

Food chains:

Bridging distances by linking the family farm to the supermarket

In many developing countries, supermarkets are growing fast. This growth entails a change in the food chain that supplies fresh foods from farmers and processed foods via agroprocessors. Farmers who wish to participate in the food chain have to adapt to the supermarkets' requirements. It is the task of governments to improve infrastructures, and access to support services and financial services.

There has been a rapid transformation of the food retail sector in many developing countries over the last 15 years, away from local retail food markets and small stores to larger centralised wholesale suppliers and supermarket stores. The demand drivers for these changes include increased incomes and urbanisation, producing a rapid rise in urban middle classes. Increased wealth has also led to wider ownership of refrigerators and vehicles. High urban rents require employment by both men and women and also increase the cost of domestic labour. These trends, together with the greater opportunity cost of women's employment, increase the demand for more convenient processed foods to save cooking time and have changed daily shopping in local shops to weekly or monthly shopping in supermarkets. Changes to national economic policies and foreign direct investment following market liberalisation in the 1990s enabled rapid development of supermarket chains, which is reviewed by a number of authors (Weatherspoon, D. D., and Reardon, T., 2003; Boselie, D., Henson, S. and Weatherspoon, D. D.,

2003; Reardon, T., Timmer, P. and Berdegué, J., 2004; Reardon, T., Henson, S. and Berdegué, J., 2007).

Supermarkets can provide new opportunities to enhance the livelihoods of both small-scale farmers and small and medium-scale agroprocessors. They offer potentially higher returns for high-value fresh produce than local markets or traders, and are the main outlets for processed foods from agroprocessors who use raw materials supplied by farmers. In independently owned supermarkets with a few stores, each store manager can source fresh produce from wholesale suppliers, who buy foods from rural farmers via agents (Fellows, P. J., 2001). As the number of stores increases, procurement changes from a per-store system to distribution centres serving many stores. Procurement requirements become more demanding and include quality and food safety standards and the ability to meet larger volumes. They are increasingly met by specialist wholesalers and preferred agroprocessing suppliers, if traditional wholesale systems have poor infrastructural support (e.g. refrigerated stores and vehicles), or inadequacies in credit provision and product certification (Reardon, T., Henson, S. and Berdegué, J., 2007). These formal contracts involve a degree of risk-sharing by suppliers, and only farmers that

have sufficient financial capital, technological expertise and management and organisational capabilities can meet their requirements.

Constraints on small-scale farmers

Most small-scale farmers do not have these resources and are unable to participate in supermarket supply chains due to a variety of constraints (Table 1). They rely on traders to purchase crops, and receive low incomes under exploitative trading conditions that maintain a cycle of deprivation and prevent investment in their farms.



Photo: Peter Fellows

Affordable and easily repaired equipment benefits farmers and agro-processors.

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Recognition of these constraints enables governments and development agencies to develop policies and programmes that encourage participation by larger numbers of farmers in new supermarket supply chains.

Role of agroprocessing

Small- and medium-scale food processors are an important income source for farmers, but they face similar constraints and also have additional problems (Table 2, page 24) that may prevent them from supplying the volumes or quality of food required by supermarkets.

These multiple constraints require co-ordinated plans to develop agro-processing as part of the modernisation of agriculture. Agroprocessors add value to agricultural products and support for these companies creates secure outlets for farmers and re-orientates them to operate as enterprises within the mainstream economy. Once strengthened, farmers are also in a better position to supply produce that meets supermarket requirements. Programmes to assist farmers should involve:

- national governments and publicly-funded research institutes, university departments and support organisations (e.g. business advisory services and Bureaux of Standards),
- international organisations,
- private sector organisations (e.g. manufacturer's associations, Chambers of Commerce, consultancy companies), and
- farmers and food processors themselves.

Role of governments

A major role of governments is to describe the overall policy environment and co-ordinate policies by different ministries to support agro-

Table 1: Some constraints facing farmers

Internal Constraints (within farmers' control)	External Constraints (outside their control)
<ul style="list-style-type: none"> • Few business skills, little knowledge of commercial opportunities and realities. • Lack of understanding or awareness of different markets. Inferior product quality or incorrect varieties for processing/supermarket needs. • Little recognition of opportunities for crop diversification. • Lack of confidence, assertiveness & communication skills in dealing with buyers, banks, government institutions. • Poor negotiating and selling skills, lack of trusting relationships and formalised agreements with buyers. • Outdated production technologies and low production capacities. • Lack of capital for investment, expansion of production or introduction of post-harvest technologies that would enable crops to be sold out of season at higher prices. 	<ul style="list-style-type: none"> • High cost of farming inputs. • Absence of poor utility services and road/ transport infrastructure. • Lack of affordable tools/equipment. • Lack of access to finance, high cost of finance from commercial lenders. • High taxes, poor tax administration, corruption. • Poor access to support from agricultural research, farm business support services and education institutions. Little lobbying power or influence over policies/services of government institutions or legislation. • Poor co-ordination between government institutions and/or the private sector, lack of coherent government agro-industrialisation strategy. • Little information on different markets. • Adverse policy environment, market liberalisation and deregulation of economy, removal of subsidies.

Source: P.J. Fellows (2001): *Promoting linkages between food producers and processors*, FAO Publications.

industrial development. This includes economic and fiscal incentives to expand linkages (e.g. creation of food parks or high-value agricultural zones), improving access to formal credit and financial services, teaching agriculture and agro-processing in schools, developing appropriate training and research at universities and agricultural institutes, and support for companies and farmers' organisations. For example, in Uganda, the "Plan for Modernisation of Agriculture" is intended to create a framework for sustainable private sector contracts between farmers and agro-processors, and to address constraints that prevent development of production, processing and marketing components. It established "District level Agricultural Research and Development Centres", and "Technology Development Centres" at community level to strengthen research-extension-farmer linkages. The Bank of Uganda established the regulatory framework for micro-financing at farm level. The

Plan also includes savings schemes by farmers and formal rural banking, and improvements to road infrastructure, transport, cold storage, market information systems using local FM radio, rural electrification programmes, and a private sector network of equipment and materials stockists (Nahdy, S., 2001). Opportunities for contract farming in the Philippines are encouraged in the "Strategic Agriculture and Fishery Development Zones" where investment incentives are given to agro-industries (FAO 2000). In Thailand, the "Agribusiness Promotion Council" co-ordinates strategies and programmes among different ministries involved in farm-agribusiness development, creates high-value agriculture zones, and co-ordinates establishment of agribusiness-related courses from secondary to university level in both agricultural and business schools. Another approach is to train extension agents in Success-Case-Replication methodologies in areas where successful enterprises are oper-

Table 2: Some constraints facing small-scale agroprocessors

Internal Constraints	External Constraints
<ul style="list-style-type: none"> • Under-developed business & financial management skills leading to inadequate cashflow to purchase crops during the harvest for a year's production. • Under-developed entrepreneurial characteristics leading to exploitation by buyers. • Poor quality assurance skills & knowledge, producing inferior or unsafe products. • Selection of inappropriate technologies that reduce productivity. • Lack of capital for expansion of production or upgrading of equipment to meet supermarket volumes. 	<ul style="list-style-type: none"> • High cost of raw materials (some sectors). • Negligible published market information. • Intense competition in some sectors, low demand in others. Competition from imported foods. • Lack of local/affordable supplies of packaging materials and equipment. • Inadequate workshop/engineering facilities for equipment production & inadequate training of engineers in hygienic & safe equipment design. • Farmers renegeing on delivery of contracted raw materials.

Source: P.J. Fellows (1999). From: Strategy paper for development of the small-scale food processing sector in Uganda, Midway Technology, private communication.

ating (FAO 2000). There is also a need to make support organisations more responsive to farmers' requirements. For example, the "National Agricultural Advisory Services" programme in Uganda supports demand-driven public and private research. Interventions to deliver farm services are based on comprehensive needs analyses, to ensure that farmers are empowered to participate in and benefit from the programme. It uses "Agricultural Service Delivery Agents", who work as private sector consultants to make them directly accountable to the local government administration and to farmers (Ribbink, G., Nyabuntu, P, and Kumar, S., 2005).

Role of development agencies

International agencies and UN bodies can promote development of farming and agroprocessing through technical training in production, hygiene and quality assurance, and training in management, marketing, bookkeeping, etc. to achieve

Farmers can diversify into processing to improve their livelihoods from the supply chain.

greater entrepreneurial competency. For example, UNIDO has supported the "Uganda Small Scale Food Processors Association" to conduct this type of training (UNIDO, 2007). Training and orientation workshops to enable farmers and agroprocessors to better understand each other's needs are a first step to more trusting relationships and improved linkages, both with each other and with supermarket buyers. Ribbink et al. (2005) recommend

that agencies should support start-up costs of new supply chains with a clear exit strategy within a limited time-frame. European agencies such as Practical Action and FAKT operate support programmes for agroprocessors, and other organisations, such as GRET and CTA, provide information resources and promote linkages between farming and agroprocessing. In the Philippines, NGOs have held 'market matching' workshops that bring together buyers and sellers of high value crops, including organically grown lettuce and asparagus, and assist promoting business partnerships for contract farming (FAO, 2000).

Support for farmers can be targeted through farmers' associations, co-operatives, local churches, trade union branches, women's and youth organisations and extension workers from NGOs and CBOs (Community Based Organisations). An association can negotiate with supermarket buyers and processors on behalf of farmers, find alternative markets, secure lower prices for farming inputs by bulk ordering or provide loans by operating sav-



Photo: Peter Fellows

Zusammenfassung

In vielen Entwicklungsländern sind in den letzten Jahren große Supermärkte entstanden, die die Nahrungskette, in der frische Produkte von den Bauern zu den Abnehmern gelangen und verarbeitete Lebensmittel über kleine und mittlere Verarbeitungsbetriebe an die Verbraucher geliefert werden, von Grund auf verändern. Dieser Artikel zeigt die Problematik, die viele Bauern und Verarbeitungsbetriebe daran hindert, erfolgreiche Glieder dieser modernen Versorgungsketten zu werden. Programme zum Abbau dieser Hindernisse müssen die nationalen Regierungen, nationale und internationale Entwicklungsträger, den privaten Sektor und die Bauern selbst einbeziehen. Die erfolgreiche Modernisierung der Landwirtschaft und der verarbeitenden Industrie erfordert den Auf- und

Ausbau von Erzeugerverbänden, starke vertikale Strukturen zwischen Käufern und Erzeugern, Investitionen in die Infrastruktur, erschwingliche Finanzierungen, transparente Marktinformationen, eine klare Agrarpolitik seitens der Regierungen und bessere Unterstützung durch öffentliche und private Träger, Forschungseinrichtungen und Bildungsprogramme.

Resumen

Recientemente se ha producido un rápido crecimiento en los supermercados de muchos países en desarrollo, el cual está transformando las cadenas de suministro de alimentos frescos por parte de los agricultores y alimentos procesados por parte de los agro-procesadores de pequeña y mediana escala. El artículo resume los obstáculos que impiden a muchos agricultores y agro-

procesadores participar eficazmente en estas nuevas cadenas de suministro. Los programas dirigidos a eliminar tales obstáculos están a cargo de gobiernos nacionales, agencias de desarrollo nacionales e internacionales, el sector privado y los propios agricultores. A fin de modernizar con éxito la agricultura y el agro-procesamiento de alimentos, se requiere desarrollar o fortalecer a las organizaciones de productores, crear sólidos vínculos entre compradores y productores, invertir en infraestructura, proveer financiamiento asequible e información transparente sobre el mercado, establecer una política de gobierno que fomente claramente la agroindustria, y mejorar el desempeño de las entidades de apoyo públicas y privadas, los institutos de investigación y los programas de educación.

ings and credit schemes. Supermarkets and agroprocessors benefit by having a single organisation with which to agree a contract, rather than negotiating separately with large numbers of farmers. The organisation can also co-ordinate its members to supply the larger volumes required by supermarkets and processors and it can act as a grading centre to monitor and control the quality of produce, as well. For example, in Malaysia, an Area Farmers' Organisation (AFO) is an agribusiness co-operative that serves as a linkage between small farmers and agribusinesses (FAO, 2000). It uses a "Supervised Farm Credit and Group Farming" approach, and the key factors that have contributed to the model's success are the AFO's capacity to provide integrated services, including market negotiation, production planning and organisation, agricultural inputs and farm mechanisation services, credit financing, packhouse facilities and transport. In Uganda, the Danish agency DANIDA is supporting an export fruit-drying business that closely involves fruit farmers in its operation.

Role of the private sector

Agroprocessors and specialist wholesalers may offer services to farmers, including training and technical advice on planting and harvesting, provision of specific crop varieties and advance payments or short-term loans that are repaid at harvest. Contract growing for oil mills, fruit processors and fish/seaweed factories in the Philippines has been successful since the 1960s due to reasonable interest rates on cash advances to growers, and superior products from these financial incentives (FAO, 2000). In Thailand, self-funding "Agro Enterprise Centres" were established by the "Chamber of Commerce" and the "Trade and Industry Association" to facilitate private sector investment in agribusiness (FAO, 2000).

Successful linkages reduce uncertainties in incomes to farmers by guaranteed sales and give a better understanding by farmers of quality requirements of processors and supermarkets. They reduce costs for processors from better production planning and

cashflow management and assure the supply of high-quality raw materials. Long-term, trusting transparent relationships are created by sharing information about market requirements so that farmers can understand quality management systems, promoting business attitudes based on production and quality targets and assisting in access to extension services (Ribbink, G., Nyabuntu, P, and Kumar, S., 2005). "Fair Trade" companies source foods (e.g. dried fruits, cocoa, coffee, nuts, spices, honey) directly from farmers' groups, who use profits for community development. Companies facilitate technical training, group strengthening and community development. The access to high-value markets provides financial incentives to farmers, and strong vertical linkages promote high levels of mutual trust and commitment (Further details from www.european-fair-trade-association.org/Efta/index.php).

A full list of references can be obtained from the editor or author.