Future Agricultures

Policy Brief

From Farmer Participation to Pro-poor Seed Markets: The Political Economy of Commercial Cereal Seed Networks in Ghana

Introduction

Since the 1980s public research systems in seed production in sub-Saharan Africa have increasingly come under pressure to privatise. In Ghana, however, privatisation has been complex and fragmented since farmers are largely dependent upon their own seeds and are reluctant to purchase improved seed. With few large investors willing to approach an industry that has not yet established itself, the development of seed investment is predicated on creating a social infrastructure for improved seeds; this will gradually build demand among farmers and integrate them into improved seed, input and food processing markets.

These developments involve the establishment of civil society networks and social service providers who engage in social networking to build 'pro-poor markets'. The social service providers actively work to facilitate the uptake of improved seeds by providing farmers with training, micro-credit and access to new markets. They build organisational and entrepreneurial skills among farmers and enforce food chain governance and new standards (Ponte and Gibbon 2005; Dolan and Humphrey 2000; Gereffi 1994). These civil society networks are mobilised around policy assumptions and narratives about the superiority of modern seeds and inputs supplied by commercial companies, and their capacity to empower farmers through solving hunger and poverty, and raising farmer incomes.

The mutual reinforcement of this agenda by donors, civil society actors and private investors leads to a policy process that excludes voices that do not share this universalising vision of agribusiness domination. This vision is based on assumptions about the performance of modern varieties and their inherent superiority. However, given that less than five percent of farmers in Ghana regularly purchase certified seed, these developments are in danger of locking small farmers into an unproven agribusiness treadmill.

This FAC Policy Brief employs a political economy analysis to examine dominant political interests in the seed industry. This is combined with an actor network approach that scrutinises the alliances and discourses mobilised to bring about agricultural change and seed commoditisation. The research is based on interviews carried out with actors in the chain of production and use of seeds, including farmers, researchers, seed-breeders, seed-

growers, agro-dealers and Non Government Organisations (NGOs) in 2009–10 (cf. Amanor 2010).

Social networking to promote seed markets and agribusiness value chains

Since the early 2000s, a new framework for the development of private seed markets has come into being in Ghana. This is centred on a dense network of NGOs interlinked with government services and programmes all working in synergy to facilitate the emergence of seed markets. Component parts of this programme include:

- Training farmers in agricultural technology
- Providing training in agribusiness organisation
- Providing quality control and standards
- Training of other NGOs
- Promoting value chain analysis
- Linking farmers with agro-industries

The main actors facilitating these developments in Ghana have been Alliance for the Green Revolution in Africa (AGRA), Millennium Change Corporation (MCC) and the International Fertilizer Development Center (IFDC), a non-profit public international organisation (PIO), closely associated with the fertiliser industry. These organisations provide a framework for supporting the expansion of private sector initiatives in seed and fertiliser distribution by:

(i) lowering the transaction costs of input delivery systems;
(ii) supporting the distribution of input and seed packages with credit support or subsidies;
(iii) facilitating the expansion of agro-dealers into rural areas;
(iv) supporting the development of private seed companies through grants;
(v) supporting the development of hybrid seeds;
(vi) (vi) developing training facilities to educate farmers on agribusiness contracts, entry barriers and quality control; and
(vii) facilitating the dissemination of information and the formation of farmer marketing organisations (see IFDC 2002).

These organisations set the main parameters around which NGOs and government agencies work, and provide funding opportunities for programmes that build linkages between farmers, agribusiness, commercial seed producers, agro-dealers, input distributors and financial intermediary services. In the Northern Region, US NGOs, including ACDI/VOCA (which works through the USAID-sponsored Agricultural Development and Value Chain Enhancement Project (ADVANCE) and Technoserve), and the Ghanaian Association of Church Development Projects (ACDEP) are prominent in linking farmers to agro-industrial food processors. Some NGOs have established subsidiary organisations focused on marketing. For example, ACDEP, an NGO originally providing appropriate agricultural services for the rural poor (Alebikiya 1993), has now established the Savanna Farmers Marketing Company Ltd (SFMC) as a private company that links farmers with agribusiness.

Several private companies are also creating their own farmer associations to promote the uptake of inputs and lower transaction costs. Wienco, the largest private fertiliser distribution company in Ghana, has founded Masara N'Arziki a farmers' association that organises farmers' groups to receive seed and input packages, technical advice and credit, and links farmers to food processing industries. These developments reflect a pronounced shift in NGO activities from community food security and income generation to linkages with agribusiness. While these associations aim to gain better prices and stable markets for farmers by overcoming entry barriers (Dawson 2002), they have also transformed the way that farmers

relate to input production. NGOs have now moved their priorities from supporting communities with training in multiplying their own seed, to encouraging them to plant certified seed. Thus, these NGOs are essentially contributing towards the creation of a social infrastructure of business services to facilitate the integration of smallholder farmers into agribusiness value chains and commercial input delivery systems.

Tensions between participation and the commoditisation of seeds

There is an inherent tension within Ghana's seed development system between participatory plant-breeding networks and the commercial networks of seed certification and distribution. Participatory breeding relies on farmers' own evaluations of new varieties based upon local knowledge and preferences. This enables the public research system to fine-tune new seeds to existing conditions; moreover this also results in open access arrangements through which farmers gain access to unreleased varieties, which they experiment with and distribute through their own networks. In contrast, commercial networks are concerned with minimising the leakage of seed to farmers (which results in the low patronage of certified seeds), to ensure that farmers purchase seeds rather than multiply and distribute them. This tension has led to policies and practices that represent seeds as technical objects that can be appropriated and commoditised rather than as public goods produced through a dynamic, open process of joint research and co-production of knowledge.

This results in narratives that construct commercial seeds as the panacea to food security problems, depicting the main constraint to agriculture innovation as a result of the inability of agro-dealers to deliver certified seeds to poor farmers in the rural interior. This serves to marginalise the important public role that farmers have played in contributing to the development and circulation of both certified and local seed varieties. Simultaneously it promotes an imagined role for a commercial seed sector that has yet to be established. The role of the private sector becomes a performative one, facilitating a repertoire of networking activities to create a market that has not existed, as though it is already proven and tested. In reality there is a significant discrepancy between policy visions of the superiority of new seeds and farmers' disillusionment as they encounter many problems with the quality and performance of these seeds.

In the past important NGO seed initiatives evolved out of the community seed banks. Before these programmes became wedded to commercial input delivery many NGOs had attempted to direct community initiatives towards training farmers to improve their skills in seed multiplication of new improved varieties. They developed linkages with seed-breeders and agronomists to facilitate the multiplication of high-quality seeds by farmer groups. These initiatives historically preceded the attempts to privatise seed, and occurred in an era in which multiplication of seeds by farmers with researcher supervision was considered a normal activity. For instance, much of the improved seed initially distributed by the SG 2000 project to farmers, before the privatisation initiatives of the late 1980s, originated from farmer-led multiplication. Many of the seeds disseminated by international agricultural research centres to national crop research institutes needed to be multiplied to create sufficient quantities for on-farm trials. Since the research institutes lacked the logistical capacity to undertake the multiplication of seeds in sufficient quantities they worked with supervised farmers' groups to achieve this.

As NGOs involved in community-led seed multiplication programmes became co-opted

into new commercial seed networks they were expected by donors to replace farmer-multiplied seeds with certified seed. Increasingly, however, they have found the certified seed produced by seed-growers to be of variable and unreliable quality. As a result they have been forced to find alternative sources of seeds, which invariably results in a return to farmer multiplication initiatives. Not only is the quality of certified seed unreliable, but some of the new varieties created by the public research system frequently fail to perform on farms. For example, NGOs involved in the production of quality sorghum for the brewing industry introduced the improved Kapala variety to farmers in northern Ghana. It has been documented that this variety has problems with compact heads, which are susceptible to mould in the wetter districts of the Northern Region. The compact heads are also vulnerable to predation by birds. Farmers found that the performance of this variety highly disappointing. The NGOs involved in developing contractual relations between the breweries and farmers are now attempting to find other viable varieties from Nigeria for multiplication within community programmes. These experiences have generated much acrimony and division within the commercial seed networks in northern Ghana.

The vast majority of farmers remain unconvinced about the superiority of certified seed and continue to multiply their own stocks of seed, which include both local varieties and modern varieties. In a survey of small-scale farmers conducted for the Future Agricultures Consortium (FAC) at Kpalung and Dundo in the Northern Region in January 2010, 85 percent of farmers purchased synthetic fertilisers, indicating a significant level of access to input markets. However, only six percent purchased seed for planting, while another seven percent purchased small quantities of seeds that they then multiplied for planting. At the same time, 85 percent of the farmers used their 'own seeds' for planting although their 'own seeds' included a wide assortment of varieties; these included current certified varieties, delisted varieties that had been phased out, and the latest experimental varieties which had not yet been formally approved but were released to farmers for evaluation in on-farm trials (cf. Amanor 2010).

Farmers rapidly distribute new varieties through their social networks. Access to a wide and freely available genetic pool for experimentation becomes an underlying philosophy of small farmer adaptation. Although farmers are frequently disappointed by the quality of certified seed and the performance of many modern varieties, they continue to find varieties that they approve of, which allows for further adaption through farmer selection under local conditions.

Consequently, farmers' fields become the repository for the preservation of both the diversity of local species and those that have originated in the public research system, with a considerable intermixing of varieties. The national research system and commercial seed-growers, however, have a low capacity to maintain a wide variety of genetic materials in production. As these varieties become phased out to make way for the latest varieties they continue to be conserved on farmers' fields and become absorbed into the lexicon of local varieties, where they contribute to the genetic diversity of farmer experimentation and adaptation.

Conclusion

Although there have been many problems with the quality of seed produced in the public research system in Ghana, the system has, on the whole, made important contributions to the access of farmers to genetic materials. Together with public research endeavours, the

involvement of farmers in the process of participatory evaluation has generated increasing options and strengthened the capacity of farmers to exercise choice and practice a process of incremental plant breeding when dissatisfied with the inherent characteristics of particular varieties.

Attempts to commercialise seeds and promote farmers' purchase of seeds transforms the value of a participatory process of incremental breeding into the value of a specific variety possessed by a commercial entity. Free exchange of genetic resources becomes a violation of commercial property right, even though farmers have freely contributed to some of the characteristics of the variety through participation in on-farm trials, or the free contribution of their own varieties for adaptive breeding. This framework of property rights in commercial seeds devalues the knowledge of farmers and their contributions to the make-up of modern varieties. Conversely, it overestimates the potential of particular commercial varieties to transform agricultural production. It also underestimates the critical importance of agro-biodiversity through the on-farm conservation of genetic diversity, and the future local crop-breeding to sustainable agriculture (Altieri 2002).

The mobilisation of influential public–private networks for certified seed promotion has been achieved through narratives about the superiority of commercial varieties and their potential to promote pro-poor agricultural growth. Such narratives devalue the participatory options that produce varieties based on farmers' own learning, knowledge and experimentation in an open access environment, and on the cross-fertilisation of knowledge between public scientists and farmers (Richards 2009, Ashby 2009, Röling 1988). Additionally, they do not accurately reflect the shortcomings of many modern varieties and the difficulties of breeding 'miracle seeds' for diverse settings.

The processes and premises on which plant breeding has been based over several decades, specifically in complex and risky environments, is being threatened by the following obstacles:

- The attempts to displace farmers' varieties by commercial seeds and lack of formal support and recognition for farmers' own experimentation and adaptation of seeds. This creates policy agendas that manipulate credit and packages of technology distributed to farmers in an attempt to pressurise them into the uptake of new varieties.
- The displacement of the criteria of successful breeding from farmers' own evaluation and uptake to agribusiness interests in new varieties.
- The creation of legislation and regulations that favour the intellectual property rights of commercial breeders over farmers.
- The threat posed by commercialisation of varieties to the process through which open access public research releases new varieties to farmers for evaluation and planting.

The commercial seed agenda in Ghana results in a single, hegemonic discourse that locks farmers into narrow agribusiness arrangements and input markets. Certified seed thus becomes one element of a monopoly package in which access to the other benefits of agricultural modernisation cannot be acquired without adopting commercial varieties and their ideological baggage. This presents one dominant pathway for agriculture development based on a pre-determined vision of the African Green Revolution, rather than a more deliberative approach to social learning and innovation based on alternative visions of possible food futures.

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