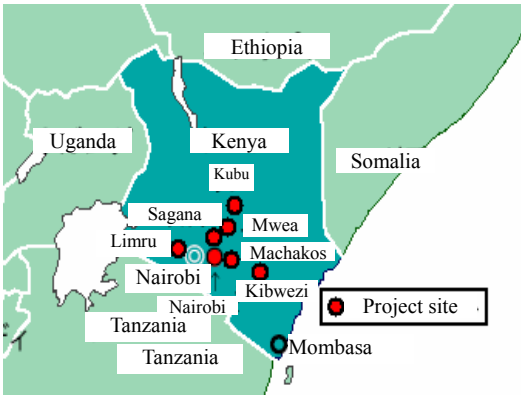
Kenya

Horticultural Produce Handling Facilities Project

Field Survey: July 2003

1. Project Profile & Japan's ODA Loan



Project Location Map

Pickup point at Nairobi Horticultural Center

1.1 Background

Kenya has been producing horticultural produce[1] for domestic consumption and export for many years, and with the rapid growth[2]of exports to Europe from the 1970s onwards the sector became an important source of foreign currency[3]. Moreover, since this is a labor-intensive industry it came to hold a position of paramount importance within the economy in terms of promoting small-scale horticultural farmers (farmers) and expanding the job market.

Meanwhile, the horticultural sector is facing problems in that it needs to diversify exports in line with the increasingly varied preferences of European consumers, and to improve quality in view of increased competition with other producer nations; specifically, the principal reason for the deterioration in the quality of horticultural produce was believed to be the result of shortages in post-harvest handling facilities, which led to heat build up in the produce. To this end, a number of large-scale exporters with capital strength began to set up pre-cooling facilities to enable the rapid cooling of produce, and cold storage facilities[4] to keep the produce at these lower temperatures[5]. However, small and medium exporters who mainly trade with small-scale horticultural farmers found it difficult to establish such facilities and the need for government support had become a priority issue.

---

1 French beans, mangoes, avocadoes, cut flowers, okra, aubergines, red peppers (cayenne), etc.

2 Exports to Europe: 22,000 tons in 1980 → 50,000 tons in 1989, increasing at an average rate of 10% per year. Exports to the UK, Germany, France and the Netherlands accounted for 80% of the total.

3 In 1989, exports of horticultural produce accounted for 11.2%, ranking fourth after coffee, tea and tourism as a source of foreign exchange.

4 Pre-cooling is a process that involves the rapid post-harvest cooling of produce in order to prevent the deterioration of quality caused by heat build up during distribution (transportation); cold storage is the process that prevents temperature increases in produce that has been cooled.

5 At appraisal there were 151 registered exporters, of which nine owned pre-cooling / cold storage facilities.

1.2 Objectives

To develop post-harvesting facilities for the Kenyan horticultural sector as a means of strengthening export competitiveness and thus increasing foreign exchange earning capacity, and of achieving higher incomes for small-scale horticultural farmers.

1.3 Outputs

The project involved the construction of pre-cooling and cold storage facilities at four distribution centers for horticultural produce (one inside Nairobi Airport's cargo handling terminal and three in horticultural produce growing regions). An outline of the facilities, including handling capacity, is given below.

(1) Pre-cooling / Cold Storage Facilities

Facility	Type & Capacity	
Nairobi	Cold storage (110 tons/day)	Pre-cooling (10 tons/day twice a day)
Limru	Cold storage (10 tons/day)	Pre-cooling (10 tons/day twice a day)
Kibwezi	Cold storage(15 tons/day)	Pre-cooling (15 tons/day twice a day)
Sagana	Cold storage (20 tons/day)	Pre-cooling (20 tons/day twice a day)
Total capacity	Cold storage (155 tons/day)	Pre-cooling (110 tons/day)

(2) Related Equipment

Forklift trucks, measuring scales, insulated trucks (4-ton × 3), management-use vehicles (2), etc.

(3) Consulting services

- Review of capacity, operation plans, etc.
- Detailed design
- Bidding assistance
- Work supervision
- Training

1.4 Borrower / Executing Agency

Government of Kenya / HCDA (Horticultural Crops Development Authority)[6]

[6] A public corporation under Ministry of Agriculture and Livestock jurisdiction that was established in 1963.

1.5 Outline of Loan Agreement

Loan Amount Disbursed Amount	2,016 million yen/ 2,016 million yen
Exchange of Notes Loan Agreement	July 1993/ October 1993
Terms & Conditions Interest Rate Repayment Date (Grace Period) Procurement	 2.6% 30 years (10 years) Partially untied
Final Disbursement Date	July 2001

2. Results & Evaluation

2.1 Relevance

2.1.1 Consistency with Policy

Firstly, in terms of consistency with government policy at the appraisal, the goal of the sixth national development plan (1988-1993) was to expand the employment by promoting the labor-intensive horticultural sector and, moreover, the "Province-specific Integrated Multi-Sector Rural Development Program" that was created in 1993 was also focused on small-scale agricultural development.

Meanwhile, the "Economic Recovery Strategy for Wealth and Employment Creation", "the PRSP (Poverty Reduction Strategy Paper)", and the "National Agricultural and Livestock Extension Program" – all of which were current at the time of evaluation – all define foreign exchange acquisition and job creation through the promotion of horticultural produce exports, and income growth for small-scale farmers who are low wage-earners as key issues, and call for the development of the necessary infrastructure and efforts to encourage its use.

As demonstrated above, this project was consistent with Kenyan policy both at appraisal and at evaluation, which confirms the relevance of the project.

2.1.2. Consistency with Beneficiary Needs

Firstly, in terms of the project's consistency with beneficiary needs at the appraisal, as stated earlier, with a view to improving quality, a number of large-scale exporters with capital strength had begun to set up pre-cooling facilities to enable the rapid cooling of produce, and cold storage facilities to keep the produce at these lower temperatures. However, small and medium exporters found it difficult to establish such facilities, and it was hoped that setting up pre-cooling and cold storage facilities with government assistance would enable small and medium exporters to collect and export the produce of small-scale horticultural farmers.

Again, at the time of evaluation, the establishment of convenient pre-cooling and cold storage facilities was deemed a desirable means of raising the incomes of small-scale horticultural farmers and of stabilizing prices.

As this evidences, the project was consistent with the needs of its beneficiaries both at appraisal and at evaluation, which confirms the relevance of the project.

2.2 Efficiency

2.2.1 Outputs

Initial plans called for the construction of pre-cooling and cold storage facilities at four locations: Nairobi, Limru, Kibwezi, and Sagana; however, cold storage facilities were in fact only set up in Nairobi and pre-cooling facilities were built at seven locations, including Limru (see Table 1). This is because in 1996, HCDA began providing integrated management services aimed at strengthening support for small-scale horticultural producers who are in vulnerable position, including purchasing the produce from the farmers, transportation, refrigeration, and auctioning it to exporters; added to which, changes were made to the system contingent upon changes in the market environment (export volumes and the number of exporters) and in distribution channels, which resulted in all produce being put into cold storage at Nairobi. The increase in collection points was made in consequence of expansions to growing areas (gross handling volumes have not changed due to cost issues). This confirms the relevance of the changes to project.

Table 1: Facilities developed through this project

Collection Centers	Type & Capacity	
Nairobi Horticultural Center	Cold storage (100 tons/day)	—
Limru	—	Pre-cooling (15 tons/day)
Machakos	—	Pre-cooling (10 tons/day)
Kibwezi	—	Pre-cooling (10 tons/day)
Yatta	—	Pre-cooling (10 tons/day)
Mwea	—	Pre-cooling (20 tons/day)
Sagana	—	Pre-cooling (20 tons/day)
Kubu	—	Pre-cooling (10 tons/day)
Total capacity	Cold storage (100 tons/day)	Pre-cooling (95 tons/day)

2.2.2 Project Period

Initial plans projected a December 1996 as a completion date, but the project was in fact completed in July 2001, four years and seven months behind schedule. These delays are attributed to the need to review the detailed design contingent upon the changes in outputs, which pushed back the start of contractor selection; however, actual construction work and equipment procurements were essentially executed in line with the original schedule.

Insulated truck at Nairobi Horticultural Center

2.2.3 Project Costs

Actual project costs[7] were 2,487 million Kenyan shillings (KS) (foreign currency: 1,134 million KS; local currency: 1,353 million KS) against initially budgeted costs of 1,395 million KS (foreign currency: 877 million KS; local currency: 518 million KS). The principal reason for the increase over planned costs was the price increases that occurred during project execution, which exceeded projections (45.8% in 1993), as well as increases in consultant costs. These increases were covered by the Kenyan government.

2.3 Effectiveness

2.3.1. Use Status of Facilities

As is evidenced in Table 2 and Table 3, of the pre-cooling and cold storage facilities that were constructed through this project, only the pre-cooling facilities at the Machakos collection center are being used. The other facilities are being used as spaces for weighing and packing horticultural produce for shipment, and in line with the reviewed plans of 1996, in order to export high quality horticultural produce, after weighing and packing at the seven collection centers, the produce is shipped to the Nairobi Horticultural Center where it is sorted for quality / standards.

[7] Calculated using 1 KS = 1.7 yen (appraisal) and 1 KS = 1.78 yen (evaluation) (simple average of execution period exchange rates based on IFS).

Table 2: Use Status of Collection Centers at Ex-post Evaluation

Item	Nairobi	Limru	Yatta	Machakos	Sagana	Mwea	Kibwezi	Kubu
Cold storage	×	—	—	—	—	—	—	—
Pre-cooling	—	×	×	○	×	×	×	×
Weighing / packing	○	×	○	○	○	○	○	○
Overall use	Exporters	×	Farmer's groups (15)	Farmer's groups (26)	Farmer's groups (24)	Farmer's groups (15)	Farmer's groups (10)	Farmer's groups (24)
Trade with exporters passing through the Nairobi Horticultural Center	—	—	×	○	○	○	○	○

○: in use as of 2003; ×: not currently in use; figures in parenthesis refer to the number of groups currently using the facilities.
(Source: results from the HCDA hearing and surveys conducted during visits to each of the facilities)

Table 3: Use Status of Collection Centers 2001-2003

Collection center	Use Status
Nairobi Horticultural Center	Has had the cold storage unit in operation since 2001, but is currently only used as the packing space.
Limru	Concluded an 8-month contract with a cut flower exporter in 2002. The packing space was used. The pre-cooling facilities have never been used.
Yatta	10-15 farmer groups have been using the packing space continuously since 2001. The pre-cooling facilities have never been used.
Machakos	One room of the pre-cooling units has been in continuous use since 2001. The number of farmer groups using the center, including as the packing space, decreased from 32 in 2001 to 26 in 2003. Handling volumes trebled in the same period.
Sagana	Put one room of the pre-cooling units into operation for four months in 2002. But has not used it, or any other of its pre-cooling facilities since. The packing space has been used continuously by 24 farmer groups.
Mwea	Of the four pre-cooling rooms, one was used by 10-15 farmer groups for one month in 2001, however, the facilities have seen no other use. The packing space has been used continuously.
Kibwezi	The packing space has been used by 10 farmer groups since 2001. The pre-cooling facilities have never been used.
Kubu	The packing space was used by 31 farmer groups in 2001. But due to difficulty to secure markets for their produce, this number had shrunk to 24 groups in 2003.

2.3.2. Factors Underpinning Non-Use of Facilities

With the exclusion of the Machakos pre-cooling facility, there are three conceivable reasons as to why the pre-cooling and cold storage facilities constructed through this project are not being used, as follows.

1. Changes in the external environment during project implementation

Between the project planning stage and completion of the facilities, development of the Kenyan horticultural export industry was led by the private sector, and the exporters and the large-scale farmers that concluded contracts with them began setting up their own cold storage and pre-cooling facilities in order to satisfy market needs (for quality improvement), and to collect the produce of small-scale horticultural producers.

2. Provision of superior services by commercial exporters

The contracts between HCDA and the farmer groups state that HCDA will pay the farmers within two weeks of sale, but delayed payments have become the norm due to tight cash flow of HCDA and distrust in HCDA has been growing among the farmers. Further, although the produce brought by farmers to the collection points is sold to exporters after being consolidated at the Nairobi Horticultural Center, there are cases of produce being returned by exporters because of defects, and this defective produce is sold at domestic markets. When this happens it is sometimes not possible to pay farmers the profits from sales as contracted, but HCDA has provided farmers with insufficient explanation on sales volumes and profits, and this is also causing the farmers to loose faith in HCDA (for details, refer to the summary of social survey results below). The commercial exporters offer customer-oriented services compared with HCDA in this area.

3. Problems with access to the Nairobi Horticultural Center

The original plans called for the Nairobi Horticultural Center to be constructed within the grounds of Nairobi International Airport, but due to problems securing land the center had to be built on a plot that was some distance from the airport. The center was thus removed from the area where exporters gather, which, as interviews with exporters have revealed, makes it inconvenient to use.

[Summary of Social Survey[8] Results]

- HCDA is useful, but in many instances it only pays out minimal sums after making farmers wait for long periods (for payment).
- Unsold produce is sometimes returned.
- Exporters pay cash on delivery, which gives them the edge over HCDA.

[Case Study] Kibwezi Collection Center (being used as a packing space)

Kibwezi lies at the midpoint of the trunk road that links Nairobi with the port city of Mombasa on the coast, and the farmer's groups ship produce to both markets. There is a farmer's group near the collection center that was set up by NGOs in 2000. The group comprises 20 members and performs accounting and marketing roles under the guidance of a leader, with regular meetings held once a week at the collection center belonging to the Regional Development Agency. This group does not ship its produce from the collection center, but sells it directly to exporters or at domestic markets. This is because the group has selected exporters and domestic market that will purchase its produce on more favorable terms, based on its own marketing activities. Furthermore, the farmer's group has received 1.5 million KS from government institutions to cover initial investment costs, its members pay 50 KS a month to build group funds and it currently has savings of 200,000 KS.

A farmer group meeting

2.3.3. Towards Encouraging Facility Use in future

Although the external environment has changed, with the horticultural export market now controlled by exporters and large-scale farmers, HCDA is actively collecting produce in order to trade with those small-scale horticultural producers that are outside the network of exporters, and there is a room for further use of the facilities. At the evaluation, HCDA was doing the rounds of horticultural producers in pickup trucks and transporting produce to the collection centers in a bid to increase the volumes being shipped to the Nairobi Horticultural Center, and it is hoped that such efforts will be continued as one means of encouraging the future use of the facilities. Additionally, timely payments and transparent settlements are essential to restoring the trust of the farmers, and sales activities targeting the exporters are also important. By comparison with other collection centers, the pre-cooling facilities and weighing / packing space at Machakos are being effectively utilized, and it is considered that the methods of operation employed at the Machakos center could be referenced to encourage the future use of the facilities (refer to the case study hereunder). While at many of the collection centers, the bonds of trust with farmers that were advocated by the JBIC survey have not been formed, trust is growing among the farmers who use the Machakos center thanks to efforts to avoid payment delays, etc. Otherwise, another conceivable method of encouraging facilities use would be to give the collection centers over

[8] The survey covered 100 farmers growing horticultural produce in the vicinity of each of the four collection centers visited during the field survey that was conducted for this evaluation, namely: Sagana, Kubu, Machakos and Mwea.

to the exporters and have them operate them, as was stated in the original plans, instead of the current situation wherein they are run by HCDA.

[Case Study] Machakos Collection Center

Located approx. 70km southeast of the capital Nairobi, the Machakos collection center was completed in 2000 and became operational in November 2001. Twenty-six farmer's groups bring their produce to the center (each group comprises some 50 members). Horticultural produce handling volumes increased from 36,195kg in 2001 to 112,836kg in 2002. French beans, peas, and string beans are collected at the center, with the facility operating at high rates during October through May: the peak export season. At busy times, the center operates at full capacity five days a week, pre-cooling 3 tons of produce a day.

A farm that sells direct to the Machakos Collection Center to secure extra funds

Every effort is being made to avoid falling into arrears with the farmers and payments are made within two weeks of collection in accordance with the terms of the contracts with the farmer's groups. Many local farmers deal directly with exporters, who pay a uniform 40 KS/kg on the spot, irrespective of produce type or sales outcome. By contrast, at the Machakos collection center, when produce fetches a higher price than the agreed contract price, the surplus is passed on to the farmers. The six-hectare field within / adjoining the collection center cultivate vegetables such as radishes, cabbages, etc., which is allotted a part of the revenue source for the collection center management.

2.3.4. JBIC Efforts to Encourage Facility Use

Via its interim monitoring survey (2000) and ex-post monitoring surveys (2002, 2003), JBIC has recommended that HCDA actively collect and sell agricultural produce and that the collection centers be leased to exporters. The two ex-post monitoring surveys involved a review of the ledger formats used at every stage of the transaction, and the creation of internal manuals on book-keeping methods, which revealed some evidence of improvements in the accuracy of accounts / transaction data. Added to which, between September and November 2003, JBIC implemented another survey regarding the introduction of computer systems as the surest possible method of managing transaction / accounts data.

The implementation status of the major recommendations listed in Table 4 was surveyed during this evaluation. To improve facilities use and enable project effects to be realized, it is hoped that those recommendations that have been insufficiently accomplished or not implemented at all, will be put into action in the future. In connection with this project, JICA experts are currently assisting in the formation of small-scale horticultural farmer's groups and providing support for their activities.

Table 4: JBIC Survey Recommendations & their Implementation Status

Recommendations Accomplished	Insufficiently Accomplished Recommendations
Develop domestic markets: Based on JBIC's advice that attention must also be paid to the domestic and not just to the export market; HCDA is promoting shipments to the former in a bid to raise the wages of smallholder farmers and the poor. Latent demand within Kenya remains high among major volume retailers and hotels.	**Build trust with farmers at the collection center level:** With the exclusion of Machakos, the trust of farmer's groups has not been acquired due to the unclarity of transaction data, payment arrears, non-compensation for returned produce, etc.
Provide information / training opportunities on the quality / pesticide residue standards of importers: HCDA is providing information / training opportunities on the quality / residue standards of EU countries to its employees and to farmers.	**Improve accounts by utilizing PCs:** PCs and dedicated software are being used, but due to shortages of funding and capable personnel, the system was not functioning appropriately at the evaluation.
Human resource development (marketing, etc.): Although it has recruited no personnel from the private sector, business-minded employees at HCDA are being assigned to the production and marketing departments to enable the formation of business strategies. HCDA is also investing resources in personnel training.	**Strengthen sales to exporters and other customers:** Sales are made by individual collection centers. However, difficulties supplying the required volume and quality within the designated timeframe mean that the centers have failed to earn the trust of exporters.
Hold meetings with farmers and exporters emphasizing a bottom-up approach: Although exporters are not participating, meetings are being held with representatives from the ministry of agriculture and livestock, HCDA, the collection centers and farmers.	**Improve the action plan and keep all employees informed:** The production and marketing departments have created action plans and are sharing information, but this is not being enforced throughout the HCDA organization.
Provide vehicles: Some vehicles are being offered to those exporters seeking them.	**Create an HCDA website:** A site is under construction but it had yet to be completed at evaluation.
Use the collection centers to provide saplings, seeds and farm inputs: Saplings and fertilizer, etc. are being sold to farmers at the collection centers.	**Introduce business concepts / performance-based system at HCDA:** This has not been put into action.
Label crates at all collection centers: HCDA requires labeling and it is being executed.	**The ministry of agriculture and livestock should provide more technical assistance:** This has not been implemented.
Improve the efficiency of HCDA finances / accounts: HCDA accounts were separated from the accounts for this project in 2001.	—
Provide personnel contributions, JICA experts, etc., from Japan: One JICA expert was dispatched on a 7-month contract during fiscal 2003.	—

Source: compiled from interviews with HCDA staff

2.3.5. Kenyan Efforts to Encourage Facility Use

Of the JBIC survey recommendations shown in Table 4 that have been put into action by Kenyan side, particular emphasis was placed on the segmentation of accounts for this project from the whole HCDA accounts and on bolstering training provisions for employees. It was necessary to segregate the project accounts from whole HCDA account because it was hard to manage the project adequately without understanding the cash-flow of the project. As to strengthening employee training, the personnel management department is offering both short and long training programs on an annual basis, which are based on performance-boosting guidelines. The short training programs are primarily targeted at marketing and administration department personnel, whilst the longer programs are designed for engineering and production department staff; a broad cross section of employees participate in seminars and the training programs provided by international donors in Kenya.

Additionally, HCDA established a subsidiary in 2004; facilities, vehicles and equipment have already been provided and the aim is for this subsidiary to develop the project. At the evaluation, the initial investment of 30 million KS had already been secured and HCDA was awaiting approval from the government.

2.3.6. Recalculation of the Financial Internal Rate of Return (FIRR)

The FIRR at appraisal was 7.9%. FIRR was recalculated using the same assumptions as at the evaluation. The resultant figure was minus due to the limited operational status of individual collection centers. The following assumptions were used for the FIRR calculation.

(Calculation terms)

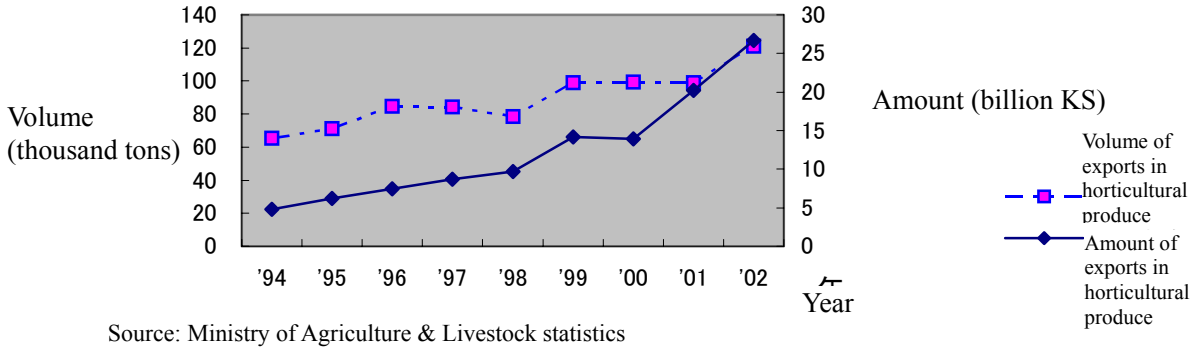
- Project life: 30 years
- Benefits: Tariff revenues
- Costs: Construction costs, operating costs

2.4. Impacts

2.4.1. Promoting Exports of Horticultural Produce (foreign exchange acquisition)

Exports of horticultural produce from Kenya are growing by the year both in terms of volume and amount (see Figure 1), and according to the hearing with ministry of agriculture and livestock representatives, the number of exporters has increased almost five times in eight years, i.e. from 151 in 1995 to 708 in 2003. Since HCDA has only a small share of the market, its direct contribution to export growth is limited; nevertheless, the social survey performed during the field survey and the ex-post monitoring undertaken by JBIC have confirmed that smallholder farmers feel positively towards HCDA regarding its provision of market information and technical guidance, etc., which implicates that it is making an indirect contribution to expanding the production and export of horticultural produce.

Figure 1. Changes in Horticultural Produce Exports

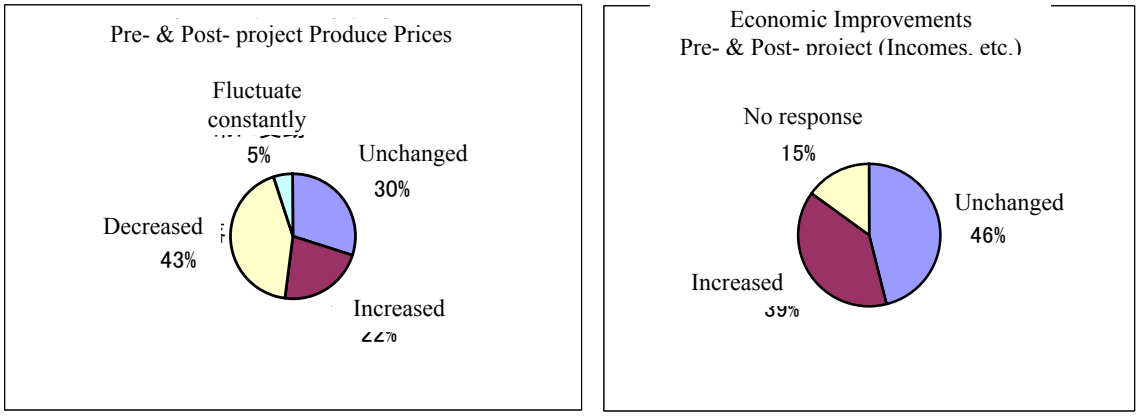


Source: Ministry of Agriculture & Livestock statistics

2.4.2. Promoting Small Horticultural Producers; Raising Labor Absorption Capacity; Increasing Incomes

Firstly, in connection with the promotion of small-scale horticultural producers, the ministry of agriculture and livestock reports that although there are no statistics on farmer's group numbers, it is increasing. As the social survey results in Figure 2 illustrate, incomes have stayed level or increased over the period spanning this project, and given that selling prices are declining due to external factors, it is suggested that the project has had some impact on the earnings of smallholder farmers.

Figure 2: Social Survey Results (selling price of small horticultural producers, verdict on changes in income)



2.4.3. Social Impacts

2.4.3.1 Environmental Impact

Detergent drain from the facilities is currently drained into the soil via natural permeation and since the volume of horticultural produce transactions is limited, there is no evidence of environmental problems such as soil pollution by detergent drainage, etc.

2.4.3.2. Socio-economic Impact

99% of the workers employed by the Nairobi Horticultural Center to sort the quality and size of horticultural produce are female, thus the center is helping to create job opportunities for women. No problems of note have been reported in connection with the land acquisition and involuntary resettlement components of this project.

2.5. Sustainability

2.5.1. Operation and Maintenance System

The production and marketing departments at HCDA are responsible for the O&M of project facilities and equipment, and in accordance with the O&M plan[9], make once or twice monthly tours of inspection to all the collection centers, including those that are not currently being used. The current condition of facilities and equipment was checked via test operations performed during the on-site

[9] The current management plan covers the period from October 2001 through December 2003.

inspections that were made at evaluation, and there are believed to be few technical problems.
Employees have numerous opportunities to receive training, and efforts are being made to boost the skills of every single employee and to improve operational management from an organizational perspective. However, there is currently a lack of communication among employees and departments at HCDA and of having common sense of purpose, and improvements will need to be made in these areas.

2.5.2 Financial Sustainability

A look at the project's cash flow performance (July 2002 – March 2003) since its accounts were segregated from those of HCDA in 2001 reveals massive overspending, with earnings of 4,539 thousand KS against receipts of 33,305 thousand KS (see Table 6). Looking at HCDA as a whole[10], although overspending of the project is being covered by earnings from exporter license fees, the project's cash flow must be improved through efforts to build relationships of trust with farmers and business promotion targeted at exporters.

Table 6: Project Cash Flow (Jul. 2002 – Mar. 2003) (unit: thou. KS)

Item		Amount
Income	1. Horticultural produce handling charges	1,768
	2. Loaning of cold storage / packing bases	511
	3. Loaning of pickup trucks	2,174
	4. Seed sales	—
	5. Chemical fertilizer sales	—
	6. Sapling sales	85
	Total income	4,539
Expenditure	1. Contingency fund	30
	2. Personnel expenses	7,969
	3. Fringe benefits, etc.	839
	4. Administrative expenses	19,576
	5. Horticultural produce handling costs	3,246
	6. Seed, fertilizer, sapling purchasing costs	51
	7. Equipment procurement costs	1,590
	Total Expenditure	33,305
Balance		▲28,766

Source: HCDA

[10] HCDA is an independent corporation and receives no budget allocation from the government; it is thus required to secure its own financial resources.

3. Feedback

3.1. Lessons learned

Nothing specific

3.2. Recommendations

To the executing agency: Continuous efforts must be made to put the recommendations of the JBIC ex-post monitoring survey into action

Despite ongoing capacity-building efforts within HCDA based on the recommendations of the JBIC surveys, issues remain, including shortages of personnel and a lack of inter-departmental communication. For the future, efforts of marketing of the products to the domestic market as well as the export market, to establish good relation with horticultural producers, to establish independent financial resources, and to develop human resources must continue, while exploring the merits of recruiting from the private sector. It is hoped that HCDA will also look into the matter of handing facilities operation over to the private sector as a means of encouraging facilities use.

To JBIC: Continuous follow-up of ex-post monitoring recommendations is essential

This project involves intricate relationships among a variety of factors, including the foreign market situation of agriculture products and participation of farmers in foreign agricultural produce markets, and efforts to ensure that JBIC recommendations are put into action will require long-term commitment. Accordingly, JBIC will need to continue monitoring status in order to ensure that its recommendations are accomplished by the executing agency.

Comparison of Original & Actual Scope

Item	Planned	Original
1. Outputs Pre-cooling facilities (tons/day)	Sagana: 20 tons twice a day Limru: 10 tons twice a day Kibwezi: 15 tons twice a day Nairobi: 10 tons twice a day Total: 110 tons (4 venues)	Sagana: 20 tons Limru: 15 tons Kibwezi: 10 tons Kubu: 10 tons Mwea: 20 tons Yatta: 10 tons Machakos: 10 tons Total: 95 tons (7 venues)
Cold storage facilities (tons/day)	Nairobi: 110 tons Sagana: 20 tons Limru: 10 tons Kibwezi: 15 tons Total: 155 tons (4 venues)	Nairobi: 100 tons Total: 100 tons (1 venue)
Related equipment	Forklift trucks Weighing scales Refrigerator trucks (4-ton × 3) Management-use vehicles (2), etc.	8.5-ton refrigerator trucks × 17[11] 3-ton dry van truck × 27 Pickup vehicles × 7 Motorbikes × 7 Four-wheeled vehicle × 1Total: 8 vehicles Crates / carts for crate movement
Consulting services	124M/M	82M/M
2. Project period	L/A conclusion: Oct. 1993 Consultant selection: Dec. 1993 Contractor selection: Feb. 1995 Equipment procurement: Mar. 1995 – Jun. 1996 Consulting services: Jan. 1994 – Dec. 1996	L/A conclusion: Oct. 1993 Consultant selection: Dec. 1994 Contractor selection: Jul. 1999 Equipment procurement: Aug. 1999 – Mar. 2001 Consulting services: Dec. 1994 – Jul. 2001
3. Project cost Foreign currency Local currency Total ODA loan portion Exchange rate	 1,491 million yen (877 million KSH) 881 million yen (518 million KSH) 2,372 million yen (1,395 million KSH) 2,016 million yen (1,185 million KSH) 1ksh (Kenyan shilling) = 1.7 yen	 2,016 million yen (1,134 million KSH) 2,404 million yen (1,353 million KSH) 4,420 million yen (2,487 million KSH) 2,016 million yen (1,134 million KSH) 1 KSH = approx. 1.78 yen* (*IFS-based simple average for period)

[11] One for each of the 7 pickup points; all other trucks were deployed at the Nairobi Horticultural Center.

Third Party Evaluator's Opinion on
Horticultural Produce Handling Facilities Project in Kenya

Dr. John Moturi Omiti
Senior Research Fellow
Institute of Policy Analysis and Research

Relevance

No horticultural sector policy has existed in Kenya despite being famous as one of the leading horticultural exporters in the world. The horticultural business continues to be a private-sector-led initiative with minimum government intervention or support. With innovativeness and efficiency, the private sector has vertically integrated, established cold storage facilities similar to those of HCDA, continues to obtain export markets on their own and has formulated its own code of practice (COP) - an industry governance tool- under which certified international food quality bodies audit them annually and award them either gold or silver quality marks that are recognized internationally. To give Government more teeth in the industry, it simply converted the industry COP into an industry Bill (2001) that was rejected by the industry stakeholders and is still shelved. The industry private sector, unfortunately views, the HCDA project as a competitor and not a facilitator. Although the project is still relevant, the small-scale farmer's entry and continued stay in the export market has become even more unattainable as the quality standards have been made more stricter due to quality consciousness. The smallholder should now aim at the latent domestic market that is still undiscriminating in terms of quality. Public policy support should aim at this market niche as they get prepared to meet the international quality standards.

Effectiveness

Three years after completion, the project is not financially attractive as its financial internal rate of return (FIRR) is negative. Due to poor cash flow, it has already defaulted in the servicing of the loan that was due in July 2004. Project capacity utilization is less than 3% mainly because (i) it cannot meet the competition from the private sector that offers perceived superior services; (ii) HPC is inconveniently situated outside cargo terminal center; (iii) lack of business trust by small holder producers; (iv) poor management as well as lack of an organization with mandate and (v) technical expertise to manage the project along strict business norms. The 6-year project delay saw over 15 large scale exporters construct similar facilities within the convenient cargo terminal area whose services are perceived to be superior to HCDA. They outsource and train out-grower farmers who have trust in them, virtues HCDA does not possess. The EU market that imports 80% of horticultural exports from Kenya has introduced directive EU/78/2000 that will unfortunately exclude small producers unless they comply with the traceability criteria that is rather difficult to attain by the majority of the small-scale farmers in the short run. So far, only 86 farmer groups (production units) have been contracted, trained and applied for certification under the 78/2000 EU criteria to pass produce via HPC, a negligible portion of the smallholder producers. The options of making the project more effective include immediate setting up of a business oriented firm with technical expertise, and financial muscle to run the project along business norms, organize farmers into product quality audited and certified production units of 100 farmers each with a contracted market and passing the produce through HPC. Secondly is to contract the O&M of the system facilities to private firms.