

Chapter 2

Literature Review

2.1 Seed systems

The “seed system” refers to the entire complex of organizations, individuals and institutions associated with the development, multiplication, processing, storage, distribution and marketing of seeds. The seed system includes the traditional or informal system in which individual farm household carry out all seed functions for land races, including seed development, multiplication, processing, and marketing where as the formal or commercial system comprises of specialized organizations with distinct roles in supplying seeds of new varieties. Legal considerations such as variety release procedures, intellectual property rights, certification programs, seed standards, contract laws and law enforcement are other important components of the seed system. These institutions help to determine the quantity, quality and cost of seeds passing through the seed system (Howard *et al.*, 2001).

Seed systems vary due to diversity of climate, crop types, farming systems, culture and economy. Two common basic seed supply systems are generally defined as the formal and informal seed sectors, being major components of seed supply systems. Among smallholder farmers, the informal sector provides 85% and more of planting seed. The formal sector - research institutes, parastatal organisations and private companies - tend to focus on larger farming operations with more inclination to concentrate on seed of hybrid crops with low planting density. The ideal institutional structure for a seed system to function at an optimal level should not be rigid because cultural, social and individual conditions, political and economic management systems and laws of the individual country have a great influence on what is possible and practicable for any particular country.

To strengthen seed systems, a comprehensive understanding of the seed systems followed by the farmers is of paramount importance. Farmers, particularly

small holders, are involved in multiple kinds of seed systems, which help them to produce and obtain the seed they require. These systems can be broadly divided into two types: a formal seed system and a local system. The local system is also sometimes called the “informal,” “traditional,” or “farmer” seed system (Sperling *et al.*, 2003).

Seeds pass through the chain of activities to one of three outlets. They are sold in the market, used in development programs, or retained by households for the next planting season (Howard *et al.*, 2001).

The seed system passes through several phases as it evolves from a traditional system, where all production and supply functions are carried out by the farm household to a more complex system in which many different organizations (e.g. seed companies, seed growers, farmer-based seed enterprises, seed processors) and legal institutions (e.g. seed standards, regulations, certification programs) play specialized roles in the seed supply chain (Douglas, 1980; Pray and Ramaswami, 1991; Jaffe and Srivastava, 1992; Rusike and Eicher, 1997). The key features of each stage are summarized below:

- In stage 1, the informal seed system predominates; most farmers save their own seed or obtain seed from nearby farmers or villages, and the rate of new varietal development and adoption of new seeds is low.
- During stage 2, seeds of improved varieties developed by publicly financed research begin to replace local varieties; use of complementary inputs (e.g. fertilizer) is limited but increasing at the same time. In here the up-coming private sector gets more involved in the seed multiplication and distribution of commercial / market oriented varieties.
- During stage 3, the private sector begins to play an active role in research and development, particularly in developing hybrids and seeds for specialized cash crops. Seed distribution systems become more organizationally varied and decentralized, and many components of the mature seed system exist but the supply of seed from the formal sector still ranges from fair to poor.

- In stage 4, the seed system and the agricultural sector as a whole are well developed. Commercial seed production and marketing are common, effective seed laws and regulations are in place and are under enforcement, linkages with stake holders outside the seed sector are well established, and the use of improved seed is widespread.

It is important to recognize the complexity and diversity of the seed sector in each phase, and the dynamic roles of a range of formal and informal seed organizations in promoting the transformation process (Tripp, 1995 and Louwaars, 1994). Two points are particularly important: (1) the changing (but not necessarily declining) public sector role as private sector involvement increases in different stages of the seed chain; and (2) the declining relative importance of the informal seed sector as the seed system develops.

Seed system development can be viewed as a dynamic process of matching the supply to the changing demand for seeds. On the supply side, this involves strengthening and promoting the seed supply organizations. It also involves designing institutions (e.g. seed regulations governing varietal development, release, and certification) appropriate to existing technical (e.g. type of crop, cropping system) and environmental (e.g. transportation, market infrastructure) conditions to promote the development of seed supply chains. On the demand side, institutions and programs continue to influence farmer decisions regarding the use of saved versus commercial seed. Several factors affect this decision, including: (1) the farmer's ability to produce and save seed; (2) the type of crop (self-pollinated, open-pollinated, roots and tubers); (3) the yield or quality advantage of purchased seed; (4) the cost of seed (purchase price plus the cost of procuring seeds from distribution outlets); (5) the price and availability of complementary inputs; (6) the relative price of crops; (7) the farmer's forecast of weather conditions and output prices; and (8) the farmer's purchasing power (Pray and Ramaswami 1991).

A well-functioning seed system is defined as one that uses the appropriate combination of formal, informal, market and non-market channels to stimulate and efficiently meet farmers' evolving demand for quality seeds.

Similarly Tripp (2003) also showed that seed system has important role in delivering new varieties to farmers. One of the first things to recognize about seed provision is that it entails a series of distinct operations and responsibilities. These include plant breeding, source seed production, seed multiplication, quality control, conditioning and storage, and marketing. Use of quality seed is a pre-determining factor to increase yield. The Seed Producer Groups (SPG) approach in Nepal is a sustainable farmer run program (Ojha *et al.*, 2000). Based on this experience, DSC has also adopted a similar strategy through involvement of contract seed grower in Bhutan. However, the localized nature of farmer seed systems poses difficulties to make generalized recommendations for strengthening such systems. Therefore, there is need to develop better understandings of how local seed systems operate under normal conditions and their reaction to various market forces.

According to Tripp (2003), an important prerequisite for commercial seed sector development is the existence of robust agricultural markets. If farmers do not have the opportunity to sell their produce and do not have access to a range of input suppliers, then development of a commercial seed sector is unlikely. "Subsistence farmers" who market little or none of their output also benefit from a commercial seed sector, but much of the initial demand will come from more market-oriented farmers. Hence, there is a crucial public sector role in the development of a commercial seed sector. For many crops, the principal source of new varieties will be public sector breeding. Mechanisms must be in place that connects public plant breeders to the demands and priorities of farmers.

2.2 Contract farming

Contracting is essentially a way of allocating risk between producer and contractor; the former takes the risk of production and the latter the risk of marketing

(Glover, 1987). Contract farming is becoming an increasingly important aspect of agribusiness in many developing countries. It usually involves basic elements like pre-agreed price, quality, quantity and time (Manage, 2003).

Glover and Kusterer (1990) suggested that contracts can be thought of as varying in 'intensity'. At one extreme, the company pays the market price on delivery and exercises little control over production. At the other side, extreme prices are fixed and the contractor exercises constant and rigorous control over all aspects of production. However, it is important to bear in mind that the "contract is a representation of a relationship rather than the relationship itself", and the divergence between the two may be crucial.

Porter and Howard (1997) in their study of contracts in Africa indicated factors affecting the success of contract farming scheme from farmers stand point as follows: scheme staff and farmer-company relations; alternative production possibilities; previous experience with multinational companies; farmer control of land and irrigation water.

Contract farming has also the potential to affect the way of income distribution within a rural community, and can even exacerbate existing patterns of economic stratification (Korovkin, 1992; Key and Runsten, 1999).

Wiboonpongse *et al.* (1998) precisely reports that contract farming can be a promising vehicle for intensification of agricultural production and expansion of agro-industry. It is also reported that coordination and support of different agencies are needed to ensure success of contract farming thus benefiting both farmer and the industry.

Apart from technical know-how and support the farmers require, they also need to enhance their management ability. The case of potato growers is more obvious where in farmers chose to allocate risk between growing for contract and non contract or some times even terminate contract for higher return. Contract farming

seems to be a promising vehicle for agro-industry development. Design of arrangement needs to take into account of local social and economic environment. To get the vehicle move quickly and smoothly, it requires efforts of local agencies in facilitating, guiding and monitoring the arrangement for fairness to all parties involved. It is highly important to control exploitation of private firms' superior bargaining position with farmers (Sriboonchitta and Wiboonpongse, 2004).

Sriboonchitta and Wiboonpongse (2004) in their review on Research Methodologies used in the study of Contract farming in Thailand reflected some issues like company and farmers contract relationship; factors affecting sustainability of contract; policy of the company on price, quantity and quality; contract farming and risk sharing like production, price and quality risk; factors motivating contract farming and maintaining the contract as very important issues which need to be addressed by contract farming research.

Eaton and Shepherd (2001) suggested that the primary precondition for any investment in contract farming is that the venture is most likely to be profitable. To mention some of the important preconditions for successful contract farming are: *profitable market, credit, inputs, communication, land tenure, financing, social consideration and government support*. Further Eaton and Shepherd (2001) argued that contract farming works best as a partnership between agribusiness and farmers supporting the fact that, contract farming does increase the income of farmers as well as their technical and managerial skills while reducing farmers' risks and uncertainties. Contract farming may also provide small and medium farmers with access to profitable competitive markets, to agricultural inputs, technology and advice from which they would otherwise be excluded. However, agribusiness managers must have good financial, managerial and social competencies to serve not just their own interests but also the interests of contract farmers.

Contract farming has potential where small scale agriculture is widespread and where high-value crops, animals and animal products are demanded on internal markets (supermarkets, fast-food outlets) or on external markets (export). High-value

products include tea, cotton, bananas, tobacco, palm oil, baby corn, gherkins, milk, chickens, or pork. Contract farming can be profitable on a small scale with a few dozen out-growers, but also on a large scale. In Sri Lanka, a flourishing export trade in gherkins has been built on contract between companies and more than 15,000 growers with plots of around 0.5 ha each. On an even larger scale, more than 200,000 farmers in Thailand grow sugar cane for the country's 46 million population under a government-sponsored system, which assigns growers 70% and millers 30% of total net revenue (FAO Spotlight, 2001: Agribusiness and small farmers)

Similarly, Wiboonpoongse *et al.* (1998) also reported that for successful contract farming, farmers have to change from productivity orientation to a more quality oriented production systems. They further emphasized the need for concerted effort of both public and private agencies involved in contract farming.

Contract farming has over the years been considered as one system that has considerable potential for providing a way to integrate small-scale farmers in development. The benefits to the agribusiness firm from a contract-farming venture revolve mainly around cost reduction, quality control and reduced uncertainty with regard to the supply of raw material (Kirsten and Sartorius, 2002).

Singh (2004) mentioned that state policy had helped contract farming to take roots in the country which now works between farmers and companies more by way of a market mechanism. At the same time there are all kinds of arrangements in place in the name of contracting. The contracts are not in favour of the farmers therefore the companies rely on brokers (middlemen) to work with farmers. The state intervention has helped the farming sector and its farmers only to an extent that it has promoted competition that has been beneficial for growers like in the case of potato growers in northern Thailand, and has also led to pumping of capital in farm sector through the BAAC loans for contract growers. But, on most other counts, like making the system fair for farmers in terms of nature of contracts, or helping farmers' organizations in processing or marketing or even in collective selling to companies, it has not really been effective. Contracting is also leading to certain adverse local level impacts like

environmental degradation. It is recommended that contracting need not be promoted for all crops, farmers and regions, and the state should now play a regulatory role rather than a promotional role and farmers' organizations should be promoted by governmental and non-governmental developmental agencies.

Critics view contract farming as a sophisticated form of exploiting farmers and a means of extending inappropriate agriculture practices (Vellema 1999; Eaton and Shepherd 2001). Vellema (2002) recognized technology as an important dynamic element in contractual production, but also emphasized the institutional and cultural modalities as a basic ingredient for understanding the evolution of a contract-farming scheme.

Coulter *et al.* (1999) and Glover (1987) stated that growers if well organized can play an important role in success of a contract by encouraging adoption of new technology and adjustment to changed market conditions and by lobbying to deal with political changes.

Governments and aid donors usually like the contract farming system because it minimizes their costs and responsibilities for provision of credit, technical assistance, marketing supports etc. It appears to be an attractive way to deflect these traditionally public obligations to the private sector. A major aid donor recently extolled the virtues of contract farming for peasants and governments, but worried that its progress would be slowed by the occasional difficulties contractors face in recovering their credit advances (Coulter *et al.*, 1999). Like wise traders and exporters, as well as foreign and domestic investors, tend to find contract farming an attractive alternative to undertaking direct production themselves or to attempt to rely on the vagaries of the market for their supplies. It enables them to shift most financial and political risks to small producers. These and many other advantages for entrepreneurs and investors help contract farming system's rapid spread in the developing countries.

In contract farming systems, the individual producer has perhaps had most reason to feel weak in his lack of market power. However, the history of agricultural producers demonstrates that growers have been seldom rewarded appropriately in the market place due to weakness in their states as farm entrepreneurs compared with other participants in the food industry. That is why it is very important for the producers to act in an organized manner. Recognition gained by organized groups is better as opposed to the lack of recognition accorded to unorganized farm producers (Anderson, 1994, cited in Rehber, 1998).

According to Rehber (1998) contract farming is a continually evolving process. Worldwide applications of contract farming have shown that the terms of the contract are shaped in their own condition and varied from product to product. For successful implementation of contract farming, having coordination and collaboration consciousness and acting in an organized manner are advisable for both sides. On the other hand, government attitudes and incentives are also important aspects.

As developing countries continue on the path of economic liberalization, there is an urgent need to bring the benefits of new trade and market opportunities to rural areas. While smallholders with larger landholdings may have access to information about opportunities and access to institutional support to take advantage of those opportunities, other smallholders are less likely to have such access and are more likely to be marginalized.

Contract farming is definitely one possible mechanism for improving the livelihood of rural smallholders and providing them with the benefits of economic liberalization. Through contractual arrangements, agro-industry can assist smallholders to shift from subsistence or traditional agriculture to production of export-orientated, high-value products. This not only has the potential to increase incomes of contracting smallholders but also to have multiplicative effects in the rural and broader economy. Without the benefits of contracting with agro-industry, smallholders may be unable to shift production to high-value crops and take advantage of new opportunities.

The type of commodity produced will influence the type of transaction costs incurred and hence the type of production and marketing system required. Contract farming is an intermediate production and marketing system which spreads the risk between agribusiness and smallholders and addresses the key transaction costs. This is unlike the spot market where risk and costs are clearly separated between stakeholders and in plantations where the risks and costs are borne by the firm.

Key and Runsten (1999) considered the development of contract farming production and marketing systems as a response to market failure. The key market failures that prevent smallholders' participation in the spot market are in the areas of:

1. **Credit:** Production of high-value non-traditional commodities is generally much more costly than traditional commodities and is more likely to require credit. Credit markets in developing countries are often missing or imperfect. Agribusiness firms are in an excellent position to act as lenders because they can withhold repayments from the production returns.
2. **Insurance:** Non-traditional crops tend to pose a higher income risk on smallholders because of the higher production costs. They are also riskier because they are more susceptible to pests making both yields and prices variable. High transaction costs keep firms from offering insurance policies in rural areas of developing countries and informal insurance mechanisms are limited due to a number of costs. Agro-industrial firms, because of their portfolio of activities across commodities and geography, are in a good position to insure against risk. By offering a forward contract with a fixed price which includes a risk premium, firms can help smallholders manage risk.
3. **Information:** Production efficiency depends on information on appropriate technology on the quantity and timing of input application and on desirable crop characteristics. Inadequate or no market information can slow or inhibit the flow of vital information to smallholders leading to poor efficiency. Agro-industrial firms can efficiently communicate information to smallholders through a number of mechanisms including the use of contracts that stipulate interaction with firm extension agents. Another potential information problem in agricultural

production relates to work effort of hired workers. Without supervision, hired workers on estates or large farms may shirk and not put in as much effort as desirable. On small farms, most labour is family labour and is less likely to shirk. Since the returns to production for a contracting smallholder accrue to the household, firms can take advantage of the presence of motivated family labour by contracting to family farms.

4. **Factors of production:** Markets for specialized inputs for production of nontraditional crops, such as certain machinery or seeds, may not be readily accessible on the market and smallholders may have difficulty securing these inputs. Additionally, because of failures in the land and labour markets, land and labour owned by households may be under-utilized. Through contracting, firms can provide smallholders with an access to necessary inputs which are some times under-utilized and less costly.
5. **Product markets:** Undeveloped product markets may make it difficult for firms to obtain the appropriate quantity and timely delivery of commodities. Through contracting firms reliable delivery can be ensured.

2.2.1 Benefits and risks of contracting small farmers

Positive evaluation of contract farming generally indicates smallholders either benefit from contracts in terms of enhanced profits or cease to participate altogether in the group. Benefits from contract participation result from improved access to markets, credit and technology, better management of risk, improved family employment and, indirectly, empowerment of women and development of a successful commercial culture (Glover and Kusterer, 1990; Runsten, 1992; Key and Runsten, 1999; Eaton and Shepherd, 2001).

There is evidence, however, that contract farming may have a negative effect on the welfare of smallholders. A number of authors expressed concern that contractors favor larger growers and hence poorer growers may be left out of the development process (CDC, 1989; Runsten, 1992; Little and Watts, 1994). Other hazards of contract farming were the potential for 'capture' of smallholders within

contracts, negative social effects of the 'cash economy', narrowing of local markets as contracted production squeezes out local food production, deteriorating contract terms as contracts mature and general concerns about how multi-national corporations behave in developing countries (Clapp, 1988; Wilson, 1990; Little and Watts, 1994; Torres, 1997; Singh, 2000).

The evidence on the benefits of contract farming to smallholders was shown to be mixed. For instance, Warning and Key (2000) found that Senegalese smallholders who participated in a peanut contract farming program received higher income from their participation when the program structure designed was so to be conducive to participation of poor smallholders. Other researchers noted only limited benefits to smallholders and even cases where smallholders had been directly or indirectly harmed (Glover and Kusterer 1990).

The benefits to smallholders of contract farming are dependent on a number of factors. The first issue to consider is whether smallholders are able to participate in contract farming when contracts are being offered. That is, if agro-industry is offering contracts for the production of a certain commodity, will the tendency be to offer contracts to smallholders or larger landholders? The answer to this question depends largely on characteristics of the commodity, the farming households and the context in which smallholders operate. For example, if a commodity is labour intensive then contracting smallholders for production, who have inexpensive and under-utilized labour, might be advantageous.

However, transaction costs of searching for appropriate smallholders and screening out better smallholders may be high and limit the ability of agro-industry to link with smallholders. Additionally, maintaining and monitoring quality may be difficult when dealing with numerous smallholders. In such cases, presence of complementary institutions, like that of smallholders' organizations may be of paramount importance. Exclusion from contract participation by smallholders can limit opportunities for smallholders and exacerbate income inequalities in rural areas.

A second consideration in determining the benefits of contract farming to smallholders is to evaluate the benefits of participation. Although agro-industrial firms may provide credit and inputs for production, thus overcoming market imperfections, agro-industry may be in a strong bargaining position and able to extract significant rents from smallholders leaving them only marginally better off than without contracts. The benefits to smallholders depend primarily on their bargaining power. The bargaining power of smallholders will be limited if they are unorganized, have few assets and scarce alternative income opportunities (Key and Runsten, 1999).

2.2.2 Benefits and risks to agribusiness

There are also reasons why agribusiness firms enter contracts with smallholders. The most important reason is the access gained to relatively cheap labour and land in order to grow high-value commodities that would not normally be grown by smallholders. Firms can participate in markets where they would normally be excluded. They can minimize costs by not purchasing land or directly hiring labour. Through provision of credit, other inputs, and in some cases technical advice, firms can encourage smallholders to produce new commodities. There are several areas of potential savings for agribusiness firms in providing credit. If the firm is large and well established it is likely to obtain funds at normal business rates. A large firm may also have advantages over moneylenders in management of risk because of the size and diversity of its loan portfolio. That is, investing in a large number of small cash advances allows diversification of lending risk either across participants in a particular contract or across participants in a number of different commodity contracts or activities. The agribusiness firm also has lending advantages by virtue of its contract. A contract allows monitoring of input use, a degree of control over crop management decisions that might jeopardize repayment and it can specify how cash advances are to be repaid. Also, contracts require delivery to the firm hence, cash advances can be deducted from post-harvest cash settlements (Key and Runsten, 1999).

While there are benefits in encouraging smallholder production through contracts, agribusiness firms are required to bear some risk. Most contracts stipulate that the firm will purchase all the produce, usually at a price higher than the prevailing market price. The firm may bear risks of crop failure due to bad management or seasonal factors. To mitigate these potential losses, the firm may maintain tight control over management and offer seasonal or annual contracts so that bad producers can be excluded from future contracts. Some of the strategies to cope with defaulter are:

Lending through groups has several advantages - Peer pressure within the group screens out potential defaulters and can reduce the risk of default, particularly where the group has to put up some sort of joint collateral. This was the main rationale behind the use of groups by agribusiness in the Zimbabwe cotton sector. In addition, economies of scale can be realized in the delivery of services, thereby reducing costs. Farmers may also benefit by having a stronger hand in negotiations with companies.

Good communication and close monitoring of farmers - The need for good communication is a key lesson, since communication between agri-business and farmers is often weak. Group members can monitor each other, a particularly critical issue for export horticulture involving European markets, where there is a need to ensure quality and traceability of produce, and to prove due diligence throughout the chain. More generally, good communications help to foster good company-farmer relations and a sense of trust, which has a positive knock-on effect by reducing strategic default.

The range and quality of services offered - The better and broader the range of services offered, the closer the relationship between farmer and business, and the more the farmer stands to lose by breaking the relationship. Delivering timely services, which respond to farmers needs, creates incentives for farmers to honour contracts. For example, input credit tends to be provided in kind to prevent credit being diverted to other expenditures. However, good performance in repaying in-kind loans can lead to cash loans being offered, as has happened in the Zimbabwe cotton sector, and in some of the stronger Kenyan dairy cooperatives.

Incentives for repayment, and strict treatment of defaulters - Repayment rates in the cotton sector of Zimbabwe rose when incentives were applied together with asset

seizure and group exclusion in the case of default. The case of tobacco in Uganda showed that legislation can be developed and enforced which, in theory, protects both parties in the contract and reduces the temptation for companies to take enforcement into their own hands.

Cooperation between buyers - This is not common, but potentially provides mutual benefits, either through agreement not to purchase from farmers under contract with other buyers, or, as in the Ugandan cotton sector, through joint operation of the scheme. Sharing information on defaulters is a further activity, which would ultimately benefit all companies involved in contract, farming, both within and across sectors.

2.3 Synthesis of literature review

2.3.1 Seed system

Seed system is a composite of organizations, individuals and institutions associated with the development, multiplication, processing, storage, distribution and marketing of seeds. It has an important role in delivering new varieties to farmers. There are variations of seed system depending on agro-ecological, socio-economic and political setup. A comprehensive understanding of the system is a pre-requisite for any intervention to strengthen the seed sector. As many authors have highlighted, it is important to recognize the complexity and diversity of the seed sector in each phase, and the dynamic roles of a range of formal and informal seed organizations in promoting the transformation process. Therefore, seed system development can be viewed as a dynamic process of matching the supply to the changing demand for seeds. However, the success of any seed system depends on the existence of robust agricultural markets.

2.3.2 Contract farming

Contract farming, which is essentially a strategy to allocate risk between producer and contractor, is becoming an increasingly important aspect of agribusiness

in many developing countries. In the similar perspective, contract farming also has the potential to affect the way income is distributed within a rural community, and can exacerbate existing patterns of economic stratification. Therefore, it is considered as a promising vehicle for intensification of agricultural production and expansion of agro-industry. While the contract farming heavily depends on profitability, the success of the system depends on how fast farmers can change from productivity orientation to a more quality oriented production system.

In recent years there seems to be dominant trend towards contract farming. An entrepreneur, large producer, a trader-processor, an investor, exporter contracts mostly small producers for delivery of particular crops at a predetermined price and time to be grown under highly specified conditions in order to meet certain quality and volume standards. The contractor typically provides small producers under contract with credit advances for labour and other inputs such as certified seeds, fertilizers, pesticides, herbicides, etc. as well as technical assistance (strict supervision) and an assured market and price. The producers are prohibited from selling the produce elsewhere even if offered a better price. Credit advances are deducted from the sale of the product as are other costs incurred by the contractor. The producers furnish their land and labour during the production process. These schemes have been expanding rapidly in numerous developing countries. Producers frequently welcome such schemes as credit advances, technical support and an assured market for production may sound very attractive to poor peasants. Moreover, contract growers can frequently obtain significantly better returns for their land and labour. Company usually takes particular care at the beginning to make the contracts attractive enough to recruit as many new participants as possible. Several problems become obvious to most participants after a few years only. Risks of crop failure due to climatic and other hazards are borne disproportionately by the small producers. Sooner or later, a bad harvest occurs leaving the producer with no alternative livelihood from self-provisioning to fall back on and sometimes deprived of his land and other valuable assets because of un-payable debts. In many ways, contract farming tends to be risky for small producers, but they often reap short-term gains in

monetary income. One should note, however, that in most areas where contract farming spreads, only a small proportion of the poor farmers are able to participate.

Good service delivery by the company is a precondition for successful contract farming. Poor services may jeopardize production, which may lead growers into the so-called debt-trap. Company must therefore take responsibility for coordinating production and marketing activities well. Managers must ensure the transparency of all interactions with the growers and they must ensure that growers understand both their own obligations and those of the company. Contract farming is essentially a commercial relationship between farmers and agribusiness, driven by economic interests. The relationship should be profitable for both parties if it is to be sustainable.

In a small farming household like in Bhutan, contract farming has considerable potential for providing a way to integrate small-scale farmers in development. The review indicated that in a contract system, smallholders either benefit from contracts in terms of enhanced profits or stop participating in the program. Benefits from contract participation result from improved access to markets, credit and technology, better management of risk, improved family employment and, indirectly, empowerment of women and development of a successful commercial culture. The crucial drawback of contracting is the possibility of smallholders being left out from the mainstream development process, and getting captured within the contracts. While the review presents mixed scenarios of contract farming, it can be concluded that the mechanism of contract and participation of the producers in the decision making process can provide a win-win situation.