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Entrepreneurship: A Case Study in African Enterprise Growth

A Rose Enterprise Blooms in South Africa: Jean Davidson and Caroza Farm

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IT WAS A HOT SUMMER'S DAY IN KRUGERSDORP, outside Johannesburg, South Africa. "Not particularly good weather for growing roses," thought Jean Davidson. Strolling across her 21-hectare[1] property, she caught sight of her new greenhouse, covering one hectare of fallow land. She knew that what she decided to plant in that greenhouse would help to determine the future of her business. A poor building job had rendered the greenhouse unusable for the moment—just one of many setbacks that had befallen Caroza Farm since Jean Davidson purchased it in 1995. After six years, the farm was now running successfully, but questions remained about how to move the business forward. Caroza Farm's four hectares of rose plants did not produce enough volume to compete on the European market. Jean had to decide whether to use the rest of her land to increase the scale of her rose production, diversify into other flowers or simply focus on increasing margins from sales to the domestic market. And she had heard other growers discussing the possibility of selling in the U.S. market. With so many options, Jean wondered how to take her business forward.

1. Personal Background

Born in Soweto, a township in Johannesburg, Jean Davidson was educated in Swaziland and attended university in Lesotho, where she received a Bachelor of Science degree in chemistry. After graduating, she needed only two months of work in a lab to know that it was not what she wanted to do. She left to work for a marketing company, where she met her future husband, Peter Davidson. Shortly after they were married, the couple bought a hotel in Durban, where Jean worked as the internal auditor. Peter also bought a construction company, for which Jean managed the accounts. In 1990, they moved back to Johannesburg and bought a gas station. In 1991 and 1992, riots in Johannesburg threatened the gas station; in one incident Peter was nearly shot. Jean and Peter walked away from the business, leaving behind a large amount of debt that would eventually need to be paid off. Peter's next venture was a labor contracting company that provided labor to the larger mines in the area. Jean started a small but highly profitable cleaning company. Today it has 15 full-time employees and is managed by her sister.

Jean and Peter wanted to live outside the city, and Jean had always been interested in farming. Jean commented, "We wanted a country home that could pay for itself." They bought a home with five hectares of land but found that it was still too small to be economically viable. Eventually a much larger property, Caroza Farm, came on the market. The Davidsons purchased the farm, and, without any prior training, Jean became a commercial rose grower. Exhibit 1 shows Jean Davidson on Caroza Farm.

2. World Cut-flower Market

[1] 1 hectare = 2.47 acres.

2.1. Consumption

About 85 percent of world cut-flower sales occur in the United States, the European Union and Japan. In the 1990s, the U.S. market exhibited moderate growth while several of the key European markets were flat or even declining. Consumption per capita varied across countries. In most markets it was between $25 and $35 per year, though in a few European markets per capita consumption was much higher. Exhibit 2 displays trends in cut-flower consumption in major markets.

The three most common reasons for cut-flower purchases were, in order, as gifts (either for such special occasions as Valentine's Day, Mother's Day or birthdays, or as a token of affection), for weddings and funerals and for home decoration. Purchasing patterns varied across markets. For example, in Italy more than 50 percent of cut-flower sales were for funerals or to place on graves; in Japan almost all cut flowers were purchased as corporate gifts or as business decorations; about half of cut-flower sales in the Netherlands were for home decoration; while in the United States cut-flowers were still considered a luxury and were given as gifts for special occasions.

Cut-flower sales in most markets were extremely seasonal. A grower might record 10–15 percent of annual revenue in the first two weeks of February (around Valentine's Day). Other peaks were in May (around Mother's Day), September and December. During these peak periods both prices and volumes typically rose, though the extent to which this occurred in any given year was difficult to predict because local shortages or gluts could have large effects on prices.

2.2. Trade

Traditionally, the large cut-flower markets were mostly supplied by domestic producers (except in Germany, where imports account for 70 percent of cut-flower sales), with excess demand met by imports. Generally, African imports supplied the European market, Latin American growers supplied the U.S. market, and New Zealand and Taiwanese imports supplied the Japanese market. However, there were exceptions to this general pattern. For example, Colombia was the second- or third-largest supplier to the European market (after Israel and/or Kenya) throughout the 1990s. Also during the 1990s, Chinese and Indian exports grew, though low yields and poor cooling and transportation infrastructure limited the competitiveness of those countries' industries.

The Netherlands was by far the world's largest exporter. Approximately $2 billion of cut-flowers were sold annually at auctions in the Netherlands, almost all of which were for export (mostly to Germany).

3. African Cut-Flower Industry

3.1. History

The first African flower farms were European-owned "hobby" farms selling to local markets. Export-oriented production began in the 1960s when a Danish company invested in a large carnation farm in Kenya. The scale, number of varieties planted and export volume of African flower farms have grown rapidly since then, particularly in Kenya. Since the 1970s African cut-flowers have had a reputation in the European markets for acceptable quality and low prices. In the 1980s roses became the most important African cut-flower export, and roses have driven most of the industry's growth in the 1990s.

In 2001, Kenyan growers dominated the African cut-flower industry. The 25 largest farms accounted for 75 percent of Kenya's cut-flower exports. Several of these were very large, with up to 100 planted hectares and 250–6,000 employees, and a few had made downstream investments. For example, the Oserian Group included Airflo, a freight forwarding service; East African Flowers, a European wholesaler; World Flowers, a distributor to supermarket chains in the United Kingdom; and Tele-Flower Auctions, a private Netherlands-based auction house. Exhibit 3 shows part of the 138-hectare Oserian farm. The second tier of Kenya's industry comprised several dozen medium-sized farms, with 2–10 planted hectares and up to 100 employees, which collectively accounted for 10–15 percent of exports. The third tier of smallholder farmers accounted for the balance of exports.

Most farms in South Africa were medium-sized by Kenyan standards. Some farmers attempted to overcome the scale limitations by cooperating in export marketing. The most successful example of this kind of cooperation was the Uniflor group. Uniflor was a collaboration of 10 growers, each with farms of four hectares or less, who sold on the international market as a single entity. An eleventh shareholder, a Dutch, rose-growing expert, traveled from farm to farm to ensure consistent quality among the group members' farms. In 1998, the members of Uniflor jointly invested in a new, capital-intensive 4.2-hectare rose farm designed to produce high-quality roses for export.

3.2. Flower Farming as a Business

An influential 1999 World Bank report[2] suggested that a two-hectare export-oriented commercial flower farm in Southern Africa, requiring an initial investment of $815,000, might expect to earn annual profits of $130,000 on sales of $840,000. The assumptions underlying these calculations are shown in Exhibits 4 and 5. But the report emphasized two caveats. First, there were enormous variations in profitability across farms; bankruptcies were common. Marketing and management expertise appeared to be crucial. Second, the economics of flower farming were extremely sensitive to prices. The "base case" assumptions in the World Bank report used an average selling price of $0.24 per stem and a yield of 175 stems per square meter. The report estimated that a change of only $0.02

[2] Malter, A. J., A. Reijtenbagh and S. Jaffee. 1999. Profits from petals: The development of cut flower exports in Southern Africa. In *Southern African Agribusiness: Gaining Through Regional Collaboration*, edited by S. Jaffee. World Bank Technical Paper No. 424.

in average price would affect profits by 55 percent. Attracted by the promise of high returns, investors in 2001 continued to develop farms in Kenya, South Africa, Zimbabwe and Zambia.

3.3. Supply Chain[3]

The cut-flower supply chain resembled that of other perishable agricultural products. Two characteristics of these products—perishability and variations in quality—drove the structure of the supply chain. *Perishability* means that supply chain efficiency is essential. In the domestic South African market, retailers were able to put flowers on sale approximately 48 hours after harvesting. African exports to Europe typically were on sale 96 hours after harvesting. Second, there could be large *variations in quality*. This means that reputation was important throughout the supply chain, which typically included several layers of middlemen whose function was to inspect the product and guarantee its quality.

3.3.1. On the Farm

Rose bushes have a productive life of five to seven years. The total cost of each plant is approximately euros 1.40[4] payment for which is due in two equal-sized installments. The first payment of approximately R (rand) 7 is due at planting, in local currency, to the breeder. The second payment of about euros 0.70 is due nine months to a year later, in foreign currency, to the intellectual property owner of the particular variety. Color, yield and vase life drive the cost of the plant.

A single rose takes 40–60 days to grow. The three characteristics that collectively define the quality of a stem (a single cut rose flower)—stem length, bud size and stem diameter—are all strongly affected by growing conditions. High altitude, moderate temperatures (18–25°C) and low humidity (as in Colombia and Kenya) are ideal growing conditions for roses. Yield is also affected by growing conditions: a rule of thumb is that for every hour per day of ideal growing conditions, yield may increase by as much as 20 percent. The price premiums that are available for high-quality roses meant that many growers found it economical to invest in small, capital-intensive greenhouses in which growing conditions are controlled by a variety of such high-tech devices as computer-controlled drip fertigation (irrigation and fertilizer delivery), on-the-ground steam heating, de-humidifiers and "wet walls" for cooling. Exhibit 6 shows two views of the greenhouses on Uniflor's new farm. Other growers used larger greenhouses with less precise technology or even shade netting (i.e., no greenhouse). The capital cost of a greenhouse varied from about $6.50 per square meter for a wooden structure with permanent ventilation to $22 or more per square meter for an imported steel structure with doubled-sided top ventilation. Fertilizer and pesticides, although purchased locally, were imported into South Africa and hence varied in price with the rand exchange rate. Exhibit 7 shows a worker transporting pesticides in one of the greenhouses at Caroza Farm.

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[3] This section is drawn from the authors' interviews and from Thoen, R., S. Jaffee, C. Dolan and F. Ba. 1998. Equatorial rose: The Kenyan-European cut flower supply chain. World Bank.
[4] In January 2002, euro 1 = rand 9.3.

Roses were usually harvested by hand. Most farms harvested in the morning or evening when temperatures are cooler, but some were harvested several times per day to ensure that roses were picked at their optimum maturity. Exhibit 8 shows workers harvesting roses on Caroza Farm. The stems were immediately placed in buckets of water (though farmers in the Netherlands and elsewhere were experimenting with other solutions) and transported to a cool room where temperatures are maintained at 2–4°C.

Later in the day the roses were removed from the cool room for grading and sorting into bunches of consistent stem length and quality. Grading was important because if even a single stem in a bunch was misgraded, then the entire bunch would be auctioned at the lower grade. Most South African growers graded by hand, though the Uniflor group recently invested R5 million in a state-of-the-art automated grading and packing facility. The two grading machines in the facility used the same three-camera technology—one to measure stem length, one to measure stem diameter and a third to measure bud diameter—that was used by farmers in the Netherlands (Exhibit 9). The initial results from this facility were not encouraging. Uniflor customers complained that the bunches, though graded as well as they would have been in the Netherlands, were not graded as well as they had been by Uniflor in the past. In addition, the shared packing facility increased the risk of cross-contamination if one farmer's roses happened to be diseased. In January 2002, the new packing facility was operating at a fraction of its capacity because the farmers had for the most part returned to hand grading, at least temporarily.

After the roses were graded they were returned to cool storage before being transported onward, which typically occurred the evening of the day that they were harvested or the following morning.

3.3.2. Export Sales

Most African cut-flower exports were handled by a freight-forwarding agent. These agents typically provided airport-to-airport service that involved consolidating shipments from various growers, palletizing and loading them onto commercial or charter air services and managing the export paperwork process. In the importing country a clearance agent completed the necessary import paperwork and delivered the shipment to the addressee. Inclusive airport-to-door service typically cost $1.60-$1.80 per kilogram, depending on the season (a box of 400 African roses weighs about 15 kg).

The largest single channel for cut-flower sales was to the seven cooperatively-owned auction houses in the Netherlands. The growth of these auctions since the 1960s made the Netherlands the undisputed world capital of the flower trade. In 1998, $1.9 billion was transacted in the auctions. Of this, the two largest auction houses, Aalsmeer and BVH, accounted for 80 percent. Each auction house was owned by a group of Dutch growers who agreed to deliver 100 percent of their output to the auction. In 1994 the Oserian Group opened Tele-Flower Auctions, the first private competitor to the cooperative auction houses.

All auction houses made use of the "clock system." The price of a lot was displayed on a large circular clock that shows, instead of hours and minutes, prices. The hands of the clock rotated around the clock face pointing to progressively lower prices. Buyers, who rented seats in the auction room, could stop the hands of the clock by pressing a button. The first buyer to stop the clock won the lot at the price at which the clock was stopped. If no buyer stopped the clock, the flowers would be destroyed. (The clock system is the origin of the term "Dutch auction.") The total cost of the auction, which includes commission as well as fees for bucket and trolley rental and repacking, was typically between 10 and 12 percent of the price. The buyer had to pay for the lot immediately, and the proceeds, net of commission and fees, would be deposited into the seller's account eight days later. Although each lot was displayed briefly in the auction room for inspection before the auction begins, a grower's reputation for consistent product quality and grading (which requires selling consistently at the auctions) could lead to significant price premiums. Many African growers found that the combined costs of airfreight and auction make this channel unprofitable.

Instead, most export-oriented African growers attempted to develop direct-sales relationships with European wholesalers. For example, Uniflor exported 60–70 percent of its total rose production to wholesalers in southern Europe and the Middle East. It sold the rest on the domestic market rather than to the Dutch auctions. In most European countries there was considerable concentration among importers. For example, in Germany there are two large importers and in the U.K. there are nine. Marketing to these customers either involved direct sales calls (typically by telephone or fax) or making contacts at trade shows. Exhibit 10 compares the economics of direct sales to European wholesalers with sales at the Dutch auctions.

3.3.3. Domestic Sales

The domestic equivalent of the Dutch auctions is Multiflora. Owned by 15 large growers and several smaller growers, about R150 million of cut flowers was transacted through the Multiflora auctions in the 12 months to June 2001. Although approximately 600 growers and 600 buyers participated in the auctions each year, many of these were seasonal, and there was a significant degree of concentration on both sides of the auctions: the 10 largest growers delivered 70 percent of the total volume and 26 wholesalers or their agents purchased 80 percent.

Growers submitted their flowers as one of three grades: Choice, Grade 1 or Grade 2. The flowers were subject to spot checks and could be downgraded by the auctioneers. If more than 20 percent of the bunches in a particular trolley were downgraded, then the entire trolley would be sold last, typically at a lower price. Multiflora made use of the dock system and resembled the Dutch auctions in many other respects. Fees and commissions amounted to 8 percent of the price, but the grower had to wait 10 days to receive the proceeds. Exhibit 11 shows the auction clocks in the Multiflora auction room and trolleys of flowers ready to be taken away by their purchasers. Exhibit 12 shows price and volume trends in the Multiflora auctions.

The second major domestic distribution channel involved direct sales to wholesalers or their agents. Fifteen agents had seats at the Multiflora auction. These agents entered into fixed-price contracts with a few growers and purchased any additional volume at auction. The advantage of these fixed-price contracts for the grower was that they removed price risk. The core business of the agents was to enter into fixed-price contracts with growers and speculate on future spot prices in remote markets (most large Johannesburg retailers and all Johannesburg wholesalers had seats at the Multiflora auctions, so the key customers of these agents were wholesalers elsewhere in South Africa). A few agents also assembled bouquets of mixed flowers to sell at auction the following day.

3.3.4. Trends

In the 1990s three trends began to transform the African cut-flower industry. The first of these was *falling prices in European markets*. Driven by growing supply in a flat market, the average price of large-bud Kenyan roses sold at the Dutch auctions fell from $0.27 to $0.20 between 1996 and 1998 (Exhibit 13). According to a World Bank report, by the late 1990s only growers of high-yield or high-quality varieties were able to export profitably.

The second trend was *rapidly evolving consumer tastes*. At the end of the decade there were more than 125 commercially-grown varieties of flowers, with new varieties being added each year. Correspondingly, the share of the 10 leading varieties of flowers sold at the Dutch auctions declined from 75 percent of the total in 1991 to 64 percent in 1997, and the share of roses, the most popular of these, declined from 24 percent to 20 percent. Moreover, the popularity of particular rose varieties began to change quickly. Only two of the top five varieties of large-bud roses sold at the Dutch auctions in 1998 were among the top five varieties sold in 1995. This put pressure on growers because of the long productive life of rose bushes.

Finally, the *importance of European supermarket chains* in the cut-flower supply chain was steadily increasing. In the past, supermarkets depended upon the traditional, highly-intermediated cut-flower supply chain. In the 1990s, however, supermarkets began exercising much more control over the procurement of perishable products in order to improve freshness and boost margins by eliminating middlemen. Importers serving supermarket chains created value-added relationships with a few large growers. Electronic exchange of information and precise logistical arrangements resulted in dramatic improvements in supply chain efficiency. For example, the British retailer Tesco was able to reduce the time from harvesting to supermarket shelf from approximately 96 hours to 36–48 hours. Exhibit 14 shows flowers at Oserian Farm being graded and packed into boxes for shipment to British supermarket chains. Consolidation and concentration among growers was expected to continue.

4. The U.S. Market

In the 1990s the U.S. cut-flower market grew at an average annual rate of 1.9 percent in real terms. More than 30 percent of all cut flowers consumed were roses, and the rose market was growing relatively quickly, at 4.4 percent in real terms. In 1998, the U.S. rose market was worth $420 million at

prices paid by wholesalers. This growth was driven by 3.8 percent annual growth in per capita consumption (to 4.5 stems per year), real price compression of 1.1 percent and population growth of 1.6 percent.

In the 1990s, imports, particularly from South America, became a more important source of supply to the U.S. market. Total cut-flower import value grew from $408 million in 1994 to $614 million in 1998. For roses, the trend was even more pronounced: in 2001, nine of every 10 roses sold in the United States. were imported (Exhibit 15). Colombia and Ecuador were by far the most important sources for cut roses in 2001, accounting for 46 percent and 39 percent of imports, respectively. In 2001, South African growers supplied only 2.4 million stems, or 0.2 percent of total rose imports.

Most South American imports were distributed through a network of brokers based in Miami. Many of these were affiliated with one or more farms. For example, Dole Foods, a large California-based food conglomerate, was the world's largest cut-flower farmer, having purchased 1,900 acres of farms in Colombia, Ecuador and Mexico in 1998. Dole operated a large bouquet-assembly facility in Bogotá, Colombia; four distribution facilities in Miami and one each in Dallas and Los Angeles; and a network of 120 sales offices worldwide. In 2001, Dole's cut-flower business broke even on approximately $200 million in revenue.

The low cost of road transport meant that flowers were usually transported in refrigerated trucks from Miami to markets in the Northeast. A rose might arrive in New York 48–72 hours after it was loaded onto the plane in Bogotá or Quito, for a total freight cost of $0.75 per kilogram. (A box of 400 South American roses weighs about 25 kg.) Typical prices in early 2002 for long-stem South American roses were $0.35 per stem FOB Miami; $0.80-0.90 from a wholesaler in the Northeast; and approximately $2–4 at retail.

In January 2002, three developments prompted South African growers to consider entering the U.S. market. The first was the introduction, in the late 1990s, of direct commercial flights between Johannesburg and New York. This gave South African exporters an edge over Kenyan growers, because there were still no direct flights linking Nairobi with the United States (though there had been suggestions that private charter flights might begin connecting Nairobi, Accra in Ghana and New York in the near future). South African roses could be expected to clear customs in New York approximately 22 hours after they left Johannesburg; a Kenyan rose routed through Europe would take about twice as long. Airfreight charges from Johannesburg to New York were $2.28 per kilogram.

The second development was the passage of the African Growth and Opportunity Act (AGOA) legislation through Congress in 2000. The AGOA program enabled approximately 2,000 categories of African exports to enter the U.S. market duty free. Until this legislation was passed, African cut-flower imports were subject to a 6.8 percent tariff. Now African growers were on a level playing field with

South American growers, who had exported duty free to the United States since the passage of the Andean Trade Preference Act in 1991.

The third development was the depreciation of the South African rand, which had halved in value—from about six to the dollar to 12—since January 2000. Exhibit 16 shows the rand/dollar exchange rate over the period 1994–2002.

In early 2002, no South African growers sold directly in the U.S. market. A few Johannesburg-based agents, who typically purchased flowers at Multiflora and arranged for transportation to wholesalers in New York, accounted for the bulk of South Africa's cut-flower exports to the United States. The growing conditions in South America mean that roses grown there have larger buds than those grown in Africa, and the few African roses for sale in the United States. traded at a discount to Colombian roses.

5. Political/Economic Overview of South Africa[5]

In 1948, the nationalist party won the South African national election. The nationalist party was made up of Afrikaners, who were Dutch farmers. They developed and instituted the apartheid philosophy, forming a legal and physical separation between blacks and whites. The blacks were moved into separate Bantustans, or rural areas supposed to be states within states. They had to get special permits to leave these areas freely. Blacks could only own businesses within the Bantu areas.

After centuries of white rule, South Africa held its first all-race elections in 1994. The African National Congress won the elections by a landslide and Nelson Mandela became the country's first black president. Mandela was succeeded by Thebo Mbeki in 1997, and in 1999, in the second all-race general elections, the ANC increased its majority to just shy of the two-thirds necessary to unilaterally amend the constitution. In recent years, however, the reputations of the ANC and Mbeki in particular have suffered due to the government's handling of the AIDS epidemic and the Zimbabwe crisis and an embarrassing arms procurement scandal. Slow progress on social programs has also contributed to voter malaise, which was evidenced by low turnout in the local elections in 2000. The next general elections are to be held in 2004.

The ANC has been relatively successful at reversing the high debt and deficit and double-digit inflation that characterized the South African economy of the 1980s and early 1990s. While the government's monetary and fiscal stabilization policy has provided the basis for sustainable growth, the growth rate has remained low, largely because FDI levels have been less than expected (which in turn is attributable to a lack of investor confidence in the political situation). In the first half of 2001, real GDP growth slowed to 2.5 percent, down from 3.1 percent the previous year.

In 2000, the country's GDP was $126.5 billion, or $2,768 per capita. The latter figure is misleading, however, as South Africa's income distribution is among the most unequal in the world.

[5] The following overview is drawn from the Economist Intelligence Unit's South Africa country profile.

The country simultaneously exhibits OECD-level affluence and levels of poverty characteristic of the developing world. Although the ANC government has reversed the previous regime's apartheid policies, income inequality remains highly correlated with race.

The South African economy, though best known for its mining and agriculture, in fact generates a greater share of GDP from manufacturing and financial services. Mining and agriculture, however, remain important. Gold accounts for more than one-third of exports, and agriculture continues to be an important source of employment. Corn, or maize, is the most important crop, but production of niche market products like wine, exotic fruits and ostrich meat is growing. Foreign trade is an important element of the South African economy, accounting for around 45 percent of GDP, and the country enjoys a growing trade surplus. The growth in exports is largely due to the falling rand. The rand's devaluation is attributable to a combination of external and internal factors, including the recent global slowdown, the Zimbabwe crisis, delays in the government's privatization program and the controversies surrounding the Mbeki administration. While good for exports, the rand's devaluation obviously made imports relatively expensive for South Africans.

5.1. To Be Black and Female in South Africa

Half a century of segregation could not be erased overnight from a country's national consciousness, and after apartheid blacks still found it difficult to obtain jobs in white areas. The hostile racial atmosphere made it difficult for blacks to get loans and start their own businesses. The white business community was hesitant to invest in a black enterprise, often viewing blacks as inexperienced and untrustworthy. These obstacles were doubled for a black woman. In a traditionally patriarchal society, black women were the lowest level of society. Black women had to fight harder than anyone else to gain respect and to be taken seriously by the business community.

6. Company Background

When the Davidsons first moved to Caroza Farm, the farm had only two hectares of rose production capacity, though the farm itself covered 21 hectares of land. They realized that they would have to expand the farm's capacity to make it a viable business. Moreover, the existing plants and facilities were old and needed to be upgraded. Of course, buying, expanding, and upgrading the farm meant a substantial investment—more than the Davidsons could afford.

6.1. Financing

In 1995, a black South African entrepreneur had few options for financing. Racial prejudice marked most South African banks, and the amount of private equity targeting small and medium-sized businesses was minuscule. Moreover, most potential lenders were hesitant to finance a rose farm and were particularly wary of Jean's lack of farming experience. Jean persevered, however. "The first question was always: 'Have you studied agriculture?" she says. "But I knew I could run [the farm] as a

business. I said 'It doesn't matter. I'm a businesswoman. You're buying expertise. I've run lots of businesses before.'"

Fortunately, when Jean approached the IFC,[6] it agreed to support the project. The IFC contracted the African Project Development Facility (APDF)[7] to help Jean put together a business plan. While the IFC was interested in financing the venture, it was only willing to do so with a local partner. Finding a local partner wasn't easy. Although Jean and the APDF consultant had put together a convincing business plan, most of the local lenders Jean approached were skeptical of a black woman's ability to run a business. "They liked my business plan," Jean says, "but they didn't like my face." Still, Jean refused to take no for an answer. "We were told no, but we didn't hear no. We demanded to know *why*: 'What do we need to do to get financing from you?'"

After numerous meetings and two rejections, Jean managed to secure financing from one of South Africa's largest banks, Nedcor Bank, Ltd. "If it was anybody else, they would have given up," says Roy Rajdahar, a former IFC official who worked on Jean's financing application. "Jean knew nothing about farming. She was a businesswoman. It seemed as if nobody was going to give her a loan. I believe she is only in business today because of persistence. She believed that she could do it and that kept her going. I think that was the key to her success: persistence."

With Nedcor on board, the financing deal came together. The capital structure comprised a mix of debt and equity. Equity stakes were taken by the Davidsons (38 percent), the IFC (31 percent) and Nedcor's venture capital arm, Msele Nedventures (31 percent), with the Davidsons having a majority position. On the debt side, the IFC and Nedcor both took a mix of senior and subordinated debt. The total package of nearly R5.5 million comprised approximately R1.3 million equity and R4.1 million debt. About R1.7 million of that amount was to be used to purchase the farm. The remainder was budgeted for rehabilitation and expansion of the farm's facilities, as well as working capital needs.

The particular capital structure was designed to meet a number of investor concerns. For example, five-year put-call options gave the IFC and Msele a means of exiting their equity positions. They were also wary of diluting the Davidson's stake because of incentive concerns. The IFC's subordinated debt took the form of an income note, which, being based on revenue rather than operating profit, provided protection against inflated costs. Nedcor, on the other hand, secured its subordinated debt with a participating preferred share—a traditional South African instrument that has tax benefits but is based on operating profits rather than revenues. Finally, the IFC's seven-year senior loan was denominated in Dutch guilders because the IFC was wary of lending in local currency.

6.2. Early Challenges

Unfortunately for Jean, getting financing was only the first of several challenges.

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[6] Part of the World Bank Group, the International Finance Corp. (IFC) is responsible for, among other things, promoting private-sector growth in developing countries. It often engages in debt and equity financing of small and medium-sized privately owned companies in developing markets.

[7] A joint IFC, African Development Bank, UNDP initiative, the APDF helps African entrepreneurs prepare viable projects.

In June 1996, as the financing was being finalized, the Davidsons took possession of Caroza Farm, and Jean immediately ordered a new two-hectare greenhouse. Jean's ability to service her debt obligations was based on expected profits from the new greenhouse. Delivery of the greenhouse, however, was delayed three months when, en route from Europe, it was lost at sea. Moreover, because the order for the rose plants that were to be planted in the new greenhouse had to be cancelled and then reinstated, production was delayed a total of six months. To make matters worse, a storm damaged the greenhouse shortly after it was built.

Cash flow problems arose when royalty payments on the rose plants came due nine months after their delivery. Jean and her financing partners had failed to budget for royalty payments. Also, they had overestimated Jean's ability to sell in the export market. As a result, Jean was forced to focus on cutting costs—including her own salary—rather than on growing the business.

6.3. Restructuring the Financing

In July 2000, Jean sought to restructure her financing. While the farm was making a profit at the operating level, capital charges were such that it was actually losing money. Exhibit 17 shows Caroza Farm's financial statements. Having established herself as a rose grower, Jean believed that she could get her capital costs down through refinancing them over a longer period. She also hoped to secure additional funds to expand her operations. Jean decided to approach the Land Bank, a South African development bank that she had unsuccessfully solicited when first looking for financing. The bank was under new, less risk-averse management and was now willing to look seriously at the venture. In August 2000, the Land Bank extended Jean a R3.5 million long-term (20-year) secured loan that allowed her to retire the IFC and Nedcor senior debt. Jean used the balance of the Land Bank loan to finance the installation of a new one-hectare greenhouse.

Unfortunately, the greenhouse was not installed properly and, though still standing, is at risk of being blown over in high winds. Jean has sued the construction company for damages and is awaiting the resolution of the case before planting flowers in the new greenhouse.

By the end of 2001, Jean had managed to get a handle on cash flows. While the company is profitable at the operating level, capital costs mean that the business continues to show a net loss. Caroza Farm's financial statements are shown in Exhibit 17.

6.4. Operations

Caroza Farm currently employs more than 60 people. The organizational structure is relatively flat, with Jean at the top and three functional managers, who report directly to her, responsible for pest control, fertigation and production. Initially, Jean used a much steeper organizational structure with an expatriate farm manager who ran the farm and foremen who supervised the laborers. Jean switched to the current structure because she disagreed with the farm manager's management style and because she wanted to develop a more thorough understanding of the business. The three functional managers

were promoted from within and were responsible for day-to-day production decisions. Jean maintained accountability with budgets, weekly meetings and performance-based bonuses. On technical matters, Jean employed a consultant from the University of Cape Town.

Although the farm comprises 21 hectares of land, only four hectares were under production (roses also grew—but were not harvested—on a fifth hectare that is covered by shade netting). Jean grew nine varieties of roses but had not diversified into other types of flowers. Although she had originally planned to export 60 percent of her roses to Europe, Jean found it tough to compete with Kenyan growers. Jean had worked with two European wholesalers and had enjoyed higher margins from sales to them than from domestic sales, but she was unable to consistently supply them with the volumes of high-quality roses they demanded. Jean had also tried to sell at the Dutch auctions but found that the auction price minus commissions often failed to cover her transportation costs. High freight costs and the demands of wholesalers have made exporting in small quantities impossible. In order to expand export sales, Jean would need to produce roses at higher volumes. This endeavor would require building additional greenhouses, which in turn would require a large capital investment. Already highly leveraged, Jean expected to have a difficult time gaining access to the capital that would be needed. Her response was to cut down significantly on export sales: in the fourth quarter of 2001, her export business amounted to less than 1 percent of total sales.

She then sent her best flowers to her domestic direct sales customers and the rest to auction. About 50 percent of direct sales volume went to a single customer in Cape Town and 20 percent to a local Johannesburg wholesaler, with the rest divided between smaller wholesalers.

One of the buyers commented on a problem that Jean had had with auction sales in the past:

Jean's flowers sometimes have to be downgraded. Consistent downgrading causes the wholesalers who bid at auction to lose confidence in a grower. Jean may then get lower prices than another grower for flowers of the same quality. On the other hand, when a trolley of Uniflor flowers enters the auction hall, everyone perks up. People are willing to pay more because they think that if a Uniflor flower is graded as First grade, it may really be of Choice quality.

Jean had tried to get Multifora to provide her workers with better guidelines for grading. So far, Multiflora has not offered such assistance. Jean could invest in producing her own grading chart and training her workers, but would the time investment be worthwhile? Instead, she has been working to increase her domestic direct sales volume.

7. The Next Step

Jean returned to her office and picked up the phone. She wanted to get the new greenhouse up and running; it could not wait any longer. She also wanted to step up her marketing efforts and form new relationships with wholesalers overseas. She was attracted by the potential she saw in the large and growing U.S. market, but knew that she would face stiff competition from established South

American growers. She wondered if breaking into the U.S. market should be a priority. And if so, how should she do it?

In any case she was determined to continue to expand until she was the largest, most successful rose grower in South Africa. Somehow, she would need to figure out a way to make her dream a reality.

Exhibit 1. Jean Davidson on Caroza Farm

Exhibit 2. Key Aspects of Leading International Cut-flower Markets

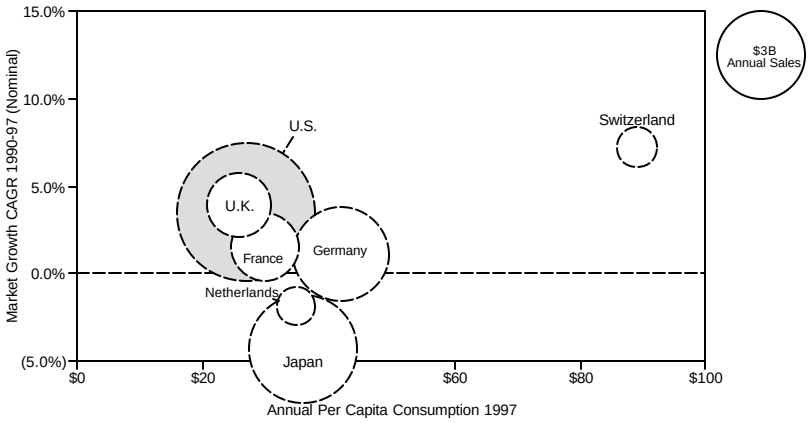

Exhibit 3. Part of Oserian Farm, on Lake Naivasha in Kenya

Exhibit 4. Initial Investment Costs for a Typical Cut-rose Project in Southern Africa

Description	Investment
Land	$20,000
Infrastructure	25,000
Greenhouses	210,000
Irrigation System	70,000
Packing Shed	50,000
Cold Storage	40,000
Equipment and Machines	40,000
Truck	45,000
Office and Equipment	15,000
Housing	50,000
Plant Material	175,000
Contingencies	75,000
Total	$815,000

Exhibit 5. Operating Costs for a Typical Cut-rose Project in Southern Africa

Description	Costs per Square Meter	Percent of Total Costs
Chemicals/Fertilizers	$1.18	3.3
Technical Advice	0.41	1.2
Electricity and Fuel	0.44	1.2
Labor	2.26	6.3
Packaging	0.74	2.1
Freight	13.53	38.0
Marketing	9.41	26.4
Depreciation	4.71	13.2
Interest	0.88	2.5
Miscellaneous	2.06	5.8
Total	$35.62	100.0

Exhibit 6. The Greenhouses at the New Uniflor Farm

Outside View of the Greenhouses

Inside View (visible on the far side is a "wet wall" for cooling and a dehumidifier system)

Exhibit 7. Pesticides Being Transported in One of the Greenhouses on Caroza Farm

Exhibit 8. Roses Being Harvested on Caroza Farm

Exhibit 9. One of the Imported Grading Machines at the Uniflor Facility

Exhibit 10. Cost Comparison Between Dutch Auctions and Direct Sales to Wholesalers for Small-bud Kenyan Roses

Dutch Auction Chain		German Direct Chain	
F.O.B. Nairobi	Euros 0.08	Euros 0.09	F.O.B. Nairobi
Freight	0.04	0.04	Freight
C&F auction	0.11	0.13	C&F importer
Auction costs (15%)	0.02	0.01	Handling fee
Auction price	0.14	0.14	Net sales
Dutch wholesale margin	22%	15%	Commission
C&F German wholesaler	0.17	0.16	C&F German wholesaler
German wholesale margin	20%	20%	German wholesale margin
German retail margin	100–200%	100–200%	German retail margin
VAT	7%	7%	VAT
Consumer price	0.43-0.64	0.41-0.61	Consumer price

Exhibit 11

The Multiflora Auction Room

Flowers Being Arranged for Collection by Their Purchasers

Exhibit 12. Price (in rand) and Volume (in millions of stems) Trends for Selected Varieties of Cut Flowers at the Multiflora Auctions

Variety	1998 Price	1998 Vol.	1999 Price	1999 Vol.	2000 Price	2000 Vol.	2001 Price	2001 Vol.
Indoor Carnations	0.59	19.1	0.57	19.9	0.64	18.1	0.67	16.1
Indoor Chrysanthemums	0.70	30.5	0.66	31.5	0.73	31.6	0.71	34.6
Alstroemeria	0.42	4.5	0.50	3.9	0.60	4.5	0.57	5.6
Irises	0.69	5.3	0.79	5.8	0.84	6.0	0.95	4.4
Gladioli	0.52	12.0	0.56	10.6	0.59	10.6	0.58	11.2
Indoor Roses	0.53	39.8	0.55	44.7	0.60	45.0	0.56	53.1

Exhibit 13. Average Prices of Kenyan Cut Flowers Sold in Dutch Auctions (US$ per stem)

Variety	1996	1998
Rose, small flowers	0.18	0.13
Rose, large flowers	0.27	0.20
Rose, spray	0.18	0.13
Alstroemeria	0.15	0.14
Solidago	0.17	0.15
Veronica	0.12	0.13
Carthamus tinctorius	0.18	0.18
Source: VBN		

Exhibit 14. Oserian Farm

The Grading Shed

Flowers Being Packed into Boxes for Export to the U.K.

Exhibit 14. Oserian Farm (continued)

One of the Boxes Destined for a U.K. Supermarket Shelf

Exhibit 15. Source of Supply to the U.S. Cut-flower Market

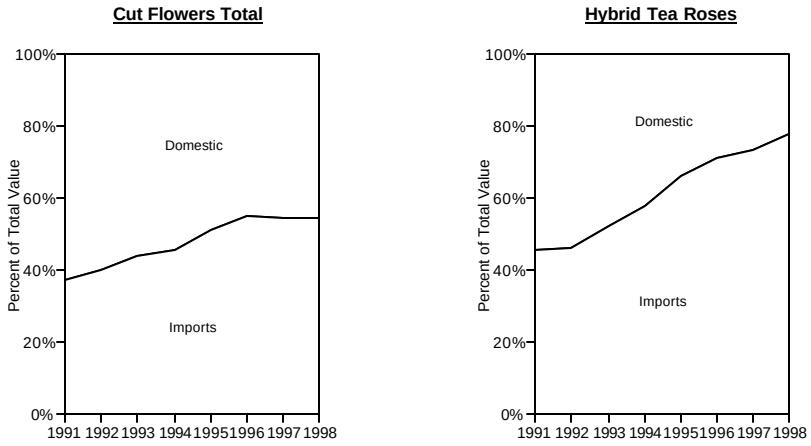

Exhibit 16. South African Rand/U.S. Dollar Exchange Rate

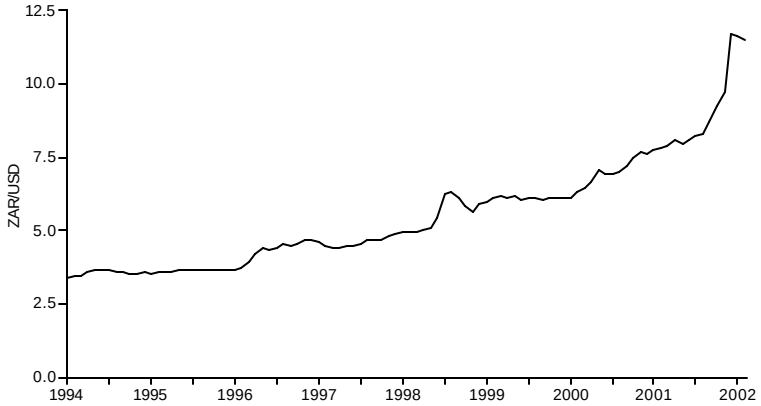

Exhibit 17. Caroza Farm's Financial Statements, Year Ended 30 June 2000

Balance Sheet

	2000	1999
ASSETS	R000	R000
Noncurrent Assets	4,189	4,778
Land	180	180
Greenhouses and Fixed Structures	2,605	2,947
Machinery	376	438
Plants	956	1,099
Other Movable Assets	72	114
Preliminary Expenses	164	164
Current Assets	262	277
Inventories	22	34
Accounts Receivable	-	24
Cash Resources	240	219
Total Assets	4,615	5,219
EQUITY AND LIABILITIES		
Capital and Reserves	305	1,193
Issued Capital	2,295	2,295
Accumulated Losses	1,990	1,102
Noncurrent Liabilities	3,464	3,152
Junior Interest-Bearing Debt	1,134	1,037
Senior Interest-Bearing Debt	2,254	2,039
Shareholder Loan	76	76
Current Liabilities	846	874
Bank Overdraft	220	60
Accounts Payable	626	814
Total Equity and Liabilities	4,615	5,219

Exhibit 17. Caroza Farm's Financial Statements, Year Ended 30 June 2000 (continued)

Income Statement

	2000 R000	1999 R000
Revenue	1,718	2,312
Operating Profit before Depreciation	289	1,025
Other Costs	1,177	1,107
Depreciation	589	558
Finance Costs	588	549
Net Loss before Taxation	888	82
SA Normal Taxation	-	-
Net Loss for the Year	888	82
Accumulated Loss at Beginning of Year	1,102	1,020
Accumulated Loss at End of Year	1,990	1,102

Exhibit 17. Caroza Farm's Financial Statements, Year Ended 30 June 2000 (continued)

Income Statement Detail

	Rand
Sales	1,718,198
Cost of Sales	891,018
Opening Inventories	34,267
Closing Inventories	-21,875
Chemicals and Fertilizers	134,153
Coal	98,210
Commission	127,274
Electricity and Water	57,707
Motor Vehicle Expenses	125,687
Wages	335,595
Gross Profit	827,180
Indirect Overheads	537,516
Audit Fees	-7,018
Bank Charges	20,029
Computer Costs	13,976
Consulting Fees	6,239
Consumables	3,177
Director's Remuneration	103,486
Insurance	114,042
Leasing Charges	9,124
Legal Fees	30,919
Loan Administration Costs	8,235
Printing and Stationery	10,729
Repairs and Maintenance	42,131
Security	1,026
Soil Tests	1,122
Staff Welfare	110,423
Subscriptions	1,017
Sundry	-2503
Telephones and Faxes	47,097
Traveling, Accommodation and Entertainment	24,265
Operating Profit	289,664
Depreciation	589,026
Finance Costs	588,409
Net Loss	887,777