Future Agricultures

Policy Brief

# Can Agro-dealers deliver the Green Revolution in Kenya?

## Agro-dealers and the new Green Revolution

In a bid to return the country to food self-sufficiency, the Government of Kenya has been spearheading strategies for a new 'Green Revolution' in the food producing sector, as spelt out in its Strategy for Revitalizing Agriculture (SRA), a ten-year action plan launched in 2004. The SRA is entrenched in Kenya's Vision 2030, the country's framework for long-term investment and development (Republic of Kenya 2007; 2004). Crucial to the SRA is the increased generation, promotion and use of modern farming inputs and technologies, particularly improved seed and fertiliser. Small-scale independent stockists or input distributors, commonly known as 'agro-dealers', are seen to have a crucial role to play in distributing these inputs in a liberalised economy. As key actors in the Green Revolution agenda, agro-dealers are thus at the centre of current policy debates about the future of Kenya's seed system.

This FAC Policy Brief sheds light on the rise of agro-dealers in recent national policy debates as central figures in the delivery of agricultural innovation, improved food security and the potential spark in igniting a smallholder-led revolution. It asks: can agro-dealers really deliver the Green Revolution in Kenya? Drawing on key informant interviews and surveys of agro-dealers in two districts, Machakos in Eastern Province and Uasin Gishu in Rift Valley Province, it assesses the different politics and interests at play and the implications these raise for future investments in both formal and informal seed systems and the promotion of agro-dealers as catalysts of change in the agricultural sector.

## Delivering the technologies for the new Green Revolution

Different input channels have been used to deliver the various agricultural technologies to Kenya's three million smallholder farms. The main ones include public institutions, such as state corporations and public extension services; commercial channels, such as private seed companies and their networks of distributors; and charitable organisations, including donor agencies, Non Governmental Organisations (NGOs) and relief agencies. In recent years, the main actors and channels have changed with the shift from a public input distribution system to a more liberalised system. Whilst the array of actors involved in input provision has grown enormously, the vision of how inputs should be delivered has narrowed to a single, dominant model: the private, independent, agro-dealer.

The Government of Kenya has remained actively involved in input provision with backing from the Alliance for a Green Revolution in Africa (AGRA) (an international NGO supported by the Bill & Melinda Gates Foundation and Rockefeller Foundation), the Food and Agriculture Organisation of the United Nations (FAO) and the World Bank. Since the mid-2000s, a strong coalition of actors has emerged in Kenya with a focus on stimulating a new Green Revolution through the application of new technologies. There has been a particular emphasis on certified seeds and fertilisers delivered by the public and private sectors (both multinational and local seed companies) with backing from the state, donors and philanthropic organisations. This core actor network sees agro-dealers as central to these delivery systems. In Kenya's SRA, for instance, one of the government's policy measures for improving farmers' access to inputs is to: 'assist stockists [agro-dealers] to increase the capacity for inputs supply and the provision of information... to farmers' (Republic of Kenya 2004). The ambitious, if somewhat unrealistic, target was to have stockists providing input services in at least 80 percent of all small towns by 2007.

In line with the appeal to scale-up agro-dealer networks, AGRA has established its Agro-dealer Development Programme (ADDP), which is being promoted in Kenya and several other African countries. AGRA asserts that 'a strong agro-dealer system is crucial to farmers' success because these local retailers serve as the primary conduits of farm inputs such as seeds and soil nutrients, and knowledge about their safe and efficient use' (AGRA 2009b: ). ADDP activities include development of national agro-dealer networks and credit guarantees to improve access to agricultural inputs by agro-dealers and small-scale farmers.

## *AGRA's Agro-dealer Development Programme*

The Agro-dealer Development Programme (ADDP) was launched in 2006 by AGRA providing training, capital and credit towards the establishment of certified agro-dealers. ADDP aims to build and develop networks of certified agro-dealers in an effort to enhance quality, volume and range of seeds offered to farmers, especially improved crop varieties. Since then, it has gone through several important stages.

Although the project is still ongoing, and some districts have yet to be covered, preliminary results from the two study districts indicate that agro-dealers based in high potential areas have

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| **2006:** ADDP is implemented by the Agricultural Market Development Trust (AGMARK). Pilot activities are executed in western Kenya, including agro-input field demonstrations and the organisation of input fairs to encourage networking between agro-dealers and farmers. |
| **2007:** AGMARK out-scales its activities and begins implementation of the Kenya Agro-dealer Strengthening Program (KASP), a three-year programme spanning 64 districts in six provinces. |
| **2010:** AGMARK marks the establishment of over 81 new agro-dealers in underserved areas and the training of 2,166 agro-dealers. AGMARK also notes the founding of the Kenyan National Agro-dealer Association (KENADA), an umbrella organisation that focuses attention on supporting agro-dealers in need of business planning assistance and marketing. |
| **2010:** Through KASP, AGMARK aims to establish a network of sustainable agricultural input suppliers serving over 860,000 smallholder farmers by the end of the programme's third year. |

benefited more than those in low rainfall areas, with 48 percent of interviewed agro-dealers having been trained in Uasin Gishu compared with only ten percent in Machakos. Further, the trainings seem to have disproportionately benefited the larger (wealthier) agro-dealers, with value of stock (a proxy for agro-dealer size) averaging about Ksh600,000 (US$7,160) for trained dealers compared to Ksh125,000 (US$1,490) among those yet to be trained. Investigating the constraints that limit agro-dealer participation in these trainings would be valuable in order to better inform design of future programmes and improve participation particularly of the smaller agro-dealers.

## *The Ministry of Agriculture's NAAIAP*

The Government of Kenya, through the Ministry of Agriculture (MOA), set out to implement its own input support programme, the National Accelerated Agricultural Input Access Program (NAAIAP), at an estimated cost of Ksh16.7 billion (US$19.2 million). This also involves a capacity building component for agro-dealers, as well as the supply of subsidised inputs (particularly improved maize seed and fertilisers) through those stockists to poor farmers. Like the AGRA ADDP, it has also gone through a number of important steps since it was launched in 2006.

Due to weaknesses in programme design and implementation challenges, NAAIAP efforts

**2006-2007:** The Government of Kenya formulates the NAAIAP with the aim of implementing the programme in 45 districts over three years.

- NAAIAP frames Kenya's food security 'crisis' in terms of low soil fertility and poor access to key agricultural inputs, particularly improved seeds and fertilisers.
- The NAAIAP aim is to improve smallholder farm productivity and output, and ultimately reduce poverty, through mobilising farmers' resources and promoting efficiency in their utilisation and investment (or re-investment) in agriculture (Republic of Kenya 2009).
- The programme's primary objective is to improve smallholder farmers' access to seeds and fertilisers and to increase the affordability of these key inputs, with the goal of enhancing food security and generating income through the sale of surplus produce.

**2006-2009:** NAAIAP uses a two-pronged approach to achieve its objectives (set out above):

(i) the Kilimo Plus Starter Kits (also known as 'Agricultural Plus') using input grants for smallholder farmers; and

(ii) the Kilimo Biashara Package (also known as 'Agriculture Business') which focuses on small business development for agro-dealers.

**2009-2010:** NAAIAP sees mixed results regarding programme impact on farmers and agro-dealers.

- Due to its inappropriate adoption of an international narrative linking low productivity to degraded soils and lack of modern inputs, the NAAIAP ignores important regional, agro-ecological and socio-cultural variations:
  - Low rainfall regions (e.g. Machakos) cited low and erratic rainfall as the main cause of low food production and food insecurity, whilst low use of farm inputs (certified seeds and fertilisers) was linked to high input prices.
  - High rainfall regions (e.g. Uasin Gishu) noted unusually low productivity (particularly maize) due to the following constraints: high cost of farm inputs; poor farming practices (late land preparation, insufficient weeding and pest control); and unpredictable weather patterns (onset of rains). Low use of improved inputs was linked to high input prices.

- Maize is the only cereal crop promoted by the NAAIAP, overlooking farmer preferences for alternatives, especially in low rainfall areas where agriculture in highly diversified (a strategy for environmental risk mitigation and for meeting community dietary needs).
- Beneficiary targeting at both national and local levels is identified as a significant problem for the programme.
  - National level: favoured districts characterised by reliable rainfall and irrigation facilities, whilst farmers and agro-dealers in low rainfall areas are excluded.
  - Local level: identification of beneficiaries is delegated to village elders and assistant chiefs. The result is high incidents of nepotism and the redirection of programme benefits to non-resource-poor farmers at the expense of resource-poor farmers.
- The assumption by NAAIAP that surplus maize would be harvested from eastern Kenya is highly questionable due to the unreliability of rainfall in the region; harvesting enough maize to meet household food requirements is questionable in and of itself.
- The assumption by NAAIAP that poor smallholder farmers will use proceeds from the sale of surplus maize (in either region, but particularly in low rainfall areas) to buy inputs for the following season or to expand their farming business is not guaranteed. Due to poverty and lack of alternative income sources many farmers are likely to use the money to meet other priority needs, such as school fees and medical expenses.

tended to benefit those farmers and agro-dealers that were already experiencing sufficient agricultural productivity compared with their counterparts who faced greater agricultural difficulties. Both farmers and agro-dealers in high rainfall areas benefited more from NAAIAP compared to those in low rainfall areas. For instance, a significantly higher percentage of agro-dealers were trained in high-potential Uasin Gishu than in low-potential Machakos (48 percent vs. ten percent of those interviewed). Further, agro-dealer participation in input supply was higher in Uasin Gishu (40 percent) than in Machakos (three percent). In both regions, large-scale agro-dealers benefited more than small-scale agro-dealers (at the time of the survey agro-dealers who had participated in supplying inputs had stock valued about Ksh870,000, while the stock of non-participating agro-dealers averaged about Ksh100,000).

In view of these outcomes there is a need for the Government of Kenya to identify more efficient strategies for targeting resource-poor farmers, with minimal leakages to the non-poor. The programme must also find ways of increasing participation of agro-dealers, particularly those operating at a small and medium scale, for instance, by allowing them to form partnerships.

Additionally, focusing on maize to the exclusion of all other potential staple crops is an example of a 'one-size-fits-all' policy that may serve to undermine, rather than support, national food security goals that are central to the success of the NAAIAP programme. There is a need to investigate whether the programme would be more beneficial to farmers (especially in low rainfall areas) if they have the liberty to choose seed from a basket of key cereal and leguminous crops. Finally, there is an urgent need to simplify the voucher redemption process possibly by devolving it to the districts and/or contracting the redemption function to a private financial institution.

## Limits of the agro-dealer model

As the KASP and NAAIAP cases reveal, agro-dealers face several challenges in the course of their trade, and this limits their effectiveness in

providing inputs and information to producers and hence delivering the Green Revolution in Kenya. The first is an industry-wide seed challenge occasioned by weaknesses in the regulatory framework. For instance, the Seed and Plant Varieties Act (Cap 326) has not been reviewed since the industry was liberalised. The Seed Policy has been faulted for insufficiently addressing seed certification and testing; regional harmonisation of seed laws, regulations and policies; and for providing an inadequate review of legal frameworks. This affects seed trade in general and consequently agro-dealership.

The second challenge limiting both the implementation of NAAIAP in the two research districts and the overall effectiveness of agro-dealers is the lack of working capital to adequately stock seed which prevents business expansion. As a result, many agro-dealers are unable to meet farmers' demand at the peak of planting season especially in the low rainfall areas.

The third challenge facing agro-dealers is the highly erratic input prices especially in Machakos and other ASAL areas. High supply prices and transaction costs, resulting from long distances to input suppliers and poor infrastructure (Chianu et al. 2008; Muhammad et al. 2003), cause many poor farmers to barter for seed through informal networks or to source it from non-certified seed suppliers whilst buying comparatively small quantities of certified seed from grassroots agro-dealers. Consequently, movement of seed stock is slow and sales are low limiting business profitability and growth and constraining the development of an efficient agro-dealership (Chinau et al. 2008).

A fourth challenge limiting the growth of effective agro-dealerships is the erratic nature of agricultural input demand resulting from unpredictable weather patterns. The low adoption of improved seeds and fertilisers in low rainfall areas is mainly linked to farmer concerns about risk and uncertainty associated with rainfall unreliability, as opposed to problems with input accessibility. Also, the choice of hybrid maize as the dominant crop to be promoted through agro-dealer networks seems to negate farmers' preferences, especially in the complex, risk-prone environments. In these areas agriculture is highly diversified not only as a strategy for mitigating environmental risks, but also because it offers a wide range of choice of crops that meet the dietary needs of the communities.

Agro-dealers face a fifth challenge: inadequate supply of inputs at peak planting season. Some agro-dealers interviewed stated that when the rains set in there is very high demand for seed by farmers. As dealers request greater quantities of seed this causes the larger suppliers to run out of stock with significant delays in restocking to match the high demand.

However, addressing these technical challenges alone may not be enough to allow agro-dealers to catalyse Kenya's long-awaited Green Revolution. The mainstream Green Revolution narrative for Kenya sees agro-dealers at the centre of the action, and portrays them as the ideal small-scale private sector solution for delivering new technologies to Kenya's farmers. However, the survey of two districts – one high potential and the other low potential – shows some limitations of this simple narrative. These include the following: (i) uneven geographical coverage, with a significant reduction in 'legal' and well-capitalised agro-dealers in poorer, lower potential areas; (ii) the focus of delivery on a limited number of seeds and varieties (mostly hybrid maize, adapted to medium and high rainfall areas); (iii) the dominance of a few large companies in the supply chain, with knock-on consequences for price competitiveness and technology diversity; (iv) limited technical knowledge by those serving in agro-dealerships; (v) the restrictive nature of regulations, which limits wider

competition in the local market; and (vi) underdeveloped infrastructural support, which increases operating costs and consequently input prices, especially in low rainfall areas.

## Conclusion

Despite the tremendous diversity of Kenya's agro-ecological zones and its equally complex farming systems, a convergence of influential political, economic and institutional interests are pushing a singular technological solution to drive agricultural innovation: the agro-dealer. Although different actors – the state, philanthropic organisations, seed companies and NGOs – employ different marketing and service delivery approaches in their activities, depending on geographical region, there is a clear consensus on the role of the agro-dealer as the primary carrier of improved seeds to farmers.

Several key findings emanate from this study:

- Both formal (involving agro-dealers) and informal (which do not involve agro-dealers) seed systems are important channels for delivering cereal seeds to Kenyan farmers, especially in low rainfall and marginal agricultural areas in eastern Kenya, such as Machakos.
- Many of Kenya's agro-dealer owners sell a diversity of stock, reflecting a risk-coping mechanism for business survival due to the seasonal and erratic demand for agricultural inputs. Therefore, any initiatives aimed at supporting agro-dealers should not focus only on seed and fertilisers but the totality of the business.
- Less than a half of agro-dealer owners are involved in day-to-day management of their businesses, and are therefore unavailable to field technical queries from customers. Thus, the trainings in agro-dealer capacity building programmes should not only focus on the business owners, but should also target the business 'managers'.
- The universalisation of the agro-dealer 'narrative' (in terms of the identification of agro-dealers as central to addressing farmers' lack of access to modern inputs) in public/private agro-dealer initiatives overlooks the heterogeneity of the smallholder farming population that the agro-dealers must serve and the diversity of agroecological and business environments in which they must operate. This complexity presents an enormous challenge for effective beneficiary targeting and leads to disproportionate 'wins' for farmers in higher rainfall, 'breadbasket' areas and for larger, well-connected agro-dealers fortunate enough to operate in those places.

In response to these research findings it is argued that greater attention must be paid to meeting the needs of smallholder farmers in lower potential areas (who represent the vast majority of Kenya's agricultural producers) by developing innovative alternatives to the archetypal agro-dealer model promoted by programmes such as AGRA's ADDP and the Government of Kenya's NAAIAP. Such models focus on the agro-dealer image as a single entrepreneur capable of running a profitable business from the sale of agricultural inputs to a customer base. Efforts must be made to move away from the 'one-size-fits-all' agro-dealer model in areas where it does not fit the mould, and other alternative models must be found and explored, especially for lower potential agricultural areas, if the Green Revolution is to be delivered by agro-dealers to the majority of Kenya's farmers.

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ii) Source: Interview with NAAIAP Programme Coordinator; and NAAIAP Programme Design and Implementation Framework 2009/2010.

iii) Extension officers estimated the current yields of maize to range between 15 and 30 90kg bags per acre, depending on the agroecological zone, while the potential is about 30–35 90kg bags per acre.

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