



## Food wholesale business: A way to improve Agri-supply chain

### Introduction:

India is world's 2nd largest producer of fruits, vegetables and flowers, yet there is enormous on farm and off farm wastage of fresh produce. The vegetable and fruit production contributes more than 30 percent of the agricultural GDP. But the real challenge starts after the production. More than 72 percent of the fruits and vegetables get wasted in the absence of proper supply chain. The sector is constrained by widespread fragmentation in the supply chain, low productivity levels, and huge post harvest losses arising out of inadequate storage, cold chain and transport infrastructure, logistics and supply chain management.

### A brief analysis of fruits and vegetables value chain:

Indian food market is extremely fragmented having large number of players both on the buyer and seller side. Presence of large number of players does not necessarily mean high level of competition and efficiency as their size prohibits them to make necessary investment in production and procurement of the food materials. Presently there are too many intermediaries in the Indian food chain merely increasing the cost of agriculture produce without adding any value to it.

Consolidation of food chain is suggested to be one way of getting rid of this problem. The advantage of consolidation of the food chain is that it will lead to decrease in the number of intermediaries and subsequent decrease in the spread between farmer

price and consumer price. In India generally farmers gets 25% of the final consumer price compared to developed and other developing countries in South East Asia where this percentage is around 60-70%.

### Entry of wholesale giants: A welcome event

Wholesale giants like Wal-Mart and Metro have ability to change the picture of Indian fruit and vegetable supply chain. Technology driven efficient supply chain is critical to their success. These international wholesale giants invest huge amount of money in setting up supply chain. Indian farmers will be benefited by efficient value chain of these companies by way of better price realization and transparent price discovery mechanism.

These big wholesale companies provide technology transfer service to farmers to produce quality produce which is acceptable to customers. Standard supply chain practices followed by these companies will lead to reduction in post harvest losses drastically. Big whole sale stores will incorporate traceability in value chain which will increase consumer acceptance for consumption of fresh fruits and vegetables.

### Strong value chain: an opportunity for value chain financing

These wholesale players have established a strong backward support system which consists of people and standard process. They have established their farm collection centres at village level where daily fresh fruits and vegetables are collected after proper sorting and grading. Most of farmers are regular suppliers and this system provides more or less certain cash flow to farmers.

This system provides a good opportunity to financial institutions to finance the farmers by way of value chain financing. Banks can get easily data of all farmers who send their produce to collection centres as well as their supply consistency. If the banks find that a number of suppliers have consistent supplying records, they can extend loans to these suppliers on the basis of their consistent supply. These loans will help the suppliers purchase better quality seeds,



fertilizers and plant protection chemicals which will result in quality fruit and vegetable production. Eventually it will increase profitability in the long run.

In this system, the repayment of the loans to the banks comes from the collecting company i.e. wholesale player, which pays the bank before paying their dues to individual farmers. The banks do not have to rely on the farmers' intent to repay the loans.

Banks can also cut down on the exorbitant infrastructure that they otherwise need for accessing individual farmers for loans. As they can avoid investing in a team to reach out to the farmers, banks can cut costs and thus lower their own price, offering the farmers lower interest rates. Value chain financing, thus, benefits farmers by allowing them access to loans at a cost that makes their ventures viable. With increasing competition, these firms also

need to improve the quality of their supply chain, both by enhancing the quality and consistency of their supplies. Value chain financing allows the larger firms to improve their supply chains by offering their suppliers something over and above a mere buyer-supplier relationship i.e. easy access to finance.

### Conclusion:

Summing up all, I would like to say that entry of international wholesale retail giants in India is a welcome step. It will benefit farmers, consumers and whole nation by way of post-harvest losses reduction, disintermediation, more share of farmer in end consumer price, traceability, transparent price discovery mechanism and technology transfer to farmers.

*(Author Harish Ram, Student PGPABM 2008-10 MANAGE, Hyderabad. Views are personal)*

## The Transgenic Crop—Can this be our next stepping stone for second green revolution?

The present situation of rising food prices has created a situation world over that various policy makers and governing bodies are mulling over as to what went wrong. Among the various reasons of sudden food crisis, the most prominent one being the sheer neglect of Research and Development in our agricultural sector. At the time when our country India was a begging bowl, Green revolution came as a rescuer and embellished us with various high yielding varieties and high input system resulting in a sudden rise in the production charts. But this process seemed to have reached a plateau. So now to pull this cart further we can consider a highly controversial issue here that is "The Transgenic world". This question is often asked that- Is the transgenic world, a world of myth? Can this be the solution of the above problem?

More food from less land: improved productivity from GMOs (Genetically Modified Organisms) might mean that farmers in the next century won't have to bring so much marginal land into cultivation. GMO might

reduce the environmental impact of food production and industrial process: as genetically engineered resistance to pests and diseases could greatly reduce the chemical needed for crop protection.

Longer shelf life: the genetic modification can make them less prone to spoil in storage or on the way to market which will reduce massive wastage incurred during transport and supply. Better management of agricultural crops: Improved weed control resulting in less tillage and soil erosion, and thus water conservation.

### Bt Cotton: A Boon for Indian Agriculture

Since India began to use Bollgard Bt cotton in 2002, the country has emerged the world's second largest producer and exporter of cotton after China. Cotton production has increased in these six years from 136 lakh bales (of 170 kg) to 315 lakh bales in 2007-08 (October-September).

In a turnaround, from being a net importer of cotton in 2001, India exported 85 lakh bales worth Rs 8,366 crore in 2007-08 and 50 lakh bales worth Rs 6,000 crore in 2008-09. The cotton-growers saved an average of Rs 2,250 an acre last year and have during 2002-2008 cumulatively saved around Rs 10,125 crore by using less pesticide. Cotton has emerged as a favoured cash-crop, particularly in the nine States under Bt cotton with the yield increasing from 302 kg a hectare to 526 kg Early.

Farmers earned an average of Rs 8,669 an acre, which was 64 per cent higher than before, and saved an average Rs 2,250 an acre. Clearly, their purchasing





power increased by 33 per cent since 2002, giving momentum to the cycle of their prosperity, increased investment in agriculture and consumerism. In Gujarat, the Bt cotton farmers earned an average of Rs 7,297 an acre, higher than the conventional seed farmers and, saved an average Rs 1,509 an acre from using less pesticide to fight bollworms versus the conventional seed farmers.

Cotton farmers in Gujarat, Maharashtra and Madhya Pradesh earned Rs 5,971 crore as an additional income in 2006. The study, a follow-up on work undertaken by researchers at the Centre for Economic and Social Sciences (CESS) has said the cost of production a quintal, which went down by 11 per cent in 2005, was lower by 31 per cent in 2006-07. The study, done by to Rs 1,563 in Bt cotton, resulting in significant savings.

One of the major contributors for this reduction was decrease in the number of 'cocktail' pesticide sprays. "The cotton yield has gone up by 32 per cent in 2004-05 in Bt cotton vis-à-vis non-Bt cotton. This increase was 42 per cent after adoption of Bt cotton in 2006-07," the survey said. Mr. N. Chandrasekhara Rao and Prof S. Mahendra Dev (former CESS Director) showed that the cost of production had come down by 31 per cent in 2006-07 from Rs 2,012 (non-Bt).

## Future View

An optimistic future scenario lies for the transgenic crops. Technological challenges like introducing specific traits and developing new GM varieties have always been faced by the research community. To overcome the technological challenges, the respective governments should promote high quality R&D and also should maintain convenient regulations with respect to field trials and marketing of GM products. The major challenge that this market faces is the resistance developed by pests. This challenge requires to be dealt with by developing some other alternative approaches through R&D to hinder the growth of pests. Also the growing world population and concerns within developing countries will boost the adoption of this technology in coming years. The high adoption of GM crops in developing countries is a positive indication towards the more widespread uptake of GM crop worldwide. But, the agriculture research companies like Monsanto, Dupont, Syngenta, Dow Agro, Bayer Crop Science and research institutes need to have a more consumer oriented approach in GM crop technology design introducing more tangible benefits for them. *(Author Anyakshi Dash, PGPABM 2008-10 MANAGE, Hyderabad. Views are personal)*

## Will the West survive Globality

(This Paper won 2<sup>nd</sup> prize in Cura'09 NIT, Warangal)

### EXECUTIVE SUMMARY

A revolution in global business is underway. We are in a new economic order. Companies based in the rapidly developing economies like India, China, Brazil and Russia armed with ambitious leaders, low costs, appealing products and services, and with modern facilities and systems, are foraying overseas and will radically transform markets and industries abroad.

This is globality. Globality is not a new and different term for globalization; it's the name for a new and different global reality in which we'll all be competing with everyone, from everywhere, for everything. It is a road where there are no rules, no direction, no speed breaker, where one can set their own rules.

As the movement unfolds, the incumbents will have to face these challengers in all fronts- for materials, talented manpower, the quest for innovation, on the acquisition front and in the markets at home and outside. Each of these competitions will offer threats as well as opportunities for cooperation and partnership.

The challengers are highly ingenuous in their

approach and have a hunger for growth. They are taking their brands global, emphasizing on innovation and are growing rapidly. They are rolling out new business models and are acquiring natural resources. A testimony to this fact is that the top 100 challenger companies have an annual revenue of \$715 bn and are growing at the rate of 24% per year, according to a BCG Report.

To meet these challenges, the Western companies which want to remain in the game can't afford to repeat the mistakes made in the past, the worst of them being complacency- to dismiss the challengers as nuisance, as the US had done to Japan in 1960s. We all know the result of this mistake.

In the new world of globality, the new rule is that there are no rules. Just because the Western companies have always done something in a certain way, doesn't mean they should continue to do so. Companies need to be flexible and fast and understand their markets and customers as never before.

In this paper we have found an answer to the question – *Will the west Survive Globality?*

Globality offers some opportunities for cooperation and obviously some competition to the Western companies. These companies would formulate new rules, capitalise on their strengths, improve customer relationships or might even cooperate with a challenger company to dominate the market.

Globality is a battle that any nation dare not lose.

*Author Dibiya Chatterjee and Arindam Mukherjee  
PGPABM 2008-10 MANAGE, Hyderabad. Views are personal)*

## Micro Irrigation : Need of the Hour

Although water is a renewable resource, its availability in appropriate quality and quantity is under severe stress due to increasing demand from various sectors. Agriculture is the largest user of water, which consumes more than 80% of the country's exploitable water resources. The overall development of the agriculture sector and the intended growth rate in GDP is largely dependent on the judicious use of the available water resources. While the irrigation projects (major and medium) have contributed to the development of water resources, the conventional methods of water conveyance and irrigation, being highly inefficient, has led not only to wastage of water but also to several ecological problems like water logging, salinization and soil degradation making productive agricultural lands unproductive.

According to research done by the International Water Management Institute (IWMI), one-third of the world's population will face absolute water scarcity by the year 2025. Among the worst hit will be regions in Asia, the Middle-East and Sub-Saharan Africa, home to some of the largest concentrations of rural poverty in the world. Also a study by scientists at the National Aeronautics and Space Administration (NASA) says that unsustainable use of water in India's northern states threatens farm output and can fuel the spectre of a major water crisis, distressing 114 million people living there. Human activity like irrigation has pushed groundwater levels in India's north down by as much as one foot per year over the past seven years. This year, poor monsoon has created panic in the entire country impelling fear of massive loss in production of kharif crops.

Therefore, water management and increased production are very essential and crucial for the development. It is recognized that use of modern irrigation methods like drip and sprinkler irrigation is the only alternative for efficient use of surface as well as ground water resources. So, MI has been promoted by the government itself. There is a Centrally Sponsored Scheme under which out of the total cost of the MI System, 40% will be borne by the Central Government, 10% by the State Government and the remaining 50% will be borne by the beneficiary.

Research studies conducted in India by various institutions have indicated that water saving is about 40–80% and the yield increase is up to 100% for different crops by using micro-irrigation. The incremental benefit-drip cost ratio ( $B/C_d$ ) worked out for various crops ranges from 1.35 to 13.35 excluding water saving and 2.78 to 32.32 including water saving. It has also been proved that drip irrigation, is technically feasible and socially acceptable not only for large farms but also in small and marginal farms.

Drip irrigation can also be adopted to large areas irrigated from wells especially for wide spaced high value crops. This method is also suitable for hilly and undulated tracts, coastal sand terrains, and to a great extent in the water scarce areas of South and Western India. About 18 million ha are under fruit, vegetables and plantation crops and the present area under drip is only about 55,000 ha. Therefore the potential and prospects of drip irrigation is very high in the coming years.

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