



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



International Food and Agribusiness Management Review
Volume 7, Issue 4, 2004

Strategic Marketing Problems in the Uganda Maize Seed Industry

Donald W. Larson ^a and Swaibu Mbowe ^b

^a *Professor, Department of Agricultural, Environmental, and Development Economics, The Ohio State University, Columbus, OH.*

^b *Lecturer, Department of Agricultural Economics and Agribusiness, Makerere University, Kampala, Uganda.*

Abstract

Strategic marketing issues and challenges face maize seed marketing firms as farmers increasingly adopt hybrid varieties in a modernizing third world country such as Uganda. The maize seed industry of Uganda has changed dramatically from a government owned, controlled, and operated industry to a competitive market oriented industry with substantial private firm investment and participation. The new maize seed industry is young, dynamic, growing and very competitive. The small maize seed market is already crowded with six firms and the possibility of new entrants including more foreign firms. Maize seed firms must develop a marketing plan (marketing strategy and the 4Ps of product, price, place, and promotion) to analyze what each firm can do to improve customer satisfaction and strengthen its competitive position in the market.

Key Words: strategic marketing, maize seed, market reforms, Uganda

① Corresponding author: Tel: + 614-292-6229

Email: Larson.4@osu.edu

Other contact information: S. Mbowe: mbowas@agric.mak.ac.ug

This case was prepared for class discussion rather than to illustrate either effective or ineffective handling of an agribusiness situation. The author(s) may have disguised names and other identifying information presented in the case in order to protect confidentiality. IAMA prohibits any form of reproduction, storage or transmittal without its written permission. To order copies or to request permission to reproduce, contact the IAMA Business Office. Interested instructors at an accredited university may request the teaching note by contacting the Business Office of IAMA.

IAMA Agribusiness Case 7.4.B

Presented at the 1st Annual IAMA Case Conference, Montreux, Switzerland, June 2004.



Introduction

Uganda has implemented a series of policy and institutional reforms designed to modernize and increase productivity of the economy in general and, more specifically, the agriculture sector. The reforms include an increased reliance on a market-oriented economy with more private enterprise investment and participation and a reduced role for direct government intervention, such as parastatal companies, in the economy.

The maize seed industry has also benefited from these reforms and is becoming a rapidly modernizing seed industry. Several new firms have entered the maize seed business in the last few years, and they account for most of the rapid change that is occurring. More change will take place as the firms seek to increase sales, market share, productivity, and profitability in the maize seed industry.

The present case proposes to first describe the seed industry and then second to apply the concepts of a marketing plan (marketing strategy and the 4Ps of product, price, place, and promotion) to analyze what firms can do to improve their competitive position in the market (Kotler and Armstrong). The seed firms have many strategic decisions to make as they strive to become market leaders in the seed industry. Each firm will have to identify ways to gain competitive advantage as it offers its products and services to the maize farmer customers. Gaining competitive advantage requires firms to increase customer satisfaction in the maize seed market.

Uganda is usually self sufficient in maize production (Table 1). Imports usually equal the exports; however, exports reached nearly 40,000 metric tons in 2001. In contrast to most developed countries, feed use is relatively small, about 10 percent of domestic demand. However, food use accounts for over 70 percent of domestic demand (Table 1). Since maize is an important staple in the Ugandan diet, increasing maize production and productivity is a high priority policy objective of the government.

Maize yields, which average about 1.5 tons per hectare, are low compared to neighboring countries (e.g. Kenya and South Africa) and compared to major corn producing countries of the world (e.g. U.S. average of 8.2 tons per hectare). Improved seeds, modern inputs, and better farm management are needed to increase maize yields. Only 20 percent of the area harvested each year (about 652,000 hectares) has been planted to improved or hybrid seed. Hence, the seed industry faces a major challenge to help farmers increase maize productivity (Table 2).

Table 1: Uganda: Maize Supply/Demand Balance Sheet 1999 to 2001

| Year | Production (Mt) | Imports | Exports | Domestic Supply | Feed Use | Seed Use | Waste/Losses | Food Use | Other Uses | Domestic Demand |
|------|-----------------|---------|---------|-----------------|----------|----------|--------------|----------|------------|-----------------|
| 1999 | 1,053,000 | 30,986 | 27,299 | 1,056,687 | 107,975 | 18,870 | 97,478 | 703,821 | 418 | 1,056,687 |
| 2000 | 1,096,000 | 19,423 | 9,314 | 1,106,109 | 111,269 | 19,560 | 133,434 | 711,520 | 360 | 1,106,109 |
| 2001 | 1,174,000 | 14,635 | 39,281 | 1,149,353 | 117,745 | 19,560 | 140,989 | 736,095 | 168 | 1,149,353 |
| Mean | 1,107,667 | 21,681 | 25,298 | 1,104,050 | 112,330 | 19,330 | 123,967 | 717,145 | 315 | 1,104,050 |

Source: United Nations, FAO Web site 2003

Table 2: Uganda: Maize Area Harvested, Yield and Production 1993 to 2002

| Year | Area Harvested | Yield | Production |
|------|----------------|-------|-------------|
| | Hectares | Kg/ha | Metric Tons |
| 1993 | 503,001 | 1,598 | 803,998 |
| 1994 | 563,002 | 1,510 | 850,000 |
| 1995 | 571,000 | 1,599 | 913,000 |
| 1996 | 584,000 | 1,200 | 759,000 |
| 1997 | 598,000 | 1,237 | 740,000 |
| 1998 | 616,000 | 1,212 | 924,000 |
| 1999 | 608,000 | 1,155 | 1,053,000 |
| 2000 | 629,000 | 1,742 | 1,096,000 |
| 2001 | 652,000 | 1,800 | 1,174,000 |
| 2002 | 652,000 | 1,800 | 1,174,000 |
| Mean | 597,600 | 1,485 | 948,699 |

Source: United Nations, FAO Web site 2003

Uganda Seed Industry

The seed industry complex consists of a process with three main activities: seed production, seed processing, and seed marketing and distribution. The seed production process includes breeding new seed varieties, testing seed variety performance, releasing new varieties for multiplication, and increasing the seed variety amounts to commercial levels. Seed processing consists of cleaning, sorting, bagging and certifying new seed for commercial use. Seed marketing and distribution consists of packaging, distributing, and selling to farmer customers. Private companies or parastatals may perform all of these many activities or they may specialize in selected parts of these activities. Large firms may have the resources to perform all of the activities while smaller firms may choose to specialize in some aspects such as marketing and distribution.

Before the reforms of the 1990s, the Uganda Seed Project, a government owned company, had a monopoly on most of the above activities. The National Agricultural Research Organization (NARO) produced the new varieties and

released them to the Uganda Seed Project for seed processing and multiplication to commercial quantities. The Uganda Seed Project also had the responsibility for marketing and distribution to farmers.

Since 1999, five private firms have entered the maize seed market to compete with the Uganda Seed Project. The new private firms are: (1) East Africa Seeds, (2) Kenya Seeds, (3) Farm Inputs Care Centre Ltd. (FICA), (4) Harvest Farm Seeds, and (5) Nalweyo Seed Company Ltd. (NASECO). In addition, the government plans to privatize the parastatal Uganda Seeds Ltd., formerly called the Uganda Seed Project. Many but not all of the new firms perform the seed processing, seed multiplication and seed marketing and distribution activities but cannot undertake seed production at the present time. Some foreign private firms (e.g. Monsanto) have also entered the market, and other foreign firms appear ready to enter the market to undertake seed production as well seed processing and distribution.

NARO continues to be the only source of seed research for new variety development. Once a new variety is ready for release, NARO releases the variety to all firms who want to buy it. Thus, the private firms are totally dependent on NARO for new seed varieties so their business is vulnerable to any problems which NARO may have, such as inadequate government funding or loss of key research personnel. In the future, the private seed firms would like to invest in seed research and production, but they currently lack the incentives and may lack the financial and technical resources to carry out this activity. The seed firms want approval of a proposed “plant variety protection law” giving them the ownership rights to any new varieties that they might develop. Such a law would create an incentive for firms to invest in new variety development because the firm would then own a patent on the new product and could earn a royalty on seed sales. In the new market oriented economy, the role of government in the seed industry is being re-defined to create a positive regulatory and quality assurance environment in which the private firms can prosper and profit from their investments.

The Uganda Seed Trade Association (USTA), organized in 1999, is a private membership association gathering all seed industry stakeholders. “USTA is an organization formed and directed by its members to shape the development of Uganda’s seed industry and to be an effective voice of action for all matters concerning research, production, marketing, free movement of seed, associated products and services for better yields and sustainable production” (USTA, 2003). What are the benefits and costs to the seed industry firms and USTA to supporting this proposed plant variety protection law?

The Maize Seed Market

The maize seed market in Uganda is small, but is growing rapidly at an estimated rate of five to 10 percent annually in recent years. Even so, adoption rates remain

low relative to many neighboring countries. Maize seed sales reached an estimated 1,800 metric tons in 2001 (Table 3). Seed sales then declined dramatically in 2002 due to a large maize crop (marketed surplus increased from about 450,000 tons in 2001 to about 600,000 tons in 2002) and substantially lower maize prices. The market potential is large (about 20,000 tons) because only an estimated 8 percent of the area is planted to hybrid varieties and another 12 percent is planted to improved open pollinated varieties (OPVs).

Table 3: Uganda: Estimated Total Improved Seed Sales for All Companies, 1998 to 2002

| Seed Product Sales (Mt) | 1998 | 1999 | 2000 | 2001 | 2002 |
|-------------------------|-------------|-------------|-------------|-------------|-------------|
| Maize Open Pollinated | 750 | 1200 | 1000 | 1300 | 450 |
| Maize Hybrid F1 | 400 | 400 | 500 | 500 | 200 |
| Beans | 570 | 1250 | 1000 | 700 | 350 |
| Other Seeds | 300 | 150 | 2000 | 900 | 200 |
| TOTAL | 2000 | 3000 | 4500 | 3400 | 1200 |

Source: Uganda Seed Trade Association, cited in “Seed Market Survey” Investment in Developing Export Agriculture (IDEA Project) Chemonics International Inc. December 2002.

Uganda has an estimated three million farm families that can be segmented into three main customer groups for maize sales. The commercial farmers (50 to 100 hectares in size) represent about five percent of the total farmers. Small farmers (5 to 49 hectares) represent about 20 percent of all farmers, and subsistence farmers (up to 4 hectares) account for about 70 percent of all farmers.

Uganda may have a competitive advantage in maize seed production for export markets because of its ability to harvest two crops in one year. Market opportunities may exist in East African countries such as Kenya and Tanzania for maize seed from Uganda.

Maize seed will sell for much higher prices in the export market than maize seed for the domestic market. The export maize seed market may be large but a firm’s ability to compete in that market will likely require large investments, higher quality standards, and large stable seed supplies.

Seed firms must make a strategic decision on which of the market segments they want to target in their marketing and distribution efforts. Many criteria such as market size, market profitability, market accessibility and seed firm capabilities should be a part of their strategy decision. Who should the firms select as the target market customers? Should the seed firms target export seed markets?

The Product

Currently, maize seed firms can only offer to the market a homogenous product with similar characteristics, because the firms can only buy improved varieties from NARO. The main products are hybrid varieties and open pollinated varieties (OPVs) that compete with farmer saved seed from past harvests. Farmer saved seed is cheap but yields only about one ton per hectare. The NARO produced OPVs are: (1) Maize Longe 1, (2) Maize Longe 4, and (3) Maize Longe 5 (Nalongo or high quality protein maize). The OPVs will increase average yields from the current one ton to three to four tons per hectare with proper input application and crop management. The hybrid maize varieties are: (1) Hybrid SC 407 from Zimbabwe, (2) the NARO produced Hybrid B, Longe 2H, and (3) the DK 8057 from Monsanto/FICA. The hybrids will produce an estimated 7 to 8 tons per hectare with proper input application and crop management. A recent development is that new hybrids from NARO including Longe 6H, Longe 7H and Longe 8H can be taken by the firms on an exclusive basis if the firms agree to pay a royalty to NARO. Ugandan seed firms may also sign exclusive agreements with firms from other African countries or with multinational seed companies.

Seed firms sell most seed in bags of one or two kilograms (about 30 percent of sales), in bags of five kilograms (50 about percent of sales), and in bags of 10 kilograms (about 20 percent of sales).

Since all the firms have access to the same varieties, they face the challenge of how to differentiate the product and related services to their customers. This difficulty frequently leads to very strong price competition and lower profit margins for the seed marketing and distribution firms. In the next few years, a continuation of the strong price competition may be very damaging to the young seed industry firms. Can the firms differentiate their product and services in the market place through exclusive contractual agreements?

The Price

Seed firm pricing strategies may be cost based, competition based, demand based or some combination of these strategies. The OPV prices for maize seed are: Shs. 1,000/kg to the farmer, Shs. 850/kg to the retailer/stockist and Shs. 700/kg to the wholesaler distributor. The hybrid seed prices are Shs. 2,200/kg to the farmer, Shs. 2,000/kg to the retailer/stockist, and Shs. 1,800 to the wholesaler/distributor. Strong competition has kept prices to the farmer at about the same level for the last two or three years. The result has been a squeeze on margins and profits of the seed companies, especially on the distributor and stockist margins, because costs continue to increase. Seed firms sell for cash to farmers. Seed firms do advance credit (about 50 percent of sales) to the distributors and stockists. What pricing alternatives can the firms pursue to solve this low profit margin problem?

The Place

Seed firms tend to have very similar distribution channels for sales to farmers. Most firms sell seed to a network of independent distributors/wholesalers (an average of about 50) who in turn sell to a network of independent stockists/retailers (an average of about 700) located in the maize production areas. The stockists typically handle fertilizers, chemicals, farm implements, and other products that farmers want to buy.

The distributors and the stockists tend to handle the same maize seed varieties from each seed firm; however, not all seed firms use all the same distributors or stockists. Seed firms do follow a selection process in deciding which distributors and stockists to use. This distribution system has advantages for the farmer who can buy any brand from the same stockist, but it has disadvantages for the seed firm that wants to differentiate its product in the market place. What can seed firms do to increase customer satisfaction and profit margins in the distribution channel?

The Promotion

Promotion consists of the various alternatives that seed firms adopt to inform the customer about their product and to persuade customers to buy their product. This includes information about the qualities, features, proper use, and benefits the product offers the customer. Some of the alternatives to communicate to customers include product labels, advertising on radio or television, newspapers, magazines, billboards, crop demonstrations, training meetings with farmers, distributors, and stockists, giving of caps or other items to customers and personal selling. What are the most effective alternatives to inform customers about a product in an era of very limited budgets?

Situation Summary

The seed industry has changed dramatically from a government owned and operated industry to a market oriented industry with substantial private firm investment and participation. The new seed industry is young, dynamic, growing and very competitive. The small seed market is already crowded with six firms and the possibility of new entrants. What can existing firms do to differentiate their products and services to gain a competitive advantage in the seed market?

Questions

1. What are the benefits and costs to the seed industry firms and USTA of supporting the proposed plant variety protection law?

2. Whom should the firms select as the target market customers?
3. Should the seed firms target export seed markets?
4. Can the firms differentiate their product and services in the market place through exclusive contractual agreements?
5. What pricing alternatives can the firms pursue to solve this low profit margin problem?
6. What can seed firms do to increase customer satisfaction and profit margins in the distribution channel?
7. What are the most effective alternatives to inform customers about a product in an era of very limited budgets?
8. How can seed firms differentiate their products and services in the market place to gain a competitive advantage?

References

- Kotler, Philip and Gary Armstrong. (2004). *Principles of Marketing*, Prentice Hall, Upper Saddle River, NJ. Tenth Edition.
- Uganda Seed Trade Association, (December 2002).cited in “Seed Market Survey” Investment in Developing Export Agriculture (IDEA Project) Chemonics International Inc. Kampala, Uganda and Washington, D.C.
- Uganda Seed Trade Association. (2003). Personal interview with the association director.
- United Nations, Food Agriculture Organization Web site. Accessed August, 2003.