A farmer centric approach to the distribution of organic fertiliser in Kenya

Learning brief summary

1. The challenge of declining soil health

Continuous intensive agriculture, limited crop rotation and excessive reliance on chemical fertilisers have led to soil degradation in Kenya,[1] characterised by nutrient depletion, increased soil acidity, reduced organic matter and diminished biodiversity in microbial communities.[2] In response, increasing amounts of chemical fertilisers are applied, exacerbating soil health issues and escalating production costs.[3] The use of organic fertilisers, soil amendments and biofertilisers holds significant potential for enhancing soil health. An integrated approach combining farm management practices that support nutrient cycling and nitrogen fixation with externally sourced organic fertiliser can achieve optimal impact and scale.

2. The status of the organic fertiliser sector in Kenya

The organic fertiliser sector in Kenya began around 2010, with significant growth seen since 2014.[4] Business models in the sector vary, including companies with centralised and decentralised production units, those managing their own waste facilities and others buying waste from third parties. Agricultural inputs are typically distributed through small agro-dealers supplied by larger regional hubs.[5] TechnoServe identified three main constraints to growth in the sector: efficacy and awareness, affordability and quality, and availability and accessibility. Research by Practical Action and Biovision, on which this brief is based, explored availability and accessibility issues through fieldwork involving key informants, organic fertiliser companies, agro-dealers, lead farmers and focus group discussions (FGDs) across several Kenyan locations.

3. Last mile constraints in organic fertiliser distribution

Organic fertiliser supply depends on agro-dealer returns

Smallholder farmers perceive the availability of organic fertilisers in agro-dealer shops to be low: 9 out of 11 lead farmers and 8 out of 14 smallholder FGDs ranked unavailability of organic fertiliser at agro-dealers as the key constraint faced by farmers in accessing organic fertilisers. This is corroborated by information from agro-dealers, who often avoid stocking organic fertilisers, deeming inorganic inputs more profitable. They perceive organic fertilisers as low-return products.

Farmer demand is a critical constraint in market development

Although many farmers use home-produced manure and compost, few have experience with commercial organic fertilisers. Only 6.4% of surveyed farmers had used commercial organic fertilisers, primarily due to lack of awareness and the expectation of the same immediate productivity impacts as those provided by inorganic fertilisers. Effective demand creation involves direct farmer training and exposure to organic fertilisers' efficacy. Additionally, 81% of farmers reported difficulty accessing commercial organic fertilisers, often due to inconsistent supply in agro-dealer shops.

Vicious cycle of farmer awareness and supply constraints

A negative feedback loop exists between smallholder demand and supply of organic fertilisers as low demand leads to inconsistent supply, which in turn hinders demand development. Agro-dealers prioritise inorganic fertilisers due to perceived low demand for organic options, thereby limiting distribution scale and increasing costs. The bulkiness of organic fertilisers further complicates storage and logistics.

4. Sub-optimal smallholder organic fertiliser markets

Demand constraints in the organic fertiliser value chain

Product characteristics, consistency, cost and competition from inorganic inputs are significant demand constraints. Organic fertilisers are perceived as less varied, less consistent and more expensive than inorganic inputs. Aggressive marketing and subsidies for inorganic fertilisers also deter farmers from trying organic alternatives. Addressing these challenges requires solutions in R&D and governance, alongside farmer-targeted activities. This emphasises that demand creation will not be achieved purely through activities targeting farmers. A holistic approach that also addresses sectoral constraints is needed.

Relative weight of sectoral constraints

A prioritisation of sectoral constraints noted by input producers and agro-dealers identified lack of farmer demand due to insufficient knowledge and the logistical challenges of bulky and storage-sensitive organic products as critical issues. Finance and enabling environment issues were less critical.

Underlying dynamics in the organic fertiliser market for smallholders

The interrelationship between demand and supply challenges affects the business case and investments in the sector. Agro-dealers' low prioritisation of organic fertilisers and input producers observe a lack of interest and demand amongst agro-dealers as a result. This further inhibits market development. The result is irregular supply and inconsistent stock held by agro-dealers.

5. Stimulating demand for organic fertiliser

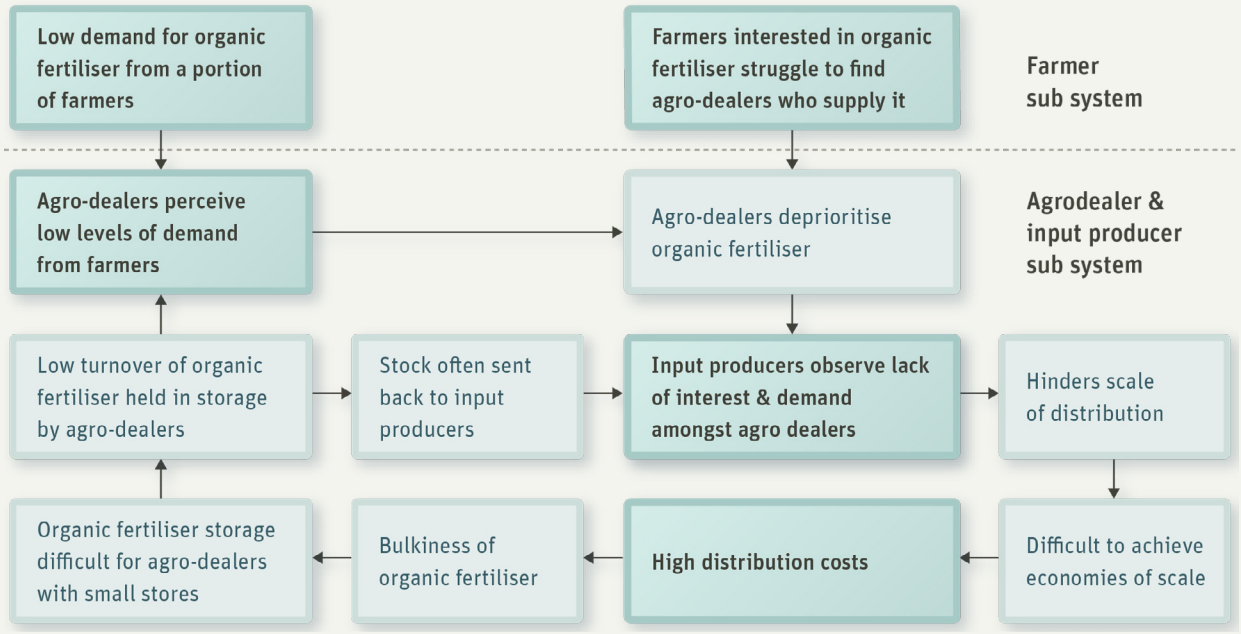
Organic fertiliser companies employ two main distribution models: business-to-commercial intermediaries and business-to-farmer intermediaries. The former relies on specialist agents and agro-dealer networks, while the latter involves intermediaries embedded within farming communities, such as cooperatives and farmer service centres.

Role of organic input producers and agro-dealers in demand creation

Organic input companies observe high demand for organic fertiliser as result of farmer training and field days, first-hand exposure that demonstrates the efficacy of organic fertilisers, and locations where organic markets are developing for specific crops. Whilst it is common for input companies to support this type of demand creation, it is less common for agro-dealers: they invest little into the promotion of organic fertilisers, because they perceive demand to be so low. However, this is insufficient to bring about the mindset change required. Less than 10% of small farmers go to agro-dealers for significant agronomic advice while 30% get significant advice mostly from extension services and 30% mostly from fellow farmers. These are trusted long-term contacts from whom farmers will get advice relating to significant changes to the farming system. In contrast, agro-dealers are used as a source of advice on specific products (e.g. specifications, how to use them and so on).

Implications for distribution models

Given the need for demand creation, farmer intermediary models are essential in the short term for their intensive, albeit costly engagement with farmers. Strategies to support improved distribution and generate demand include temporary subsidies, customer incentives, partnerships with initiatives developing organic markets, effective extension and advice delivery, and enhanced capacity and efficiency of farmer intermediaries A market systems perspective that understands the inter-connectedness of demand and supply issues is crucial.



1 Africa Fertilizer/IFDC. (2018). Africa Fertilizer Summit 2018. International Fertilizer Development Center (IFDC); 2 Bationo, André, Boaz Waswa, Job Kihara, Joseph Kimetu, Shamie Zingore, Roberto Laouali, John F. M. Kienzle et al. 2006. Advances in integrating nutrient management and conservation technologies in the West African Sahel. Nutrient Cycling in Agroecosystems 76, no. 2-3: 193-206. https://cropnuts.com/fertilizer-efficiency-soil-ph accessed 1 May 2024; 3 This situation is most prevalent in the heavily cropped south-western and central regions of Kenya; 4 CASA. 2023. Scalable alternatives to inorganic fertiliser. Final report, April, FCDO/TechnoServe; 5 This assessment explored conventional distribution models. It did not explicitly explore the emerging potential of ICT-based distribution, models such as internet-based platforms.