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## **Executive Summaries**

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### **RESEARCH**

#### **Supplying Improved Seed to Farmers in Rural Kenya: The Case of Freshco Kenya Ltd.** *Edward Mabaya, Laura K. Cramer, Veronica K. Mahiga, Huang Q. Pham, Tara M. Simpson, and Xiaowei Tang*

Freshco, a small producer and distributor of hybrid maize seed and macadamia seedlings, was one of the first private companies to enter the Kenyan seed market after its liberalization. The company's mission is to distribute agricultural inputs that increase the wealth of smallholder farmers with a vision to be the most preferred producer and supplier of seed in East Africa. Currently the company produces and markets six high yielding maize varieties that are suited for diverse agro-ecological conditions. Despite the company's encouraging growth in the local maize seed market, Freshco's executives recognize the need to scale up its operations to maintain growth. However, the maize seed industry presents a broad set of challenges. Competition is fierce, and government bureaucracy and poor infrastructure add to the difficulties of managing a business in a developing country. The East Africa region and Kenya's developing seed industry are both extremely dynamic contexts; preparing for different challenges and taking advantage of opportunities that emerge is imperative for Freshco's long-term profitability. As Freshco pursues its vision of becoming a seed industry leader, the CEO of the company will need to maintain a keen insight and understanding of the environment in which it operates. There are a number of trends, actual and potential, that will have a significant impact on Freshco: (1) revitalized interest in seed development in Africa, (2) regional integration efforts, (3) aggressive market penetration by multinationals and (4) continued presence and impacts of not-for-profit organizations in the region.

#### **Competitive Analysis and Market Power of China's Soybean Import Market** *Baohui Song, Mary A. Marchant, Michael R. Reed, and Shuang Xu*

Globally, China is the number one soybean importer, and the U.S., Brazil, and Argentina are the top three soybean exporters. In 2005, China's soybean imports accounted for 41% of the world total, and soybean exports from the above three soybean producing countries accounted for over 90% of the world total. This research develops and estimates a U.S.-China two-country partial equilibrium trade model (that includes Brazil and Argentina as competitors) to test which country has

stronger market power in the Chinese soybean import market. This model incorporates U.S. residual soybean supply, Chinese residual soybean demand, and the market equilibrium condition, whereby residual supply equals residual demand. This equation system was estimated simultaneously.

Results of this competitive structure analysis imply that the U.S. and South America are seasonal complementary soybean suppliers for China. Empirical result supports the hypothesis that Chinese soybean importers have stronger market power relative to U.S. soybean exporters. It seems that the increased availability of South American soybeans throughout the marketing year seems to have allowed more market power for the Chinese. The implications are that the US, Argentina, and Brazil have a common interest in developing new and expanding existing markets for soybeans to help combat this market power of the Chinese. More market outlets for soybeans will bring new customers to compete with the Chinese for exported soybeans, reducing the reliance on Chinese imports and possibly shrinking Chinese marketing margins.

## **Efficiency and Productivity Changes in the Indian Food Processing Industry: Determinants and Policy Implications**

*Jabir Ali, Surendra P. Singh, and Enefiok Ekanem*

This paper evaluates the performance of various segments of the Indian food processing industry in terms of total factor productivity (TFP) and efficiency change during pre and post market liberalisation periods. The Indian food processing industry has immense potential for generating income and employment through value addition due to availability of resources, labour, technology, a huge market and favourable business environment. The 10% per annum output growth of the industry is largely driven by the incremental use of input. However, this growth is constrained by the lack of productivity augmenting technologies, as a major quantity of the food is being produced in the unorganized sector where resource utilization is very limited. The average technical efficiency score is estimated to be 0.902 under the Variable Returns to Scale model, with an average scale efficiency score of 0.870. This implies that the average technical inefficiency could be reduced by 10 percent by improving scale efficiency and eliminating pure technical inefficiencies. It is also important to note that technical efficiency scores for the food processing industry have declined during the 1990s as compared to the 1980s.

The analysis of returns to scale in the food processing sector suggests that most of the sub-sectors have moved from increasing returns to scale to constant and decreasing returns to scale during the last two decades, with the exception of meat and meat products, fish and fish products, fruits and vegetables, and starch and starch products. This result indicates that additional investment in the food processing segments, with increasing returns to scale, will give encouraging and profitable output, while food segments with decreasing or constant returns to scale will need reorientation and modernization in the production process. The Indian food industry needs to modernize its production system for improving the capacity

utilization of factor inputs, mainly in the areas of raw material, capital and energy. As raw material constitutes about 85 percent of production cost, proper methods of sourcing quality raw material for food production should be adopted to shorten the supply chain of the food processing industry.

## **Market Segmentation Practices of Retail Crop Input Firms**

*Aaron Reimer, W. Scott Downey, and Jay Akridge*

While market segmentation and the associated idea of target marketing are not new, there are questions about how the strategy of market segmentation and target marketing is being used in retail agribusiness firms. Previous research has demonstrated that distinct groups of farmers/customers exist (Alexander, Wilson and Foley 2005). However, retail crop input firms tend to be of modest size and are geographically bound. Both lack of resources and confinement to a specific geographic market present challenges for successful implementation of a market segmentation/target marketing strategy (Stolp 1998).

In this study, market segmentation/target marketing practices were explored in two types of crop input retailers: independently owned and operated firms (9 firms) and agricultural cooperatives (11 firms). A number of questions related to market segmentation/target marketing strategy were assessed via a web-based survey and telephone interviews. Referencing Best's seven-step framework, market segmentation is compared and contrasted by firm type; gaps in market segmentation strategy execution are identified; and challenges to implementing a market segmentation strategy are considered.

Results show that market segmentation/target marketing was employed by 85% of the crop input retailers in the sample. Key gaps identified in market segmentation strategy execution include measuring market segment attractiveness; evaluating market segment profitability; developing a product-price positioning strategy for a tailored offering; expanding the positioning strategy to include promotional and sales elements of the marketing-mix; and evaluating the progress/success with each target market segment. Addressing these key gaps will aid industry professionals as they work to serve the needs of a continuously evolving farmer/customer base.

## **CASE STUDIES**

### **Greene Gardens**

*Gregory A. Baker and Kirk O. Hanson*

This teaching case describes the 2006 E. coli outbreak in the California spinach industry. It unfolds over a period of about one month, with four separate eventful days described in detail. At the end of the narrative for each day, the reader is provided with several questions and asked to decide how he or she would respond to the events and justify his or her decision.