areas of East Africa due to
 - insufficient appropriate technologies,
 - poor linkage among value chain actors,
 - low rate of technology dissemination and
 - inadequate/unavailability of good quality seed of improved varieties (SEED ACCESS).

Dissemination of technologies – pathways – especially new varieties



Source : Louise Sperling

Good seed quality characteristics

- The seed is viable and has vigour
- Not discolored
- Not shriveled
- Disease and insect damage
- Grain not broken
- No trash, straw, dirt, soil and stones in the seed

Good seed required

- Seed of popular varieties important



Seed small packs dissemination pathway



Pack Size

Size	Price
100g	20
250g	50
0.5kg	90
1kg	175
2kg	340

- Land sub division – many crops & varieties
- New varieties – availability to more farmers
- Purchase power versus open market grain
- What ranges of crops can use this model

Crops like wheat can have 5kg, 10kg, 20kg as mall packs

Small packets approach

- Research shows that in most areas, small scale farmers adopt a variety, if they have seen it grow (prior promotion), if none small packs essential
- New varieties
- Small packets cater for poor to rich farmers



Partners in small seed pack pathway

- Seed companies (private & public)
 - Need to buy in (is there market & volumes)
 - Sustainability assured
- NGO's
 - Mobilising farmers & moving technology
 - Seed procurement
- Regulatory agents
 - Quality seed
- Financial institutions
 - Credit support

Targets & Marketing small packs

- Need to work out quantities of each seed pack (e.g 100g will have a lot of seed packs – how many farmers to buy)
- Subject to seed availability
- Number of varieties available
- In making the targets of sizes to pack need to consider:- locality, purchasing power, land sizes, importance of crop etc

Targets for small pack beans

- Packaging of bean small packs in 2011 by KARI

	Number of packets per variety				
Pack size	KAT B1	KAT B9	KATX56	KATX69	Total
100g	1,500	2,000	5,000	1,500	10,000
250g	1,800	2,400	6,000	1,800	12,000
500g	690	920	2,300	690	4,600
1kg	330	440	1,100	330	2,200
2kg	113	150	375	113	750
Total	4,433	5,910	14,775	4,433	29,550

Targets of small pack beans by Dryland Seed Company Ltd in 2011

	Number of packets per variety			
Pack size	KAT B1	KAT B9	KATX56	Total
100g	2,300	1,000	2,200	5,500
500g	4,000	400	2,000	6,400
1kg	2,000	500	1,500	4,000
2kg	1,500	750	1,250	3,500
Total	9,800	2,650	6,950	19,400

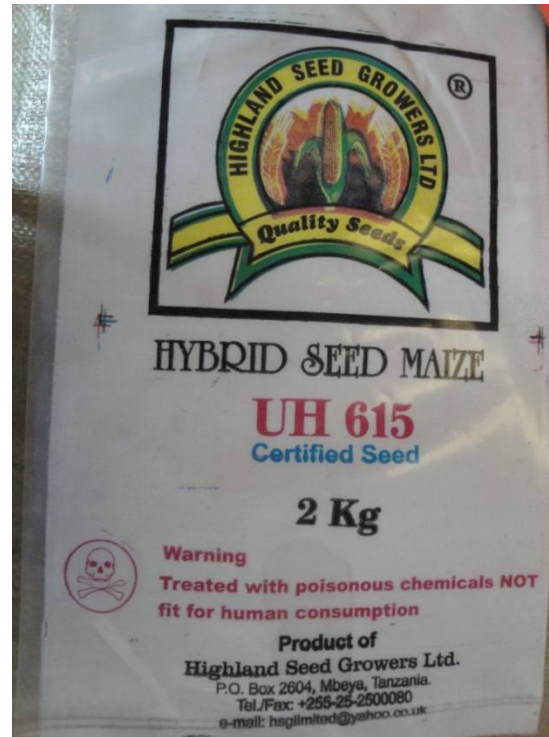
100g pack used to substitute the sh20 change by agro-dealers for farmers buying agricultural inputs

Marketing small packs

- When to market –
 - close to planting season
 - During field days, exhibitions
 - Seed fairs
- Where to sell
 - bean growing areas
 - new areas (need to have tested the variety in the region – demo, trial)

PREPARATION & PACKAGING MATERIALS

- Preparations are like for normal packs (2kg, 5kg)
- Need to plan for
- Seed packs
 - Polythene paper - clear
 - Paper (khaki)
 - Polythene bag
- Labeling & contents



packaging materials cont'

- a) Cotton/jute- used for small size bags material is durable, easy handling, hear tear strength.

Material liable to rot when it absorbs water and has little protection to microorganisms, insects, rodents and high humidity

- b) Paper. Can be strong if multi layer construction. Offers rot & insect resistance. Not moisture resistant and poor handling



Labeling seed packs

- Print well labeled packs with all required details



Labeling seed packs cont'

- Have packs with some details printed so as to use the pack size across several crops



Labels printed by computer and no gum

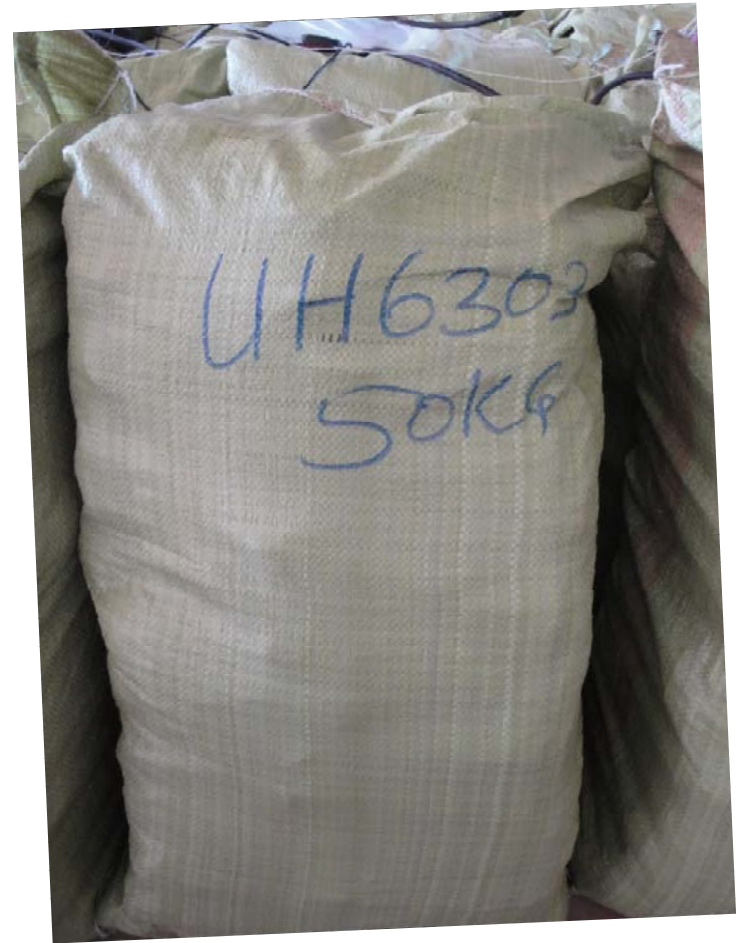


Labels printed by computer on paper with adhesive gum



Bailing MATERIALS

- Bailing and accessories)
- Bailing materials
 - polythene bags (gauge > 400)
 - Nylon papers
 - Khaki papers – double layered
- Accessories
 - Masking tapes (polythene)
 - Threads and threader machine



Handling and transport
factors important

EQUIPMENTS AND ACCESSORIES

- Weighing balances
- Pulse sealers and accessories
- Threading machine & accessories



EQUIPMENTS AND ACCESSORIES Cont'

- Technician or casual (handle simple repairs, sealers)
- Repair support technician



Use of adhesive tape for sealing khaki bags & computer printed label

LABOUR MANAGEMENT

- Supervisors system
- Training of workers/casuals
- Processing and packaging arrangement of workers/casuals
 - Filling seed packs
 - Weighing
 - Sealing
 - Bailing
 - Threading bales
 - Carry the bales
 - Stacking the bales

Labour can increase operating costs significantly in small packs if not managed well

Seed Processing & treating

Hand sorting –
contract or piece
meal labour
effective
- Requires effective
supervision of
sorted seed



Weighing seed

- Determine kgs to be weighed per day – 1 person per weighing balance



Seed sealing



- Heat sealing - 1 person per sealer
- Can have several sealers
- Need support of someone picking the packs and bailing



- Thread sealing - 1 person per sealer
- Can have several sealers
- Need support of someone picking the packs and bailing

Seed Bailing

- Several types of bailing materials available



Clear paper polythene bag

Determine how much packs to be done and how many people then

- to bale
- and stack seed

polythene bag



Packaging and bailing seed

Packaging and Bailing seed – labour costs

8 Average casuals	Kilos to pack
beans	
2 kg	4,000
1 kg	3,000
0.5 kg	2,000
250 gms	1,000



Cost of packaging Various bean seed packs in Kenya

PACKAGE SIZES	250 gms	500 gms	1 kg	2kg
Quantity (Kgs)	1,000	1,000	1,000	1,000
Number of packets per 1ton	4,000	2,000	1,000	500
Costing in USD				
Bailing paper	1.99	1.99	1.99	1.99
Cost of packet	65.00	47.50	25.38	23.93
masking tape	4.1	4.1	4.1	4.1
Sisal twine corn thread	5.6	5.6	5.6	5.6
Labels	25.0	12.5	6.2	3.1
Packaging and sealing labour	37.5	18.7	12.50	9.38
Total Cost for 1,000kg USD	139.2	90.49	55.87	48.1
Cost per pack USD	0.1	0.09	0.0	0.05

Thank you

