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Approaches to Linking Producers to Markets

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1 Introduction¹

Agri-food systems are undergoing rapid transformation. Changes are being observed in all regions of the world and in all segments of production-distribution chains. The traditional way in which food and fibre is produced, without farmers having a clear idea of when, to whom and at what price they are going to sell their crop is being replaced by practices more akin to manufacturing processes, with far closer links between farmers, processors, retailers and others in the supply chain, often involving advance price negotiation. Furthermore, in many parts of the world a consolidation of farms is being observed. Fewer farmers are supplying food to more people as populations grow and as rural people move to urban areas.

As incomes increase the pattern of food intake is changing. Demand for animal products, oil crops and sugar is growing, and farmers are diversifying production to respond to this. Consumers are also becoming more demanding in terms of quality and safety and demographic and income trends are leading more affluent consumers to demand convenience foods such as frozen, pre-cut, pre-cooked and ready-to-eat items. Production, processing and distribution systems have been adapting to these trends, which offer considerable threats, but also many opportunities, to farmers.

It is against this background that donors, NGOs, farmer organizations and others are now recognising that the traditional agricultural assistance projects that concentrated on building up farmers' production capabilities are no longer sufficient to ensure sustainable income growth (if, indeed, they ever were). There is an increasing understanding that production-support activities must be linked to market demand and that farm-level activities must be looked at within the context of the whole value chain and the linkages within that chain. Occasional selling of subsistence surpluses is no longer a realistic long-term option for farmers in the developing world. Thus concepts such as "Linking Producers to Markets" or "Linking Farmers with Markets" are very much in vogue at present. However, while the underlying ideas behind this development approach may now be more realistic, little will be achieved, unless the approach adopted when working with farmers is also realistic. This paper tries to draw lessons from experiences to date with linking farmers to markets while bearing in mind that many linkages have only been in operation for a few years and it may as yet be too early to draw significant conclusions about what does and does not work. The main purpose of this paper is to assist NGOs seeking to link farmers to markets. It is recognized that the

¹ This paper draws on many sources including Canz (2005); [Chen et. al. \(2005\)](#); [Eaton and Shepherd \(2001\)](#); Röttger (2004); presentations at the [FAO/AFMA/FAMA Regional Workshop on the Growth of Supermarkets as Retailers of Fresh Produce in Asia, Kuala Lumpur, October 2004](#); presentations at the UNFFE/FAO Sub-regional Workshop on NGOs, Farmer Organizations and Agricultural Marketing and Enterprise Development, Kampala, July 2005 (with thanks to Susan Minae for her summary of the presentations); papers presented at the ACIAR workshop on Agriproduct supply-chain management in developing countries, Bali, Indonesia, August 2003 (in particular the workshop conclusions prepared by Chris Wheatley, Elizabeth Woods and Setyadjit); case studies developed at the KIT Writeshop on "Learning from Implementing Pro-Poor Marketing Chains with Smallholder Farmers in Africa", Moshi, Tanzania, October, 2005; case studies on Linking Farmers to Markets presented on the [web site of FAO's Agricultural Marketing Group](#); an unpublished presentation by Doyle Baker at the post-IAMA workshop on Inaugurating New Partnerships in the Global Food Chain: Experiences from North Africa, the Near East and Asia, Chicago, July 2005; an unpublished presentation by Carlos da Silva on "The Growing Role of Contract Farming in Agri-food Systems Development" to an Asian Productivity Organization workshop on Contract Farming, Colombo, Sri Lanka, July 2005; and "A Market Facilitator's Guide for Agro-enterprise development", CIAT (draft document).

private sector has, itself, developed many linkages with farmers without the benefit of external support and those experiences are used to draw lessons of potential benefit to NGOs.

“Linking farmers to markets” can embrace a whole range of activities, from the very small and localized to the very large. The concept does, however, assume the development of long-term business partnerships rather than support for ad hoc sales. This mirrors trends in developed country markets, discussed above, where there has been a rapid shift from open markets to market organization through tight linkages and alliances from production to consumption. At the simplest level agricultural extension workers can link farmers to buyers by identifying buyers and arranging for them to meet with the farmers, or small-scale traders themselves can seek out new suppliers or work with existing suppliers to develop new or improved products. At a more complex level is the work carried out by NGOs and others to identify markets for particular products and organize farmers into groups to supply those markets, or the activities of agroprocessors to secure their raw material supply from small farmers. Larger scale contract farming may involve considerable long-term investment on the part of the companies and farmers.²

Potential advantages for farmers of improving linkages with their buyers appear numerous. In some cases the buyers are prepared to supply inputs and/or arrange credit for those inputs. In advanced contract farming schemes they may also provide mechanization services. Companies may provide technological and extension advice or arrange for government extension services to do so. By linking with buyers in advance of production, farmers potentially have a more assured market and often a clearly agreed price. Offsetting the advantages, however, is the possibility that the contract may break down, with the buyer renegeing on the agreement after considerable investment by the farmer; the possibility of price manipulation by the buyer (e.g. by downgrading produce quality or through lack of transparency in price setting) and the loss of flexibility in enterprise choice. An ever-present risk is that arrangements will break down because of a lack of trust between the parties. Contractual arrangements can sometimes significantly impact on gender roles and resources access. Social tensions might arise when the benefits of and work involved in contracts differentially affect men and women on particular households.

Traders, processors and agrifood companies can obtain more reliable and regular supply and have a greater input into produce quality. Such reduction in supply risk makes them more attractive to financial institutions. For larger companies, linking with small farmers enables them to overcome land constraints that would be present if they attempted to produce everything themselves. Working with smallholders is also usually more politically and socially acceptable and can often be more efficient, with labour costs being lower than when using a company’s own farms. Economies of scale in purchasing can be obtained by buying from a larger number of farmers in fewer locations. Offsetting these advantages are the costs associated with providing support to farmers, costs that may not be borne by competitor firms. A major problem is that of extra-contractual marketing by farmers. Transaction costs in

² Ways in which extension workers can assist farmers with linkage development are discussed in FAO’s new Marketing Extension Guide No. 5, “Horticultural Marketing” by G. Dixie, while contract farming is reviewed in Eaton and Shepherd, 2001.

working with a large number of small farmers can be high and inputs supplied to farmers may be diverted to other uses, or even sold. At a time when there is growing attention being paid to safety issues the need to provide traceability is growing in importance, although there are concerns that traceability may not be viable with smallholders.

In brief, therefore, there are strong potential benefits of closer links between farmers and produce buyers, but also some possible costs. The recent resurgence in contract farming and in donor-led activities to link farmers to markets suggests that the balance is in favour of improved linkages, although much will depend on particular economic, social, financial, organizational and environmental circumstances and on the enabling environment that governments are able to provide.

2 Examples of market linkages

In the following section examples of market linkages are given. These are presented according to the ways in which farmers are linked to the buyers. The examples provided are used to draw lessons about the various approaches and their likelihood of success. Both negative and positive aspects of the different approaches are therefore considered.

Farmer-to-domestic trader linkages

➤ **with an external catalyst (e.g. NGO; service provider; extension worker)**

- The Keprok Soe variety of mandarin is much in demand in Indonesia. However, it only grows well in West Timor province. Because it is a premium variety there is an incentive for traders to play an active role in improved linkage development, something that is not often witnessed. Working with farmer groups formed by NGOs, traders conduct workshops for farmers, covering areas such as fruit fly control, organic farming principles and postharvest handling to meet market requirements. One company taught farmers how to make wooden boxes and provided grading guidelines and definitions of maturity levels. Traders have also initiated actions to address farmers' cash shortages, including advancing working capital. Traders thus play the role of channel manager, information supplier, investor and extension officer. Benefits for traders include not only reliable, high-quality supply but also the fact that the linkages with farmers represent a high barrier to entry for other traders.³

➤ **developed by the participants themselves**

- A trader in Ho Chi Minh City wholesale market specializes in butterhead lettuce. By improving linkages with farmers and encouraging them to produce safer and higher quality vegetables he has increased returns for farmers, reduced losses and improved his own profit margins. The trader collaborates with several collectors who are responsible for training farmers in how to grow, harvest and pack the lettuce. The collectors pay the farmers 15 days in advance. The trader coordinates their activities and places orders five days in advance thus enabling the collectors to look for the required quality, unlike other traders who order only on the same day. The trader finances the collectors who, in turn, extend loans to the farmers. This case suggests that traditional traders can help to improve the fruit and vegetable supply chain through a focus on quality, supplier training, specific investments, collaboration and joint planning.⁴
- a professional vegetable supplier in Chiang Mai, Thailand specializes in chemical residue-free vegetables. He assembles produce, such as lettuce, cos lettuce, cabbage and cucumber, from 40 farmers and delivers the produce to three buyers in Bangkok. Supply

³ Wei *et al.* 2003

⁴ Cadilhon, *et al.*

is based on mutual trust and there is no written contract. The supplier conducts residue tests 20 days prior to harvesting. To prevent growers from delivering non-members' vegetables, he visits their plots before harvest to estimate production and observe chemical applications. He is responsible for quality inspection, grading, dressing, and packaging. The buyers do not provide him with exact product standards or grades, except for head lettuce. Payments are made seven to 15 days after delivery;

- the Bimandiri company in Indonesia was established in 1994 and by 1998 it was supplying four supermarket chains. However, in 2000 the company decided to become a dedicated wholesale supplier only to Carrefour, which had ten stores in Indonesia by early 2005. Initially Bimandiri purchased from local traders and individual farmers, but the decision to work solely with Carrefour led to moves to develop a sustainable procurement system, which involved encouraging farmers to work in groups and developing partnership arrangements with those groups. The company works with farmers' groups on the basis of agreed quantities. Prices are either fixed in advance or related to returns within a floor/ceiling price range. Bimandiri supplies a range of products to Carrefour and is working on broccoli and chilli production, aiming to produce standardized products. Problems faced include the level of commitment of farmers, seasonality of production and price volatility. Also, at times, Carrefour is unable to fully absorb the supply, resulting in sales to traditional markets at a loss. Indicative of the problems faced in dealing with small-scale farmers is the fact that of the one hundred members of a farmers' group near Yogyakarta approached by Bimandiri to grow watermelons, only half were considered suitable to grow the crop.

Farmer-to-retailer linkages

➤ direct sales by farmers

A supermarket chain in India, Foodworld, has developed supply relationships with one hundred small-scale farmers.⁵ Working with small-scale farmers is necessary because land tenure rules prevent farm consolidation; farmers have an average holding of two hectares. The chain does not have contractual relationships. For the time being Foodworld has agreed to purchase everything its farmers produce, although if quality considerations begin to override quantity requirements this may not last. Prices are set on a daily basis with reference to the prevailing wholesale market price and the method of calculation is fully transparent. Farmers deliver from a distance of up to 50 km to a consolidation centre which, in turn, is located at a distance of up to 300 km from the stores. The company negotiates for loans with seed and fertilizer companies on behalf of the farmers and also ensures that the correct varieties are supplied. At present, the chain plays no role in loan repayment although it would cease buying from farmers who failed to pay back their loans (this has yet to happen). Discussions were under way (end of 2004) with banks to set up a quadripartite arrangement, whereby the banks would finance the inputs supplied to farmers and Foodworld would repay the banks out of the farmers' earnings.

⁵ Based on presentation by K. Radhakrishnan at the FAO/AFMA/FAMA workshop on the Growth of Supermarkets as Retailers of Fresh Produce.

Linkages through a leading farmer

- Until recently, all farmers on the island of Mindanao in the Philippines sold their produce either on local markets or through traditional marketing channels that involved village collectors and wholesalers in Mindanao and wholesalers and retailers in the major cities of Cebu and Manila. With support from a USAID project, a new approach was developed, involving “clusters” of farmers who supply markets directly. The Bukidnon “lettuce cluster” involves five farms in northern Mindanao. A market for lettuce was identified with fast food companies. Marketing activities are coordinated by the largest of the five farms, which accounts for 44 percent of production. Coordination involves: (1) contacting each grower to get confirmation of weekly supply and matching any individual shortfalls with production by others in the cluster; (2) checking the pre-cooling and packing area and the supply of plastic crates; (3) transmitting weekly receipts reports and payments to the other growers and discussing identified quality problems; and (4) liaising with the crate supplier, transporters and input suppliers. Individual farmers’ crates are colour-coded for traceability. Information about each shipment is faxed in advance to the cluster’s agent in Manila who receives the shipment at the buyer’s premises, monitors the weights, identifies any quality problems and reports back to Bukidnon. The agent also arranges bank transfers of payments to growers. The cluster provides a model of an integrated approach that involves close liaison with input suppliers, transporters and buyers, and the coordinating role of the leading farmer appears to be the essential component of its success to date.⁶
- The In-Net-Vegetable Growers’ (INVG) group, in Chiang Mai Province, Thailand, consists of 72 members from eight villages who together produce kale, cabbage, bean and broccoli. Members of the group pay no membership fees, but each buys a share of 120 baht (US\$3) which is used as initial funding and operating capital, mainly to provide loans for inputs. The INVG group has invested in water pumps and tube irrigation. The group supplies two supermarkets in Chiang Mai, as well as two wet (fresh produce) markets and a university shop. The INVG farmers deliver vegetables to their chairman, who acts as the buyer and has supplied the supermarket chain for more than 15 years without a written contract. Since the purchasing system is by consignment, the INVG chairman must carefully determine the right quantity to deliver each day to avoid losses. Fruit is inspected piece by piece for quality and freshness, leading to high rejection rates. Each member’s code is included on bag labels for traceability. Payment is made every 45 days. Two advantages of selling to the supermarkets are that produce keeps fresh for the whole day and there is a certainty of a market due to a sizable group of customers. The disadvantage is that the vegetables need to be sold within a day. The case provides an interesting example of where a leading farmer, trusted by the others, has taken on the role of trader, to the benefit of all group members.⁷

Linkages through cooperatives

⁶ Based on the work of Flordeliza Lantican.

⁷ Wiboonpongse and Sriboonchitta, 2005.

➤ **directly with the private sector**

- The first company in China to export organic vegetables to Japan uses an integrated organic ecology system, which was introduced in 1993. The company does not sign contracts directly with farmers but through village vegetable cooperatives formed by the village committee and the leading vegetable farmers. The company provides fertilizer in advance and the farmers pay for the fertilizer when they sell their vegetables to it. Producers are selected on the following criteria: soil structure; quality of irrigation water; surrounding environment; education and capability of farmers; and capability of the cooperative's leadership. Once the producers have been selected, the company holds a village conference to discuss organic vegetable production and outline the contract. It establishes farmer schools to train farmers on organic crop cultivation and has two Japanese experts to monitor and provide training together with Chinese staff. Leaders of the cooperative are typically the village leaders who can ensure village support. The company now has 25 farmer cooperatives that are certified as organic crop producers.⁸

➤ **with an external catalyst (e.g. NGO; service provider; extension worker)**

- A Belgian NGO, ACT, established the Muleba Association for Agriculture and Local Industries (MALI) in North-West Tanzania to improve productivity at farm level. However, the success of this initial venture led to surplus fruit, encouraging the NGO to develop a fruit-juice processing factory. Production of around 1500 crates of juice a month has been achieved but the plant has the capacity to double this. The NGOs assisting the project have never felt comfortable with supporting the processing side of activities and are looking for an exit strategy to enable them to concentrate on their core production extension activities. However, they are presently meeting two-thirds of MALI's processing, distribution and marketing costs. It is unclear at this time whether MALI can make the transition from development project beneficiary to viable commercial enterprise;⁹
- In Mali the NGO, SNV, supported women's groups to improve the processing and marketing of sheabutter. Forty community groups were organized, embracing 1500 women. SNV provided storage facilities and equipment for each group and provided training in production of improved quality butter. Sales were made through a cooperative union developed by the project. Initially the activities were successful and women's incomes increased but on completion of the project the intervention appeared to be unsustainable. This was because of the limited time frame (four years) and the fact that the NGO had been directly involved in running the marketing side of activities without developing a capacity in the cooperative union to take over this activity.¹⁰
- Members of the Unión Cuatro Pinos in Guatemala are small-scale farmers. There are local collection centres, overseen by a manager and two or three assistants in each of the eight communities that participate in the cooperative. Members pre-select, weigh and store their produce at the collection centres and the amounts received are registered. The

⁸ Chen *et al.*, 2005.

⁹ Ringo and Uliwa, 2005.

¹⁰ Conilh de Beyssac, 2005.

cooperative headquarters has a central collection centre and a plant for postharvest operations, including pre-freezing, grading, cleaning and storage. Exports of fresh vegetables are made to the US and the UK. The main export products are green beans, zucchini squash, artichokes, pimento peppers, tree tomatoes and snow peas. The cooperative makes production contracts with its members during the distribution of seeds, which it controls. For the first 14 years, the cooperative received a non-reimbursable seed fund and technical assistance from a Swiss group that organized the cooperative.¹¹

Farmer-to-agroprocessor linkages, including contract farming

➤ **with an external catalyst (e.g. NGO; extension worker)**

- having identified lack of reliable oilseed supply as a problem faced by crushers in Tanzania, Faida MaLi, a Tanzanian NGO, ended up linking farmers to a start-up crusher because existing companies had no capacity to support farmers. One hundred and eighty farmers were organized into three transitional farmer groups. The NGO assisted with contract negotiations and both farmers and the company paid a percentage to the NGO. The company financed production costs, with farmers contributing 40 percent of those costs to a group savings account. However, problems were encountered with the weather and with cheaper imports.¹²
- In Mozambique the CASCA project to revitalise the cashew industry is a multi-agency venture involving SNV, HIVOS, Technoserve, two Mozambican NGOs, one providing farmer training and the other microfinance; a medium-scale private cashew processing factory and the national cashew promotion institute (INCAJU). Technoserve provides technical assistance to the development of small-scale processing units which sell to the larger factory for further processing, grading and packaging.¹³

➤ **initiated by the agroprocessor**

- an entrepreneur visiting Ghana identified the potential to export fresh-sliced pineapples to Europe. Because of the peeling and slicing in Ghana the entrepreneur could utilise much of the 35 percent of the pineapples that were rejected for fresh export in whole form. The initial venture ran into difficulties because of side selling and because farmers argued that as their pineapples were being exported they should receive the full export price. It was clear that the entrepreneur could not run his processing facilities profitably by relying solely on smallholder supply. He therefore established his own farm and now supplements supply from outgrowers on a contractual basis. These outgrowers receive training by working at the entrepreneur's pineapple shootfarm. After one year the farmers return to their own farms and grow pineapples on a contract basis;¹⁴
- in Malawi a Dutch-owned company promoted paprika production. Farmers were grouped into clubs of 20-25 and they elected chairman, treasurer and secretary. Company-employed extension agents provided technical support to farmers and also to

¹¹ Santacoloma and Riveros, 2004.

¹² Ndanshau, 2005.

¹³ Wijnoud, D. 2005(b).

¹⁴ de Heijer, 2005.

Government and NGO staff. The company offered a minimum guaranteed US dollar price before farmers started sowing each year. Production monitoring determined where the company would set up buying depots or collection centres each year. Problems encountered included traders who bought from farmers by telling them that the company was not going to buy and fraudulent activities of the company's staff who would purchase paprika as Grade B, deliver to the company as Grade A and pocket the difference. Farmer credit default was also common. To address these problems the company appointed prominent farmers as Field Assistants, working below the extension officer. These Assistants were elected by their peers and looked after 300-500 farmers each. They were not paid but received a bonus according to how much paprika their farmers delivered to the company. Also, the company computerised all records; each farmer now receives a computer print-out with records of sales, thus avoiding the problem of fraud. Computerisation has also enabled the company to more efficiently manage procurement and control transport costs and also to confirm that women farmers have a far higher average production than men!¹⁵

- also in Ghana, a company processes fresh chilled pineapple, mangoes, watermelon, passion fruit and papaya for export. Linkages between farmers and the company were established through visits and meetings and further strengthened with the introduction of EUREPGAP certification. The company has taken on the technical and financial responsibility of certification for all its suppliers. Those who are EUREPGAP-certified are obliged to sell to the company because of the investment it makes in obtaining certification. The company sources from some 135 suppliers, including 77 small-scale producers of pineapple who have recently been certified as Organic Fair Trade. Transactions are with individual farmers rather than farmer groups of cooperatives. Fruits are delivered either to the factory or collected at the farmgate and are paid for two weeks after delivery. The company does not provide credit to farmers nor link them to any financial agents, but does offer inputs and equipment on hire-purchase without interest. Farmers receive free technical training and advice from company staff to ensure that produce meets safety and quality requirements. Training in EUREPGAP standards and certification of farmers, as well as prompt payment and competitive prices, has ensured regular supplies from producers. Improvement in road infrastructure has enhanced access to farms by company trucks, which reduces the burden on farmers to transport produce to the processing plant.¹⁶
- In Kenya, a private dairy has developed strong relationships with its suppliers. Farmers are organized and registered through a formal supply contract, which indicates how much milk each will deliver daily. These arrangements are an important planning tool for the dairy, determining capacity utilization and ensuring optimal use of its transport fleet. Farmers are normally grouped into collection centres, which collect milk and supply inputs. At each centre, raw milk is entered into each farmer's account, after it has been tested for quality. The firm then transports the milk to the processing plant. The dairy provides extension services, artificial insemination and veterinary drugs, as well as animal feeds. All these services are provided to farmers on credit, which is then deducted from

¹⁵ Donker, 2005.

¹⁶ Dannon *et al.*

milk proceeds. With an assured market and an agreed price for milk, farmers enjoy a relatively low-risk environment. They are thus able to engage in dairy production with a clear idea of their expected revenue and also have guarantees of input price and quality.¹⁷

➤ **initiated by the government**

- in Viet Nam a joint venture between a state-owned company and an international consortium operates a sugar factory in Vietnam's North Central Coast region. Most of the growers in the region were subsistence farmers and therefore lacking resources to invest in the new crop. Credit was thus an indispensable component since it takes about 14 months between planting and harvesting of the first sugar crop. The project focused on the disbursement of working capital to growers in the form of short-term loans. As an initial investment the company covered expenses for a total of 2 000 hectares, providing either cash subsidies or free seeds and fertilizer. Since credit distribution to a large number of clients was very expensive and time-consuming, it was decided to form joint-liability groups (JLGs), each consisting of about 50 members, governed by a board. To reduce handling costs, starting capital was disbursed to the groups from the district office of the Vietnam Bank for Agriculture and Rural Development (VBARD). Each group was responsible for disbursement to the members who shared liability for credit and repayments. Also, savings were mandatory. Loans or starting capital from VBARD's district branches to the groups were repaid, in instalments, over four years. The credit programme was considered the essential ingredient for the success of the project.¹⁸

Farmer-to-exporter linkages

➤ **with an external catalyst (e.g. NGO; extension worker)**

- In Nampula, Mozambique a trader buys oilseeds from farmers for onward sale to exporters. He works through farmer associations, such as those set up by CARE, and provides credit in the form of fertilizer and in the form of money for the associations to purchase the crop. No repayment problems were reported. Farmers who work with this trader are sometimes prepared to accept deferred payment. While credit arrangements involving mutual trust appear to work well in this case, there were examples involving cash crops in the same area where trader/farmer credit arrangements had not worked.¹⁹
- Working in central Mozambique, the Netherlands Development Organization, SNV, carried out a programme of development of the pineapple industry. Production was already widespread and farmers were already working in associations but marketing was poorly developed. In addition to carrying out training programmes for the associations and investigating the potential for pineapple processing, SNV identified a trader in the neighbouring province of Manica who was exporting pineapples to Zimbabwe. The trader agreed to sign a long-term contract to buy 3-7 tons a week at a fixed price. He also agreed to provide training on production technologies.²⁰

¹⁷ Wambua, 2002.

¹⁸ Boselie and Van de Kop.

¹⁹ Shepherd, A.W. Field visit.

²⁰ Wijnoud, 2005(a).

➤ **developed by the participants themselves**

- Cassava is grown in marginal areas of Ecuador where other crops do not grow. Aid institutions have largely abandoned the zones where cassava is produced and processed and the dynamics of the cassava industry have thus developed spontaneously through partnership between farmers, traders and processors to meet market demand in neighbouring Colombia. An important factor in the success of these business linkages is the generation of mutual trust through the fulfillment of verbal agreements. Farmers make verbal agreements with the starch factories and deliver their production. Sometimes the factories pay farmers in cash at the moment of sale, and others the producer must wait until the processor sells the starch. Colombian intermediaries go to the area with their own transport, contact agents familiar with the zone and negotiate with the different starch factories. Verbal agreements are made and in many cases the intermediary pays an advance, either in money or raw materials before the cassava is processed. The intermediary buys all or part of the cassava starch production from the processor in exchange for the processor's commitment to deliver a quality product. This agreement is made before the starch is processed, which enables the processor to plan production.²¹
- Jujube growers in Myanmar's Mandalay Division sell their fruit mainly in Muse Town, 300 km away on the Myanmar-China border. The Muse market was first tapped by traders in mango and watermelon. The growers usually ship their fruit to intermediaries in Muse using their own trucks or hired vehicles. The fruit is transported in consignments ranging up to 500 boxes, across mountain roads and through security and taxation checkpoints. In Muse, the drivers deliver to intermediaries, who contact Chinese buyers and negotiate prices. The drivers usually bring the sales revenue back to the growers with a voucher signed by intermediaries (if the sale value is high, the intermediaries send money to their suppliers through a private bank, and pay bank charges).²²

²¹ Santacoloma and Riveros, 2004.

²² Kyaw Myint, personal communication.

3 Factors affecting the success of linkages

Profitability and markets

The availability of markets is a *sine qua non* for successful linkage development. But markets are not enough. They must be capable of showing a profit for the entrepreneur who is linked to farmers and the farmers, in turn, will need to be assured of higher net incomes with the same, or less, risk from entering into a new linkage than they could obtain from existing or alternative activities. At a very early stage estimates of farm level profitability must be made. Such calculations should be fully costed, making realistic assumptions about production yields (i.e. using farm, not research, data) and ignoring any subsidies that the linking organization may be tempted to provide.

While some reservations are made below about the extent to which market demand can support all of the market linkage activities being undertaken around the world, it is clear that many new possibilities for market-oriented production are opening up. Most countries continue to experience high levels of urbanization with growing urban markets being supplied by a smaller (at least in percentage terms) number of farmers. In countries with a rapidly growing middle class there are new opportunities to supply high-value food crops, with a consequent chance of higher farm profitability. For such countries domestic markets will continue to be more important for most producers. Farmers in less dynamic economies may, however, have to seek markets outside their national borders.

The initial focus should be on local markets. Organizations working to link farmers to markets need to contact agrifood companies and identify their raw material shortages and problems. A typical marketing paradox is that buyers, such as supermarkets and processors, complain about inadequate supply of the required quantity while farmers complain about lack of markets. Clearly the buyers have not been too active in seeking out new suppliers, while farmers have lacked the skills and resources to identify new markets and the skills to take advantage of identified markets through value addition activities such as grading, cleaning, sorting, packaging, bulking, and primary processing.

There is inevitably a considerable market risk associated with linkage development. The two main types of such risk are:

- local or world demand
- limited number of potential buyers

Demand. For many products the market demand is not very great. Short-term price hikes often encourage NGOs to promote crops, only for prices to fall. Alternative crops often exhibit similar price patterns, but these are the types of crops that may be attractive to donors and NGOs because of their relatively short gestation period. For example, NGOs promoted vanilla development in Uganda in response to good prices caused by bad weather in

Madagascar, the major world vanilla producer. When the Madagascar harvest recovered prices became less attractive and the NGOs investigated the potential of passion fruit, another crop subject to significant price fluctuations.

Export markets, particularly for high value products, can be unreliable and very price competitive. Subject to guarantees regarding quality, supply, traceability, etc. buyers purchase on the basis of price. A company or group of farmers can lose an export market overnight if a cheaper supplier comes along or if short-term quality problems are experienced. Successful market linkage developments for products with a relatively limited demand, or even for widely traded commodities with a large demand, may lead to the “fallacy of composition” or the “adding up” effect. While one country in the region may successfully develop mango exports this may cease to be profitable if all countries in the region follow suit because there will be just too many mangos available. Thus, while linking farmers to markets does offer considerable potential, we should not get carried away into thinking that this is the solution to all rural development problems. Farmer commercialization ultimately depends on market demand.

Some ways of responding to market constraints include:

- *niche marketing.* Egypt supplies strawberries to Italy, and the rest of Europe, for a brief period in November/January after the Italian harvest. By January the fruit is imported from Morocco, by early February it is imported from Spain and by March Italian strawberries are available from Sicily. Strawberry exports from Egypt are only profitable because this niche period is available when others cannot supply. Identification of such niches is an important marketing tool;
- *organic product marketing.* While organics do offer considerable potential for market development they are, to some extent, also constrained by limited market demand. While many developing countries are in a strong position to supply organic produce, due to existing production practices that involve low, or no, chemical use, arrangements for certification can be costly.
- *fair trade.* Fair trade produce was initiated by NGOs and charities, who argued that farmers were receiving an unfair proportion of final consumer price. Often such products were sold through charity shops in countries of the west. More recently, the concept has been used as a marketing tool by Western supermarket chains and with this has come a growing interest in the conditions (especially social and environmental) under which sourcing of commodities takes place, whether produced on estates or by small-scale farmers. Usually, the costs of compliance with social and other ethical codes are borne by the producer. Costs may escalate where supply chains involve producers who are dispersed over a wide geographical area. Those with the capacity to bear the costs are typically the large farms and estates. For most small-scale farmers corporate social standards and SPS²³ may be inappropriate and a potential liability to

²³ Sanitary and Phyto-sanitary Standards.

their livelihoods. Compliance with fair trade rules and market linkages usually involves significant NGO support and it is presently unclear whether farmer groups can access such markets sustainably on their own.

- *developing the local market.* There tends to be an excessive emphasis in the promotion of exports among development agencies and their government counterparts. This can be easily understood. Investigating international markets provides the opportunity for international travel. Visiting New York, London or the Gulf States is much more attractive than going down to the local wholesale market or visiting local agroprocessors or supermarket buyers. But the returns from many efforts to develop international markets appear questionable. Market research is often carried out before there are clear indications that the production capacity would provide the quantities required by international buyers, without having first developed a processed product that the international market may be interested in and without consideration of the prices that could be obtained on domestic or sub-regional markets. Meanwhile local stores are selling products that could be produced in-country and local consumers are unaware of products that could be grown or processed locally. Speaking at an FAO workshop on the subject of NGOs and agricultural marketing, held in Uganda in 2005, a private trader urged NGO staff to start their market linkage activities by visiting local supermarkets to see what was being sold and what could be produced in the country.²⁴ This sound advice should be the first rule of all efforts to link farmers to markets. In many cases successful linkages may simply be developed by identifying products that farmers say they can't sell and which buyers say they cannot find to buy.
- *encouraging local consumption.* Allied to efforts to develop local markets are efforts to promote domestic consumption. These may not appear an attractive activity for NGOs, because it is difficult for them to demonstrate clearly the benefits that have been achieved. But activities that encourage, for example, the consumption of fruits and vegetables or that promote domestic alternatives to imported products can benefit a large number of farmers.
- *adding value.* There is considerable scope for adding value to agricultural production. On international markets, for example, the growing demand for "convenience" foods has created a market for pre-cut salads and fruits. On domestic markets of developing countries scope exists for producing dairy products from milk, flours from grains and root crops, juices and jams from fruits, etc., or simply from cleaning or grading products.

Limited number of buyers. Many smaller countries have relatively few or even no sizeable agroprocessors. This does not apply to most Asian countries but is certainly a problem in Africa and the Near East. While those companies that do exist may presently have surplus capacity, their capacity, and thus their ability to absorb additional production, is inevitably

²⁴ J. Magnay, personal communication.

limited. Promotion of small and medium enterprises (SMEs) is seen by governments and donors as one way to promote competition and increase value addition but this may be constrained by a variety of factors, such as the lack of a risk-taking culture, lack of entrepreneurial skills, credit constraints, high cost of imported processing equipment and low demand when products are being produced for the domestic market.

Capacity of the linking organization

Agencies addressing agricultural production concerns at field level either realise that they must pay more attention to marketing or the ventures they support collapse. Most NGOs have thus made a fairly rapid transition from a production-led approach to more of a market-led orientation. However, it is clear that many such organizations lack the necessary business approach to enable them to effectively advise farmers. NGOs, themselves, usually acknowledge this fact. For example, at a workshop for NGOs in Eastern and Southern Africa many participants highlighted the fact that they themselves required further institutional development before they could work well with rural communities. Difficulty in attracting staff with the right orientation was also highlighted. Areas identified by NGOs for training included management, contract negotiation, market research, value chain analysis, use of basic business documentation, such as delivery and consignment notes, and farm enterprise decision tools such as crop budgets. Linking organizations therefore need to assess their own skill levels in agro-enterprise development and identify training requirements. Overriding the need for training in such technical areas is perhaps the need for NGO staff to have a more positive approach to the private sector and to get away from the past philosophy that entrepreneurs were to be mistrusted. Understanding the way the private sector functions and the problems it faces is essential if NGOs are to successfully link farmers to the private sector.

There appears to be limited collaboration between NGOs in terms of sharing the available training materials. By organizing workshops for NGOs in Eastern and Southern Africa in 2005 and for South East Asia in 2006, FAO has sought to promote collaboration. However, more remains to be done. Establishment of a web site for NGOs that could provide a database of training materials would be one possibility.

No dependence on subsidized assistance

There is now a clear understanding among most of those seeking to promote improved linkages that there should be no hand-outs to farmers. Projects that involve subsidized assistance have a very low chance of success as problems arise when farmers have to meet the full costs after the end of the project. Farmers should not be encouraged to take free inputs if they are capable of entering into a profitable business arrangement and linkages should not be promoted if they cannot be profitable for farmers. Where subsidies are applied, ownership of an activity by farmers is generally weak. Subsidies tend to reduce responsibility and reward failure. Linking organizations should, instead, develop a business plan that can enable farmers

to buy inputs on commercial credit terms. While organizations may, for example, agree that provision of free inputs to farmers should be avoided, they often at the same time find it perfectly acceptable to provide free equipment for a small-scale agroprocessing facility. In most cases such free provision of equipment should also be avoided.

Enterprise development is inherently risky and farmer groups need assistance to make decisions about whether to accept a risk or not. Thus use of external resources can legitimately be considered for facilitating the process of business development. Grants to enable groups to carry out local market assessment, prepare business plans, experiment on a particular product, and strengthen skills in areas such as group management and bookkeeping and postharvest handling can be considered legitimate use of development funds. Spending money on packing materials (except for trial purposes); transport of farmers' produce, etc. cannot.

Although the private sector would be the first to criticise NGOs who provide hand-outs to farmers, companies are themselves not immune from taking advantage of "incentives". Loans by the International Financial Institutions (World Bank, Asian Development Bank, etc.) are often targeted at providing subsidized assistance to specified sectors by, for example, providing funds to onlending to contracted farmers at favourable rates or by establishing research facilities targeted at a particular crop.

Mutual trust

Several of the case studies reported in Section 2 stress the importance of mutual trust in the establishment and continuation of linkages. This seems to have been achieved primarily through linkages involving relatively small private sector operators. Interestingly, several of these linkages involve cross-border trade.

Trust has been an essential ingredient of business dealings since people started to trade with each other. A significant proportion of agricultural marketing transactions between farmers and traders is based on trust: traders trust farmers to repay loans while farmers trust traders to pay for the products they sell to them, deferred payment being a common practice.²⁵ The question then arises as to why, in a trading environment where mutual trust can be considered almost the norm, some transactions, including many developed by activities to link farmers to markets, are characterized by considerable mutual mistrust. Reasons for this may include:

- although many exchanges appear to be based solely on trust, that trust is usually underpinned by the ability of the trusting party to enforce the transaction through social or family ties, through long-term knowledge of the borrowing party or through the ability to monitor that party's actions. Traders may not lend money to farmers outside the village in

²⁵ Shepherd, A. 2004.

which they usually operate, and may live, while farmers may not accept deferred payment from traders who have not been trading in their village for many years;

- we can easily observe ongoing relationships of mutual trust but have little information about relationships that may have broken down. The present trading relationships may only have been achieved after a lot of trial and error;
- in contrast to more traditional relationships, relatively new linkages are usually characterized by transactions between parties who are more remote from each other and have little or no prior contact. Lacking the underpinning of trust with social capital, neither party has a strong social incentive to honour an agreement. While there may be objectively compelling economic reasons to honour contractual arrangements, i.e. that it is in the best economic interests of both partners, these may be less apparent to farmers than the compelling social obligations of traditional systems.

How, then, can suspicion between parties to new transactions be overcome? The case study from the Malawian paprika industry provides one approach, with the company arranging for local farmers to be elected by their peers as Field Assistants with, *inter alia*, responsibility for monitoring the contract. Confidence that problems can be resolved by independent arbitration may also improve relationships and the development of industry associations with membership drawn from farmer and company representatives may be useful. Evidence from some studies suggests that prompt cash payments by companies may do much to avoid mistrust. Trust is also boosted by perceptions of partner's commitment to the business. If a company invests in plant facilities, warehouses, etc., it tends to be seen as committed to long term presence and thus becomes more "trustworthy".

In Nigeria the brewers, Guinness, contracted individual farmers to produce sorghum. After four years the company pulled out because farmers failed to honour contracts of diverted inputs supplied to other crops. The company then changed the approach, using buying agents or trusted suppliers. It receives applications or letters of intent from prospective suppliers, then issues a local purchase order to the buying agent to supply grains within a specified number of days to the company's buying centres. The order specifies quality requirements, such as percentage of insect damage, weather damage and foreign matter content.

Everybody must understand the terms of a contract. Activities must be clearly specified, with a time schedule. Under contractual arrangements farmers have to be able to synchronise production to ensure that the product is required when the agroprocessor, retailer or fast-food restaurant wants to receive it. This often requires the ability to work to strict planting schedules that specify planting material availability, planting dates, amounts to be planted, harvest date and expected yield. Field practices may also have to change; for example, Ugandan farmers supplying a restaurant chain had to reduce potato planting density in order to increase the size of their potatoes.

Side selling, pole vaulting and extra-contractual marketing are all terms used to describe the failure of farmers to honour contractual agreements, whether they are formal contracts where the sponsoring company has made up-front investments in farm inputs and, perhaps,

other cash advances, or informal arrangements to supply agroprocessors. Extra-contractual marketing can cause major difficulties for crop buyers. Faced by such problems the tendency is often to lose interest in developing sustainable relationships with farmers; only the larger companies have the time and resources to try to work with farmers and their groups to overcome such problems.

From the perspective of a farmer who has limited income-earning opportunities and is usually in urgent need of cash, side selling for higher prices than those agreed with the contractor may appear to make sense. It is difficult for the farmer to understand the potential benefits of establishing a long-term arrangement with a reliable buyer if that buyer is paying what appear to be low prices. Considerable work is therefore required of extension workers and other service providers to develop trust between the various parties. Contracts should have flexibility for renegotiation, if prices or costs change too much.

Group formation, structure and legislation

Notwithstanding the fact that farmer group formation has had a mixed success to date, with the support required to achieve success reducing prospects for replication, it is generally felt by linking organizations that development of groups is necessary to enable farmers to make the transition from a production to a market orientation, as it enables farmers to more easily access extension and inputs, to improve produce quality, quantity and economies of scale, and to increase bargaining power with buyers. From the point of view of the company, provision of credit and inputs through groups can reinforce peer pressure and can discourage non-compliance with contractual obligations assumed individually. Working through groups can also reduce the transaction costs associated with contract negotiation. Nevertheless, it should be noted that several of the successful direct linkages between the private-sector and farmers reported above have been initiated by the private sector without group formation. While awareness of the potential benefits of collective action often exists among farmers, this awareness is often not sufficient to overcome their suspicions about working with each other. Implementing group market-linkage activities is thus easier when farmers are used to working together or collaborating for some other reason. In Indonesia, for example, NGOs have been able to build on informal social or church groups and many farmers operate informal groups for mutual assistance during harvest.²⁶

The approach of organizing farmers into groups has the best chance of success when farmers perceive that obvious economic benefits are derived from group activities. Indeed, a clear indication of potential economic benefits should be a precondition for such work to begin. For this reason actions need to be taken to develop the economic performance of a group at the same time as work is underway on its institutional and organizational aspects.²⁷ Strengthening one aspect without strengthening the other makes little sense. These benefits

²⁶ Wei *et al.* 2003.

²⁷ one approach may be to develop a short-term crop to demonstrate immediate economic benefits as well as developing crops with a longer gestation.

must be sustainable and not derived from the fact that membership of a group entitles the farmer to subsidized assistance from the NGO or donor. Furthermore, NGOs should see group development as a component of the development of a market-oriented approach among farmers and not as a convenient vehicle for delivering inputs and carrying out activities.

Linking organizations use a whole gamut of terms to refer to the groups they organize. Commodity interest groups, district farmer networks, producer organizations and farmer associations are some of the terms used in just one workshop. However, whatever the group is called the development process should be bottom up and groups should be member owned and democratically operated. It is important that, from the outset, groups have a business orientation. Farmer groups that do not handle money but solely organise farmers to carry out activities on a group basis (e.g. assembling produce in one place to meet a trader or combining orders for inputs) tend to have the best chance of long-term sustainability, because there is no chance that one of the group members will run off with the assets. However, significant expansion of an enterprise requires that groups should be able to carry out financial transactions. For example, a farmers' group in Tanzania which, with assistance from Africare, developed linkages to supply potatoes to a fast-food chain had to open a bank account, as payment by the chain was by post-dated cheque. In many countries the legal status of farmer groups remains to be clarified and thus they are unable to carry out financial transactions. In some others there have been moves to force farmer groups or associations to be registered as cooperatives and thus come under the control of the ministry dealing with cooperatives, despite the fact that there appears to be a preference among groups to have the status of a limited liability company. There is often confusion about the exact legal status of cooperatives and how best groups can register as such.

The capacity of farmers to successfully manage business-oriented groups remains problematic and there are many experiences to suggest that this is likely to be the major hurdle to overcome. Where there are doubts about the capacity of farmers, even with training, to manage their own groups it is almost certainly better to consider alternative approaches. Linking farmers more closely with existing marketing channels, rather than trying to bypass those channels, is one approach. Indeed this may be preferable even where farmers exhibit management skills.

Contract negotiation

One key factor affecting sustainability of contracting will be risk management and who bears the risk under contractual arrangements. Mitigating risk is one of the most important motivations for contracting, while perception of who bears the risk is an important factor affecting the sustainability of contractual relations. Some risk sources can be known *a priori* and their sharing among transaction parties can be negotiated, but many sources of risk cannot be foreseen or fully covered by contractual clauses. Strategies are needed to cope with unexpected events that otherwise could undermine the contractual relationship. For example, in the case of known risks, or even in the case of so called "force majeure" events, insurance mechanisms

might be developed to provide the needed compensations. For circumstances that cannot be foreseen, arbitration mechanisms need to be put in place to resolve ensuing disputes.²⁸

Basic guidelines on contract specification are provided in the contract farming literature.²⁹ Bogetoft and Olesen (2002) introduce a “rules of thumb” checklist for contract design based on lessons from contracting in Danish agriculture. The examples given make it clear that many of the problems and sources of risk could be addressed through more innovative and appropriate contract specifications. Many contracts are inappropriate when first developed and are improved through trial and error over a period of several years. Systematic attention is needed to identification of appropriate contract specifications for different needs and circumstances. There would appear to be a related need for capacity building in contract negotiation and compliance.

The right enabling environment

Although the private sector should be responsible for organizing its supply of raw materials and marketing of the finished products governments can play a vital role in guiding and facilitating development of market linkages. They can improve efficiency by providing necessary public goods such as roads and a suitable policy and legal environment.

(a) The policy environment

The case studies reported on above primarily relate to project interventions, which are the prime focus of this paper, although there are also interesting examples of successful linkage development by the private sector, both small and large. However, the success that project-based interventions by linking organizations can achieve is inevitably limited by available resources and the limited number of farmers and farmer groups that such service providers can work with. One of the biggest challenges to tackle is how to develop policies, institutions and services to foster value chain development outside the context of such projects.

In seeking to do this, governments need to concentrate on developing an environment that can enable the private sector to function in a competitive way. Unfortunately, there are indications that some governments are seeking to move beyond facilitation towards direction, often with a pro-poor justification. Activities already noted include:³⁰

- driving, usually in association with IFIs, the choice of target enterprises, with the consequent creation of asset specificity and vulnerability. This has, of course, been most noted in the promotion of new, large-scale schemes such as oil palm estates but even loans to develop existing industries tend to distort competitive advantage;

²⁸ Da Silva, 2005.

²⁹ see, e.g. Eaton and Shepherd, 2001.

³⁰ based on Baker, D., 2005.

- provision of support to farmers for specific crops without reference to market demand, leading to market gluts. This is particularly dangerous for tree crops, which require a long-term commitment;
- service provision that tends to undermine commercial service providers. As examples, governments in Africa continue to involve themselves in input supply, despite the theoretical liberalization of that sector in most of the region, while there is these days considerable talk about reintroducing agricultural development banks, thus minimising any incentive commercial financial institutions may have for developing loan products suitable for farmers;
- cost absorption that results in a business dependency syndrome. Examples include provision of government extension services that are specifically targeted at farmers linked to one particular agribusiness company. The success and sustainability of much private sector activity can be and in many cases already is being affected by public sector and donor agency support developed in the context of specific projects, which act as a disincentive for investors and competitor firms.

Policy must be consistent, particularly where sizeable investments are made on the basis of policy changes. For example, Mozambique reduced export taxes on raw cashews, leading to a surge in exports of raw nuts and hard times for domestic processors. From 2001 the policy was changed, giving renewed encouragement to processors and the establishment of village-based primary processing with donor and NGO support. Considerable progress has been made but this could be jeopardised if there were further changes in the export tax policy.

(b) Legal and regulatory framework

There are many issues that governments should address. Specific to market linkage activities is the need to clarify legislation relating to farmer groups and cooperatives. In particular, groups,³¹ as noted, need to have a similar status to limited liability companies. Given that the concept of farmer groups as business entities is a relatively new one, many countries have yet to develop appropriate legislation. Contract farming sponsors entering into agreement with a cooperative also need to be sure that the cooperative is on a sound legal footing. Of broader concern is the question of laws of contract and the ability to enforce agreements in the courts of law. Unfortunately it is at this point that legal arrangements often break down; court procedures are universally slow and even if judgement is obtained there are usually problems in enforcing it and inflation has eroded the sum claimed. Furthermore, contract laws are of limited utility for businesses seeking to obtain repayment of loans from individual farmers who have practised extra-contractual marketing, given the small sums involved. Tracking down guilty farmers can also present problems. Conversely, small farmers will never have the means to bear the costs of fighting large companies in court!

An environment where corruption is prevalent is not conducive to investment in any sector, and particularly in agriculture, which even in the best policy environment is always

³¹ A distinction needs to be made between groups established to develop trading relationships with buyers and groups organized by contract farming companies to facilitate delivery of inputs and extension and collection of the crop. The latter type of group does not usually require legal status.

fraught with risk. Additional disincentives to invest are provided by poor monetary policies, which lead to high interest rates and artificial exchange rates.

Other areas in which governments can contribute to providing an effective enabling environment include regulations relating to pesticide use, food standards, seed quality and provision of arrangements to certify quality, GAPs, geographic origin, etc. While anti-trust legislation is desirable governments should avoid the temptation to over-regulate. The emphasis should be on enabling successful market linkages rather than on trying to control those involved in production and marketing.

(c) The institutional environment

(i) Infrastructure

Most studies identify the lack of suitable infrastructure as a major constraint to linkage development. The role of governments should be to concentrate on infrastructure improvement. Clearly this is a truism and an easy recommendation to make. In reality, governments in most developing countries have extremely limited resources and many claims on those resources. Given this reality, the best that can be hoped is that they will use funds earmarked for agriculture to develop rural infrastructure, rather than utilise them for politically inspired subsidies which have no long-term development impact.

Reliable power and water supplies are vital for agroprocessing and export of fresh produce. Good feeder roads are particularly important for perishable crops for export and for crops that require processing soon after harvest, such as tea, sugar and oil palm. In the past government provision of communications infrastructure was considered to be vital but with the rapid expansion of cell phone services the government role is moving from being one of service provider to service facilitator (i.e. by promoting competition and not imposing unnecessary restrictions on the private sector provision of cell phone networks).

(ii) Market information

Farmers lack knowledge of markets, both in terms of current prices and in terms of likely future market developments. They are not, therefore, in a good position to evaluate proposals put to them by NGOs and others and not well-equipped to negotiate effectively with buyers after withdrawal of NGO support. Governments and donors have for many years tried to establish market information services but these have often suffered from problems of both sustainability and data accuracy. Moreover, such services often address only basic agricultural commodities and are usually ill-equipped to provide information on export markets or on markets for processed products.

(iii) Extension

Individual companies are not in a position to internalise the cost of providing the necessary extension to farmers, particularly where they are in direct competition with other companies

who do not provide such services. At the same time, governments often lack resources to provide extension and extension agents rarely have a business orientation.

(iv) Marketing Extension

Where extension services do function, field-level officers can play an important role in promoting linkages between farmers and traders or agribusinesses. A recent FAO publication discusses in detail the role that extension workers can play in linking farmers to buyers.³²

(v) Research

Research and development policies are rarely coordinated with agro-industry policies. Agricultural research stations rarely, if ever, plan their work programmes around the market demand for and economic feasibility of specific agricultural products.

(d) Commodity associations

Increasing attention is being paid to the need to establish inter-professional commodity or industry associations, which can provide a focal point for discussions about individual industries and can play an important role in supporting farm-to-market linkages. Such associations should draw their membership from all relevant sectors of an industry. Care must be taken to ensure that associations represent an industry but do not try to control it. Possible activities of such associations can include:

- contract monitoring, registration and arbitration;
- where appropriate, industry-wide price setting;
- avoidance or reduction of extra-contractual marketing through an industry code of conduct and exchange of information;
- provision of a forum for discussions involving companies, governments, farmers, etc.;
- identification of research and development requirements;
- policy liaison with government, as a first port of call when the government encounters problems relating to the industry.

Such associations can be self-regulating but may also be established by governments. An example of the latter is the Sugar Board of Tanzania which has membership drawn from both sugar millers and outgrowers and arbitrates on behalf of all. The Board also oversees a development fund and exports sugar to the European Union on behalf of the millers. Relationships between outgrowers and millers are said to have improved considerably now that there is an effective mechanism to resolve issues related to breach of contract and allegations of inaccurate grading and weighing. In South Africa, the South African Sugar Association is also responsible for setting the price paid to outgrowers.

³² This is discussed in details in Dixie, G., 2005.

Financing arrangements

The availability of suitable financing arrangements must be considered at an early stage. Companies seeking to develop contract farming arrangements with farmers need to address how best those farmers can fund their start-up and ongoing costs. In the case of some tree crops, such as oil palm, the investment can be considerable and there is no production for several years. Ways of meeting start-up costs, in particular, need to be carefully planned. In practice, large-scale investments tend to be financed by governments and international development banks and few companies make large up-front investments in contracted farmers.

Tripartite arrangements are often involved with contractual arrangements. As noted in Section 2, a sugar development in Vietnam worked with the Viet Nam Bank for Agriculture and Rural Development which disbursed money through joint liability groups. In India, a supermarket chain linked its farmer suppliers with input dealers who agreed to supply the farmers on credit, and was planning to turn this tripartite arrangement into a quadripartite arrangement with the involvement of a bank.

The provision of credit requires specialist skills. Therefore, wherever there is an option the linking organization should try to link farmers to an experienced financial institution. Indeed, NGOs have now generally moved away from direct provision of credit to farmers, preferring to involve microfinance organizations. For example, the Kenya Rural Enterprise Program (KREP) manages the loan credit component of Technoserve's banana development project. Unfortunately, in many rural areas there are few or no specialized financial institutions prepared to lend to small farmers.

Difficulties faced by farmers in becoming involved in and maintaining linkages

The choice of product must, of course, be based on market demand. But market demand is not in itself sufficient to make the product suitable for all farmers. The choice must take into account farmer location, social structure, available infrastructure, farm size, agronomic suitability of the land, the land tenure situation, farmers' assets, capacity to establish new enterprises, access to finance and capacity to use that finance profitably, technological requirements and access to extension advice. It also needs to take into account the capacity of farmers to adapt to new systems. Even apparently simple activities, such as grading produce where no grading had been done in the past, can present problems.

From the farmers' perspective, the lack of or inadequate access to production or post-harvest technology; the lack of or limited market information and intelligence on prices and alternative buyers and their limited negotiating or bargaining skills can be considered as constraints to initiating linkages. Furthermore, linkage development is often obstructed by the difficulties small farmers face to meet stringent food safety requirements and delivery schedules required by processors and supermarkets, as well as the by the lack of institutional

support. Business models need to be kept as simple as possible. Numerous chain partners with complicated and non-transparent financial transactions will confuse farmers and lead to hostility and should be avoided. Worst-case scenarios also need to be considered from the outset. If, for example, produce is sold on consignment there is the possibility that farmers will not cover their costs, with the likelihood that the linkage will break down unless farmers fully understand the circumstances. Rejection of produce on quality grounds is a common cause of friction in contractual arrangements.

Producing for the market certainly requires a completely different approach to the occasional sale of subsistence surpluses. Farmers need to supply on a consistent and reliable basis. Processing factories have a commitment to their buyers to supply the finished products and so require a reliable supply of raw materials. Supermarkets, whether local or overseas, need to have a full range of produce available for their customers at all times. There is strong evidence that small-scale farmers face difficulties even before they are required to meet sophisticated safety standards and good commercial practices. Farmers wishing to supply supermarkets or agroprocessors must accept that traditional religious or social obligations, which in the past may have led to the suspension of most on-farm operations for a couple of weeks, cannot now stand in the way of a commitment to supply supermarkets 365 days of the year and processing companies when required by the companies. Supermarkets usually insist on delivery at an early hour of the morning and many farmers face problems in complying with this. Farmers must also accept the fact that a percentage of their produce may be found to be of unacceptable quality and that they will have to make arrangements to dispose of it through other channels (if they exist) at lower prices, or even to throw it away.³³

Farmers tend, for very sound reasons, to be risk averse but supplying processors or retailers successfully often requires a willingness to make risky investments, to plant new crops or varieties and, in the long run, to concentrate on just a few crops. In many cases the investments are asset-specific and it requires considerable trust on the part of the farmer to make such investments or to take on the required debt. Technologies promoted by NGOs and others need to be viable for the type of farmer they are working with, and should not excessively increase the vulnerability of farmers to external shocks. Financial institutions need to be in place and road and other infrastructure must be consistent with the need to supply the buyer efficiently.

In many contract farming ventures the companies recommend, procure and distribute farm inputs and may provide tractor services. In many cases this is possible because they have the opportunity to obtain repayments out of the proceeds of the farmers' production. For smaller linkage activities, those buyers who wish to play a developmental role are often reluctant to make such arrangements because of the dangers of extra-contractual marketing. However, linking organizations need to ensure that input supplies will be available on a sustainable basis. For this reason they should try to avoid providing the inputs themselves but should work with relevant companies to develop appropriate retail outlets.

³³ see Shepherd, 2006. (forthcoming)

Promoting entrepreneurial capacity

Studies of farmer-to-market linkages often talk of the need to promote entrepreneurial capabilities. This does raise the question as to whether someone can be taught to be an entrepreneur or whether such capacity building can only assist those with an entrepreneurial instinct to become better managers. It may be unrealistic to expect people living in rural areas to suddenly become entrepreneurs.

Worldwide, there appears to be the beginnings of a movement in agriculture away from vertical integration, which was in vogue until the mid-1990s, to vertical coordination. Western companies are concentrating on their core competencies and are more and more outsourcing their requirements through strategic partnerships and contracts, thus minimising risks associated with open markets. This change in business strategies is associated with a rapid concentration in all segments of industry, i.e. input supply, production, processing, distribution and retail. In contrast to these trends, many linkage projects, particularly those with a “pro-poor” orientation, try to go beyond the immediate goal of improving rural incomes to that of enabling rural producers to become “chain owners”. In other words, farmers are expected not to be just suppliers of raw materials but also to be able to manage the marketing or “value” chain up to the level of the consumer. This may involve farmers becoming involved in a range of value-adding activities, including produce preparation and processing, storage, transport and, sometimes, retail sale. While direct sale to consumers in urban areas by peri-urban producers should often be encouraged, it is questionable whether vertical integration of this type should be promoted for most farmers and highly debatable (1) whether farmers have now or are likely to have the capacity to manage the entire chain and (2) even if they could, whether such a move would be profitable for them.

Some projects have recognised the need for a core-competency approach. A cooperative (MALI) in NW Tanzania carried out fruit juice processing, distribution and marketing with fruit being supplied by the cooperative’s members. However, a Tanzanian consulting firm, originally employed to investigate the potential for product diversification, recommended that MALI should change its focus from that of doing everything to concentrating on its core activity of fruit juice processing. MALI was advised to outsource distribution and marketing to wholesalers who were able to offer retailers a broad range of products, which MALI could not do.³⁴

Sustainability of external interventions and exit strategies

The jury is still out on whether new linkage projects are likely to be sustainable, replicable and up-scalable. There are many potential problems and we have tried to highlight some of them in this paper.

³⁴ Ringo, E. and Uliwa, P. 2005.

There is a continuing idealism about small farmer empowerment and participatory community level development. Unfortunately, even market-oriented farmers can face difficulties in successfully entering more sophisticated markets and the task for small farmers living in remote areas, with limited skills and an inability to raise finance, makes the task almost impossible. There may be a case, at least in the short run, to concentrate on the better-endowed farmers. Such an approach should start from the market demand and work back to the farm level, closely involving the business that is providing that demand. It is far from clear that choosing farmers in a particular area and then setting about trying to identify suitable enterprises for them can be a particularly sustainable approach.

It is important to involve national, regional and local public authorities from the outset of any linkage activities. Consultation at the beginning and on an ongoing basis can avoid misunderstandings and can also identify expertise and resources that may be able to assist. There is also a need to learn from past mistakes and to be flexible. The entrepreneur marketing fresh-sliced pineapples from Ghana to Europe, described in Section 2, now has a very different business to that he envisaged when he moved to Ghana. A characteristic of entrepreneurs is a willingness to be flexible and to take a trial and error approach. NGOs, other service providers and the farmers they work with are likely to be less flexible. Indeed, some NGOs may have their hands tied by inflexible implementation agreements reached with donors. In linking farmers to markets there is, however, a clear need to be flexible and this needs to be recognised by donors. Both import and export markets change constantly in response to the activities of competitors, to government policies, to climatic influences on production and to tariff and non-tariff barriers. Farmers and their service providers need to be in a position to respond quickly to such changes.

From the standpoint of technical support problems can occur when external experts visit a project, demonstrate technologies, write a report and leave the “beneficiaries” to get on with it. Large-scale projects often provide a vehicle for a whole range of consultants to promote their particular hobby horses, with limited lasting impact. One project in Myanmar called in a whole team of experts to investigate new income-earning opportunities, yet paid no attention to ways of improving production and marketing of crops that farmers were already growing. The alternative approach is to ensure service provision by partnering with local organizations that should be in a position to provide services in an ongoing manner. Clearly, development projects need to reinforce the competence of local organizations. However, an acknowledged weakness of this approach is that in many countries local service providers cannot be expected to have the range of skills necessary to meet all eventualities. There is also likely to be a limited supply of suitable service providers. On consequence of this comes from Uganda, where an NGO has reported competition among NGOs for the services of leading farmers.

Leaving farmers and their groups or associations to look after themselves becomes easier if a clear exit strategy has been worked out from the beginning. An exit strategy should ensure that the NGO or other agency does not become directly involved in marketing or processing of produce but, instead, facilitates linkages between farmers and those able to provide such

services. Otherwise the withdrawal of NGO services would inevitably result in a collapse of market linkages. Opinions are divided on the time frame necessary to have a high chance of sustainability. Some NGOs have attempted 2-3 year interventions while others believe that the process requires ten years. While successful market linkages can, probably, be introduced over two or three years, institutional development may take longer. Groups, or at least their leaders, require business training, such as an ability to budget and do bookkeeping, in order to ensure financial sustainability, and regular audits need to be carried out.³⁵

Limited access to financial services is a major constraint for farmers and certainly affects their ability to take advantage of market-oriented production opportunities. Several NGOs see an important component of an exit strategy to be the development of a capacity of farmers to save part of the income generated by market-oriented production. They have thus encouraged farmer groups to develop savings schemes and link to micro-finance organizations. There is little information to date as to whether this approach can be successful.

Fortunately most NGOs are increasingly resisting the temptation to achieve short-term success by heavily subsidizing the farmers they work with. With a background working on relief programmes it has taken time for NGOs to appreciate that long-term commercial success is not achieved by doing almost everything for farmers, as might apply to a relief programme, but by facilitating farmers to do things for themselves and to enable them to link up with appropriate service providers. A problem of this nature was experienced by a USAID coffee-development project in Haiti. At first the program faced confusion between the federation of farmer associations' origin as a subsidized development project and the need for its role to be that of a going concern. In addition, its financial structure did not encourage quality control or efficient cost management - until 2001/02, farmers perceived no link between coffee quality and financial reward.

As noted previously, governments, donors and NGOs tend to have a "pro-poor" growth orientation. This can often sit uneasily with hard commercial realities. Business development is not and cannot become synonymous with social policy and sustainability almost always requires that business prudence overrides some equity concerns. Businesses are likely to be more confident about linking with farmers if some have a demonstrated capacity to produce commercially. At the same time, care does have to be taken that linking farmers to markets should not exacerbate pre-existing inequalities.

Many activities involve a multiplicity of facilitators. The donor or donors has/have technical inputs; several NGOs may work with farmers in different areas, sometimes using service providers; another agency may do market studies and/or work with processors; a microfinance institution may be involved; not to mention government agencies. Support to the cashew sector in Mozambique involves six agencies. A programme to promote honey production in Tanzania involves five. There are significant risks if the success of a venture depends on the continued involvement of all parties and one or two decide to back out.

³⁵ see "A Market Facilitator's Guide for Agro-enterprise Development", CIAT (draft document) for suggestions regarding an exit strategy over a 5-10 year time frame.

Scaling up

A relatively small number of farmers is presently being assisted by NGO and donor-led activities to link farmers to markets. The project approach used by such agencies may have a good chance of success for those fortunate beneficiaries but it is presently having little impact on the great mass of farmers. Ways of replicating tried and trusted approaches at lower cost, in order to benefit a greater number of farmers, do not yet seem to have been developed and need to be considered as a matter of some urgency. Project scaling up should only proceed from some initial point of success. Replication should only begin after at least one enterprise cycle (i.e. from production to successful sale) that has been profitable on a sustainable basis, i.e. without external inputs from the linking organization.

The project approach may detract from the need for a more wide-ranging analysis of the factors affecting the ability of more farmers to develop a market orientation. The policy, demand, institutional and infrastructural issues considered earlier need to be addressed as a matter of urgency for upscaling through replication outside of a project context to be possible.

Working with the private sector

Many donor/NGO-driven projects, while recognising the need to link farmers to commercial markets, nevertheless still seem to maintain a residual hostility to the private sector and to “middlemen”³⁶. This leads the service providers to seek to establish alternative marketing channels. Examples of where such alternative channels have proved to be sustainable are difficult to find. Despite the perceived exploitative nature of commercial intermediaries, farmer groups or cooperatives have always found it difficult to compete with them. Often, farmers or their groups lack the necessary economies of scale to be competitive with marketing activities. Sometimes the NGO itself carries out marketing activities without developing an exit strategy.

For an NGO to establish a start-up company or business cooperative is usually not a good idea. Existing companies with a good track record have expertise in processing, logistics, marketing, etc. as well as adequate cash flow and are usually in it for the long run. Furthermore, start-ups with small throughput find it difficult to compete with larger companies. On the other hand, many countries have very few potential buyers and it may be desirable to promote agroprocessing development.

The private sector includes large-scale agribusiness concerns operating large contract farming programmes with thousands of farmers; agroprocessors who need a larger and more reliable supply of raw materials and who either are or are not interested in working directly

³⁶ Strangely, this word, often used in a pejorative way, is one of the few gender-biased words to have escaped political correctness. People who would recoil from the use of “chairmen” happily talk of “middlemen”, possibly because of the negative context in which intermediaries are often viewed. It should be noted, however, that in many parts of the world women play a dominant role in agricultural trading.

with small farmers to achieve this; supermarkets and other retailers who wish to secure supply and small-scale local traders. Activities to develop linkages often tend to ignore the last group on this list. Indeed, some see the purpose of “linking farmers to markets” as being to bypass such intermediaries and to enable farmers to take on more of a “chain management” role. This may not be the best approach. Traders often have informal credit linkages with farmers and by-passing the trader then means not only finding new marketing channels but also identifying new credit sources. Existing social capital between farmers and traders provides a powerful incentive for trying to build on the relationship rather than attempting to destroy it. Many traders have the capacity to work with farmers in a culturally appropriate manner and at low cost, to advise on quality issues, to increase supply and to reduce transactions costs, without the need to create formal farmer organizations.³⁷

As shown by some of the case studies reported on in this paper the private sector can be a major driver for sustainable linkages and can often develop commercial linkages without the involvement of a third party. However, this may require going beyond pure commerce and entering into development. This may necessitate establishment of a research department, extension, field trials and farmer training. Such initiatives benefit from gradual growth rather than starting on a large scale. Where things are seen to work further growth happens naturally. However, while this may be the best way to interact with farmers, the gradual approach may cause problems for agroprocessors who need to make large up-front investments.

³⁷ Wheatley et. al.

References and further reading

Baker, D. 2005. Unpublished presentation at the post-IAMA workshop on Inaugurating new partnerships in the global food chain: experiences from North Africa, the Near East and Asia. Chicago, July 2005.

Bogetoft, P. & Olesen, H.B. 2002. Ten rules of thumb in contract design: lessons from Danish agriculture. *European Review of Agricultural Economics*. 29(2): 185-204.

Boselie, D. & Van de Kop, P. Institutional and organisational change in agri-food systems in developing and transitional countries: identifying opportunities for smallholders. *Regoverning Markets Global Issue Paper 2*. The Netherlands.

Cadilhon, J., Fearn, A.P., Tam, P.T.G., Moustier, P. & Poole, N.D. Collaborative commerce or just common sense? Insights from vegetable supply chains in Ho Chi Minh City. *Supply Chain Management: An International Journal* 10/3 (2005) 147-149.

Canz, S. 2005. Linking small-scale farmers to markets – a multi-level analysis with special reference to Malawi, Kenya and South Africa. Margraf Verlag, Weikersheim, Germany.

Chen, K., Shepherd, A.W. & Da Silva, C. *Changes in food retailing in Asia – implications of supermarket procurement practices for farmers and traditional marketing systems*. Agricultural Management, Marketing and Finance Occasional Paper 8. FAO. Rome.

Conilh de Beysac, B. 2005. *Shea butter value chain upgrading*. KIT Writeshop, Moshi, Tanzania.

Dannson, A. 2002. *Farm-agribusiness linkages in Ghana*. Unpublished report prepared for FAO.

Dannson, A. Gallat, S. & Röttger, A. 2005. Blue Sky Company Ltd. <http://www.fao.org/ag/ags/subjects/en/agmarket/linkages/pvtco.html#gh>

Dixie, G. 2005. Horticultural marketing. FAO Marketing Extension Guide, No. 5. Rome.

Donker, S. 2005. *A private sector perspective on smallholders accessing the market and the private sector accessing the smallholder market*. KIT Writeshop, Moshi, Tanzania.

Eaton, C. & Shepherd, A. 2001. *Contract farming – partnerships for growth*. FAO Agricultural Services Bulletin No. 145. Rome.

de Heijer, A. 2005. *Chain development of pineapple subsector: a private to private approach*. KIT Writeshop, Moshi, Tanzania.

- Ndanshay, N.** 2005. *Chain development on oil seeds in Tanzania*. KIT Writeshop, Moshi, Tanzania.
- Ringo, E. & Uliwa, P.** 2005. *Mali Muleba – fruit juice*, Tanzania. KIT Writeshop, Moshi, Tanzania.
- Röttger, A.** 2004. *Strengthening farm agribusiness linkages in Africa: summary results of five country studies in Ghana, Nigeria, Kenya, Uganda and South Africa*. AGSF Occasional Paper 6. Agricultural Support Systems Division, FAO.
- Santacoloma, P. & Riveros, H.** 2004. *Alternatives to improve negotiation and market access capabilities of small-scale rural entrepreneurs in Latin America*. AGSF Working Document 4.
- Shepherd, A.W.** 2004. *Financing agricultural marketing – the Asian experience*. AGSF Occasional Paper 2. FAO, Rome.
- Shepherd, A.W.** 2006. *Quality and safety in traditional horticultural marketing chains of Asia* (forthcoming)
- Wambua, T.** 2004. *Farm-agribusiness linkages in Kenya*. Unpublished paper prepared for FAO. and at <http://www.fao.org/ag/ags/subjects/en/agmarket/linkages/pvtco.html#ke>
- Wei, S., Adar, D., Woods, E.J. & Suheri, H.** *Improved marketing of mandarins for East Nusa Tenggara in Indonesia*.
- Wheatley, C., Woods, E.J. & Setyadjit** 2004. *The benefits of supply-chain practice in developing countries – Conclusions from an international workshop*. ACIAR Proceedings No. 119e.
- Wiboonpongsee, A. & Sriboonchitta, S.,** 2004. *Regoverning markets: securing small producer participation in restructuring national and regional agri-food systems in Thailand*. Chiang Mai University, Thailand.
- Wijnoud, D.** 2005(a). *The case of pineapple produce associations in the Chibabava district, Sofala province, Mozambique*. KIT Writeshop, Moshi, Tanzania.
- Wijnoud, D.** 2005(b). *Case study of small-scale cashew processing in the rural areas of Mozambique*. KIT Writeshop, Moshi, Tanzania.