



Linking to markets

A case of small scale sorghum farmers group in China

Sorghum harvest – linking to new markets

**Ch Ravinder Reddy, Zou Jianqiu,
A Ashok Kumar, P Parthasarathy Rao,
BVS Reddy and CLL Gowda**

Market access is one of the most critical linkages in farming business for the rural farm households; it is also evident that they are a prerequisite for enhancing agriculture-based economic growth and increasing rural incomes. Rural incomes will not be substantially increased by exclusive emphasis on subsistence food crop production; rather, more market-oriented production systems are needed. These require intensification of agricultural production systems, increased commercialization and specialization of production. The innovative marketing linkages through contract farming have yielded positive results.

In China, the markets are growing rapidly in the areas close to urban centers, with relatively dense populations, and in higher-potential areas where levels of agricultural production and surpluses are greater. In areas that are away from the urban areas, remote, have weak infrastructure, less populated and have low agricultural potential, the process of market development has been far slower. Furthermore, different types of market relations have developed for different types of crops. The food crop markets being typically characterized by informal arrangements between producers and small-scale intermediaries, and export crop markets by 'formal' relations between producers and agro-processing firms which in case also supply inputs and provides production support services. In many countries, export crop markets have emerged faster and more smoothly than food crop markets.

In this rapidly evolving context, the policy and institutional frameworks established by the governments of developing

countries have not been consistently supportive of private-sector-led market development. At the national level, improved farmer-to market linkages have been typically constrained by, for example, an overly restrictive legal framework for farmer group registration, the lack of an effective legal framework for contract enforcement, or by excessive licensing requirements for traders.

The small scale farmers in China are also constrained with regard to the access and operation in the markets. Markets no longer have fixed nominal prices. Instead, new commercial relations must be struck with a myriad of suppliers and buyers, and prices, whether for selling produce or purchasing inputs, are now largely negotiated. Most of the small scale farmers especially those trying to produce market staples in remote areas, it has created major problems. The issue of market access may usefully be considered according to three dimensions: physical access to markets; structure of the markets; and producers' lack of skills, information and organization.

The practice of contract farming is becoming increasingly common in various developing countries. The process involves buyers/end users/exporters/ industrial users entering into an agreement with farmers/group of farmers/farmers associations to buy a certain quantity of a product at a specific price. Such arrangements, for example, exist for sorghum in China, for bananas in Samoa, squash in Tonga, and root crops in Vanuatu.

This paper presents the experiences of contract farming model in China with alcohol industry as an example of inclusive market oriented development. The project was designed to support small-scale sorghum producers in enhancing production and accessing markets are interesting and have been able to address market constraints and help farmers in responding to new opportunities resulting in better incomes. The project initiatives were funded by CFC, The Netherlands.

The project

The project is trying to improve the farmers access to markets, and in this context, it is seeking ways to: a) effectively increase the market share of the rural poor and improve the terms in which they participate in markets; b) achieve greater market access and market development for the rural poor.

The project in China is led by Sorghum Research Institute (SRI) of Liaoning Academy of Agricultural Sciences (LAAS), Liaoning province, PR China. The project developed on coalition approach mode and the important collaborating partners of the project include

- Liaoning Green Fangshan Organic Foodstuffs Co. Ltd.
- Jinzhou Jingchao Food and Mill Co. Ltd.
- Jinzhou Daoguang 25 Liquor Making Groups
- Heishan Xinhe Food and Oil Trade Co. Ltd
- Jinzhou Branch, Agricultural Bank of China
- Xiaodong Credit Agency Heishan County
- Xiaodong Means of Production Company
- Liangfeng Seed Company of LAAS

Improved farmer-to market linkages have been typically constrained by an overly restrictive legal framework for farmer group registration, the lack of an effective legal framework for contract enforcement, or by excessive licensing requirements for traders.

Based on the baseline survey of project area, the constraints faced by the small-scale sorghum farmers in accessing the inputs, credit and market studied by Sorghum Research Institute, Shenyang, were documented. The contract farming model developed in the project was proposed on the basis of the extensive study of these constraints and identifying possible innovations that can be suggested and used in identifying appropriate input supply and marketing systems suitable to the farmers.

The model

A contract farming model was developed to suit the requirements of the sorghum farming community by involving coalition partners to have holistic approach for improving the livelihoods of sorghum farmers in Heishan and Benninin county villages.

Based on the findings of the baseline survey and based on the experiences of initial two years and in depth understanding of the constraints, marketing value chain strategies were planned with the project partners. The aim was to develop a marketing model to increase the production and provide linkage to alcohol industry.

The contract farming model sketch (Fig.1 on p. 22) specified the roles and responsibilities of the public sector (SRI) and private sector (seed, oil, food, and alcohol industries) members involved in the process. ICRISAT is the project implementation agency (PIA) and the Sorghum Research Institute (SRI) the lead partner in the project implementation facilitated the adoption of the model by the company and the farmers. Both the organizations play complementary roles in developing and implementing the contract farming model in China.

Adoption of the model

SRI facilitated the adoption of the model by the alcohol company and the farmers. The alcohol company played an important role in liaison with SRI in implementing the contract farming model for the benefit of the farmers and the company in a win-win mode.

Through the project, SRI was able to bring the sorghum farmers together into an association and build their capacities for joint action. Several meetings, exposure visits, field demonstrations, trainings, group discussions were organized for the benefits of the farmers. The farmers' association is given special inputs in managing the financial accounts and decision making processes. On-farm advice and field support was also extended to the farmers groups during the entire cropping season.

Training and capacity building activities have been cross cutting themes and they aimed at enhancing the skills of farmer groups in

crop production, selection and use of improved seed/fertilizer/chemical, demonstration of improved production technologies, accessing institutional credit, bulking, storing, grading and marketing of farm produce within the target regions. The above activities were conducted in collaboration with partners.

Based on SRI research and suggestion of cultivars, the alcohol company places prior purchase order for required quantity of seed. SRI supply seeds of high yielding cultivars suitable for alcohol extraction. The company takes up responsibility of seed distributions to project farmers. The alcohol company provides good quality and required quantity seed material and other inputs such as fertilizers and the plant protection chemicals to the farmers on timely basis. The company will also enter into buy-back agreement with farmers association to supply inputs (seeds, fertilizer, pesticide) at reasonable price and minimum price for procuring the produce.

Technical on-station and on-farm advice and field support in identifying and controlling pest and diseases, improved production technologies like IPM, INM is extended to the farmer groups during the entire cropping season.

Farmers are advised by SRI on timely harvesting (physiological maturity) and drying of grain to keep up the quality of the produce. The farmers will be guided for grading and bulking of the produce as per requirement of alcohol industry. The systems of bulking and grading for better quality of grain were introduced to the farmers and the importance, advantages and the requirements of grading, bulking and storing were explained through training programs.

Storage in the villages is one of the major constraints that exert pressure on the farmers to sell the produce soon after the harvest of the crops. Farmers seldom in these villages used the storage facilities of the private sector as they are far away and the transaction cost of storing and selling small quantities are high. On the other hand, industrial users demand bulk quantities of grain in a single transaction. To overcome these constraints, under the project dialogues with the private sector, the storage structure was developed jointly by the company and the farmers association.

Apart from the storage structure, a drier for the sorghum ear head drying has been installed in the central village to help the farmer

to dry the sorghum ear heads after the harvest to reduce the moisture content of the grain upto 10-12% to hamper the growth of mold fungi.

Price commitment

The company at the time of entering into the contract with the farmers will also quote a minimum price for procuring the sorghum grain from the farmers. Interesting point to note here is that if the market prices of sorghum go up in the market at the time of the sale of the produce by the farmer, the company will pay the increased price to the farmers as per market price and not the pre agreed price. On the contrary, if the market prices for sorghum fall below that of the agreed price, the company will pay the pre agreed price to the farmers. This is one reason why the farmers were interested in entering into the contract agreement with the company.

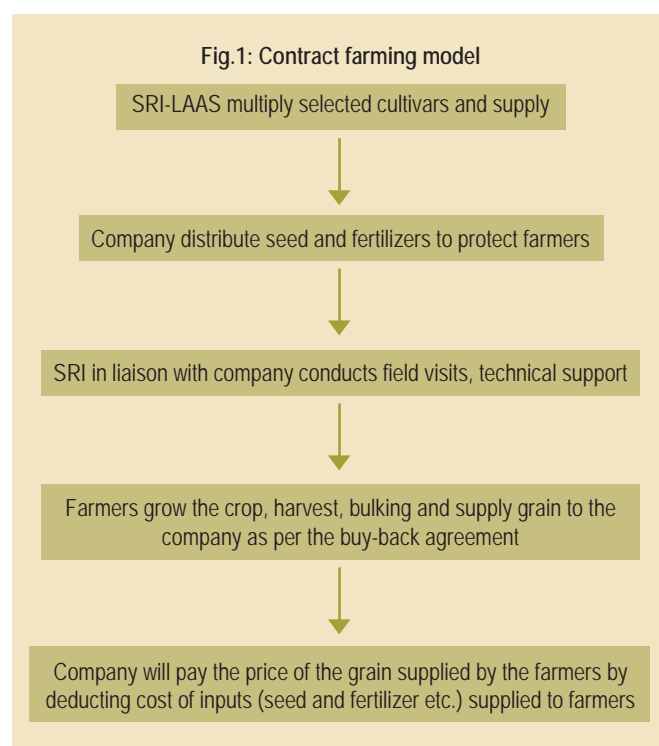


Table 1: Details of grain production, quantity marketed and price realized

Year	Total production (tons)	Quantity of grain Sold in Free marketing (tons)	Quantity of grain sold in Contract marketing (tons)	Average price per kg grain (USD/kg)		Percent price increase over market
				Market price	Project farmers	
2005	874.5	567.5	232.0	0.146	0.175	19.9
2006	990.0	661.0	254.0	0.161	0.182	13.0
2007	3900.0	2741.5	1050.0	0.204	0.226	10.8
2008	4177.0	1412.0	2661.0	0.199	0.219	10.1

Note: 1 US Dollar = 6.85 RMB

The company organizes for the bulk purchase of the grain from the farmers at the mutually agreed price at the village.

Results

The efforts under the project for contract farming have yielded good results. These communities have seen an increase in the productivity at the farm level due to adoption of best cultivars and cultivation practices and are also related to the development of new markets for the sorghum farmers. The remote communities in low-potential areas, or households lacking adequate levels of assets and organization, technical know-how have been benefited by the project interventions.

The farmers and partners have gained practical experience in adopting the farming model with the small scale farmers groups. The lessons learnt in the project in assisting poor rural producers in accessing markets more effectively through farmers groups and contract farming have yielded results in addressing production and market constraints by the small scale farmers and helped the farmers in enabling them to respond to new opportunities and increase their production and income levels through better markets (Table 1 on p. 22) apart from helping them to confront and respond to the unpredictable and inequitable markets.

Farmers realized several other benefits. Farmers got an extra income of about 58 USD/ha from selling glumes to Sorghum pigment industry. They also got 5-10% discount on seed price and 5% of discount on fertilizer price. There was less seed usage per hectare (17% decrease) and reduction in fertilizer usage by 20-25% owing to improved production technologies. All these together have reduced their production costs. On the other hand,

farmers got higher price (13-20%) for grain as compared to open market price.

Conclusion

The project directly assisted smallholder producers in understanding better how the contract farming model works, how to gear their production to the demands of potential buyers and how to access such markets. Key to achieving this is the support provided to them to form commercially oriented organizations (farmers associations) and training them so as to enable them to develop the understanding and skills required to interact effectively with markets. The innovative contract farming model was a holistic approach encompassing production enhancement aspects, capacity building and assured market linkage. This helped in overcoming fragmented production system, improve the quality and competitiveness and raise the income of rural households.

Ch Ravinder Reddy, A Ashok Kumar, Parthasarathy Rao, BVS Reddy and CLL Gowda

International Crops Research Institute for the Semi Arid Tropics, Patancheru, Andhra Pradesh, India.
E-mail: c.reddy@cgiar.org

Zou Jianqiu

Sorghum Research Institute,
Liaoning Academy of Agricultural Sciences,
Shenyang, PR China.

Call for Articles

SRI: A scaling up success

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The System of Rice Intensification (SRI) is a simple, low cost approach that is quietly transforming rice production around the world. It is now practiced by farmers in many countries. SRI is a set of practices based on single, widely-spaced, early transplants grown under an alternate wet-and-dry water regime, and preferably with organic fertilizers. Together, these practices lead to stronger plants and to systems which are much more water-efficient, especially when compared to rice grown under conventional methods. It is claimed to lead to a doubling of yields and to halving the use of water. Even though many scientists question it, SRI has spread rapidly among farmers, and many more are enjoying higher yields every year.

The March 2013 issue of LEISA India will look at this evident success, and explore the ways in which these practices have spread, from farmer to farmer, from country to country, and also from rice to other crops. We welcome contributions that unravel the "mystery" behind SRI. What extension or communication approaches are followed? How are

farmers adapting it to their local context and conditions? What is the role of civil societies, scientists, researchers and the government in the promotion and scaling up of SRI? Building on the SRI example, we will also look at the political and institutional support which is needed to ensure that farmers' innovations, and success, receive the global recognition they deserve.

Send us your contributions! Please visit our website and leave your suggestions, comments or ideas for this issue. Articles for the March 2013 issue of LEISA India should be sent to the Editor, LEISA India at leisaindia@yahoo.co.in before 15 January, 2013.