

Impacts of Selling Seed in Small Packs: Evidence from Legume Sales

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Choosing the right size of package can drive new business models

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Choices in packaging and labeling are an under-invested, but critical piece of scaling up our ability to reach rural, low-income markets. Choosing the right packaging material and size of package can drive new business models and impact cost structures that catalyze scale where it was previously not possible. Similarly, labeling in markets reaching smallholder farmers is critical to expanding markets through brand equity and building trust. These issues are large and deserve much greater attention across all agricultural technologies reaching smallholder farmers. Here we offer highlights of the choice of size in packaging and examine the use of small packs in scaling seed systems. A complementary essay looks at packaging materials and labeling innovations.

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Small packs allow farmers to get access to new varieties, and to test them at low risk

Small packs

When seed of promising varieties is made locally accessible, one of the key components in the farmer's decision whether or not to use the seed is cost. There have been numerous innovations in financial services to enable farmers with low and cyclic agricultural incomes to purchase products, but a fundamental one is to reduce the size of the package. Seed is often sold in package sizes of interest mainly to larger-scale farmers. These multi-kilogram packs are convenient for farmers using machines to sow large areas. For example, 25 kg of maize seed will plant about one hectare. Most seed companies in Africa, however, package seed into packs of 2-10 kg (MacRobert, 2009).

There has been important work, though to reduce the size of seed packs even further to a fraction of a kilogram. The small pack approach allows farmers to get access to new varieties, and to test them at low risk. For example, a legume seed pack of 100g is equivalent to the cost of a cup of tea in Kenya. A small pack also encourages farmers to test several varieties on offer (e.g. one pack each of three different varieties).

Small packs are enabling different business models for distribution,

where a range of different farmer-friendly points of sale are being tested (PABRA, 2011). Some stock packs with official agro-dealers, while others are setting up sales in local, remote country stores or through traveling shops. Pick-up trucks sell small packs in the local open markets where farmers may buy their routine foodstuffs- like cabbages and onions and beans. Using a megaphone, truck-based sellers announce small packs for sale, and bins at the side allow farmers to see the wares on offer.

Small packs are also able to reach a different customer base. "Lotions, detergents, mobile phone scratch cards and other fast-moving consumer products are often found in small sizes, packaged according to consumers needs," notes Paul Seward of FIPS-Africa. "In most rural shops, seed and fertilizers are sold in bulk sizes that most poor farmers cannot afford. Smallholder farmers are largely an untapped, under-served market (CapitalFM, 2010)." Importantly, more women are being reached with small pack seed. Janey Leakey's Leldet is one of the first seed companies in Africa to offer small packs. She notes: "The women farmers have change in their pockets, so you can sell a lot of small packages (Thurow, 2012)."

Impacts of Selling Seed in Small Packs: Evidence from Bean Sales

Early results on small seed packs as a tool have been impressive. In 2011-2012, for instance, the Pan African Bean Research Alliance-linked countries calculated 684,000 small pack sales (purchased through cash, and vouchers in the case of Malawi). Similarly, in the year from May 2012, partners in the Tropical Legumes II program tallied some 943,170 in pack sales (again through cash, and vouchers in Malawi) crossing a range of crop types: groundnut, cowpea, chickpea, pigeon pea and soybean. Small pack legume seed programs have now been tested across 6 crops in 13 African countries.

Small pack sales are giving farmers access to new varieties. However, in some cases, it is also creating a demand for certified seed itself. In Kenya, one company reported a good number of customers coming back to buy bean seed again, but in larger packs. A farmer may start with a 100 g purchase and then seek a 5 kg package during a second round.

As more packs are sold, initial lessons on customer preferences start to emerge. Some farmers prefer the very small packs, but this preference differs markedly by crop. For beans, the 100 g size is especially sought in Kenya, but for soybean (which is commercialized), the preferred sizes

are bigger: 1 kg for Kenya; 2 kg for Nigeria. Cowpea seed in Mozambique has even been put on offer in 5 kg as the standard small size. Monitoring also shows women just as likely to purchase small packs as men, but as legume seed purchase tends to be associated with women in the first place, we need to be cautious about drawing quick conclusions. Clearly moving to scale on small packs will require a much greater understanding of such client and market differentiation.

Breaking of two stereotypes, in particular, stands out in reference to the small pack model. Small seed pack does not mean small production impact. Farmers starting with 30 seeds have harvested 100kgs (a full bag) three seasons later. Also, with risk-free sizes, farmers have shown their willingness to buy even 'unknown' varieties.

All of these results are different and initially promising. They suggest real farmer demand for legume seed across crops, for new varieties and for high quality seed. They show different types of farmer clients willing to buy, and they indicate what seems to be a dynamic, broad-based market that might be leveraged towards higher numbers of farmers and higher aggregate volumes.

Some challenges for scaling up small packs

The jury is still out, however, on comparing small packages across different crops. To determine commercial viability over time, and whether these models can offer sustainable business strategies for scaling commercial enterprises, requires careful analysis of the increased costs of small packs needs and farmers' willingness to pay, weighed against the increased breadth of the market, and the characteristics of the new market reached with small packs. In addition to the needed basic analysis of these numbers,

Small seed pack does not mean small production impact





however, there are further commercial benefits that are harder to quantify. Brand equity is an important reason for many companies to enter new markets. Farmers that begin to buy small packages of seed will end up coming to trust brands earlier and companies will reap the benefits as these farmers later begin to purchase other products and larger packs of seeds.

A cautionary note is taken from the 'single-serve revolution' of Prahalad's Bottom of the Pyramid (BoP) literature. Small-packs were a foundational component of Prahalad's BoP propositions, professing they were a way for large companies to reach new markets in developing countries. Examples of small packs of shampoo, salt and many other consumer products were cited as the key for companies to scale into previously challenging markets. A few years on, we can see that successes with this model have been limited. In discussing the small-packs revolution, Stuart Hart notes: "If we are honest with ourselves, and we look at the results of companies that have tried to do that—take existing products, take the cost out of them somehow, and then trying to get extended distribution usually using NGO partners—it just hasn't worked very well (Mahajan, 2013)."

In the seed business, constraints to private seed sector involvement still need to be better understood and addressed, although several companies are being engaged in the small pack process (including some of those mentored by AGRA). Employing a small seed pack strategy involves considerable changes for a company. Given particularly the relief seed business, the private sector has become accustomed to large bulk sales, with a small number of transactions. Small pack strategies mean investing in new equipment (we have seen sealing machines priced at US \$25,000), understanding new markets, and coping with new logistics challenges.

Ultimately, the small pack approach will prove to be profitable for some in the seed industry—but investments can be made now to catalyze its reach and at the same time target its use by assessing where it is unlikely to be commercially adopted.





Key Lessons Learned for Scaling Seed Systems

- 1 Packaging Small packs can potentially be scaled up to achieve important production gains and quick diffusion of modern varieties.
- 2 The viability of the small pack model will demand more nuanced understanding on both the demand and supply side: especially -what types of client base will buy what size and where; and which portfolio of private companies can organize to achieve sufficient profit margins.



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