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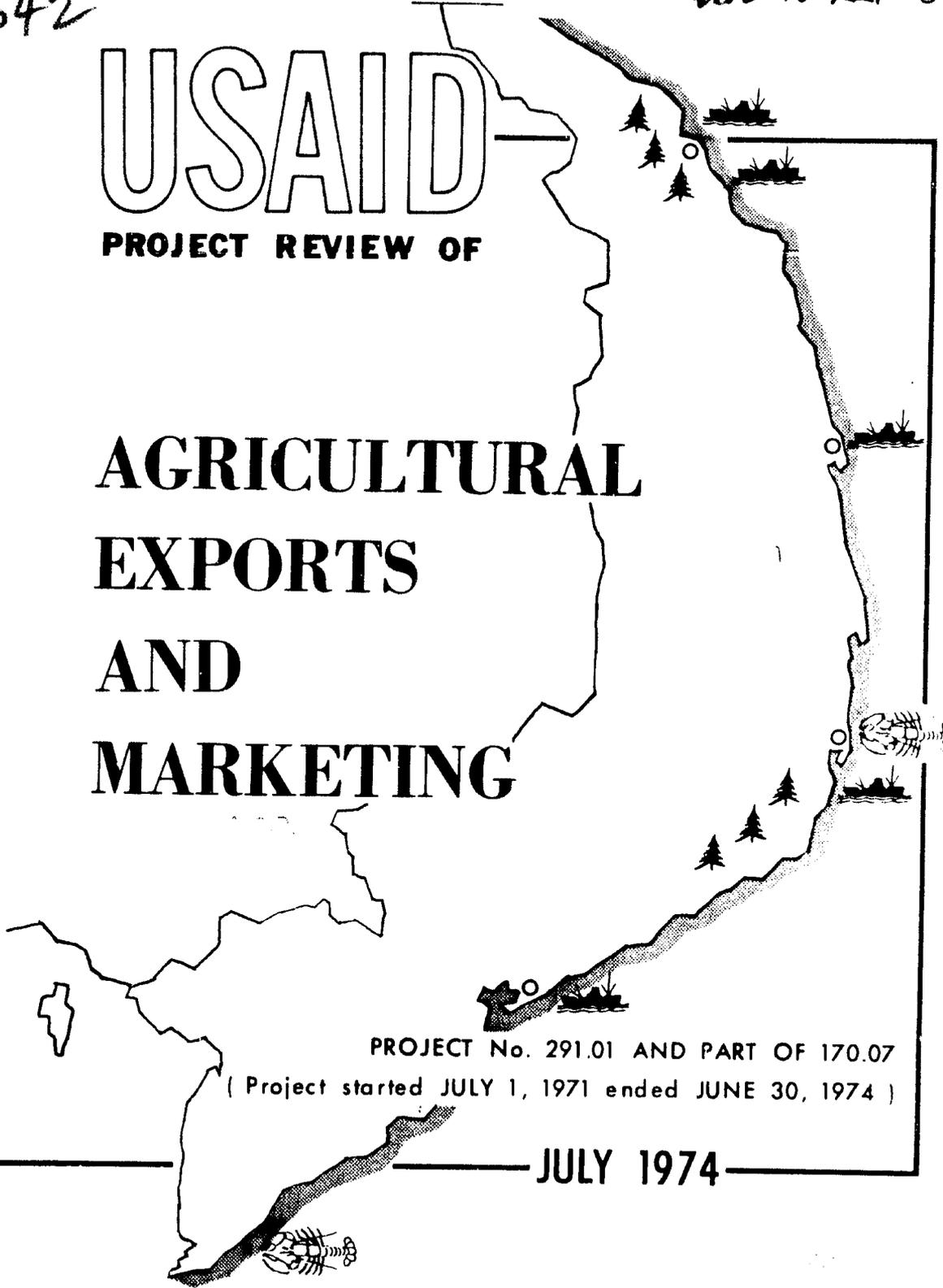
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USAID

PROJECT REVIEW OF

AGRICULTURAL EXPORTS AND MARKETING



PROJECT No. 291.01 AND PART OF 170.07
(Project started JULY 1, 1971 ended JUNE 30, 1974)

JULY 1974

United States Agency
for
International Development

PROJECT REVIEW
OF
AGRICULTURAL EXPORTS
AND
MARKETING

(Project No. 291.01 and Part of 170.07)

Office of Food and Agriculture
U.S. Agency for International Development
Saigon

July 1974

PROJECT REVIEW

Project Number 291.01 AGRICULTURAL EXPORTS AND MARKETING

This project initiated July 1, 1971,
was terminated June 30, 1974.

Project Number 170.07 EXPORT EXPANSION

The parts of this project which
included the investigation of
development of Forestry and Fisheries
for exports under PASA SA/VN (AJ) 01-73
were terminated June 30, 1974.

Work on the Fishery and Forestry
part of this project which was
transferred to ADFA July 1, 1973,
continues under Projects 170.05
and 170.06.

S. A. Robert, Jr.
R. H. Pollock

June 13, 1974

TABLE OF CONTENTS

	Page
PROJECT SUMMARY	1
EXPORT DEVELOPMENT	1
PROJECT OVERVIEW	4
SECTOR GOAL	4
STATEMENT OF PURPOSE	4
BACKGROUND AND HISTORY	4
ACCOMPLISHMENTS	7
Agricultural Export Development	8
Crops	9
Fishery and Forestry Products	11
Banana Exports--Special Case	13
Foreign Trade Officers Course	17
Import Substitution	18
Improvement in Domestic Marketing	21
Investigations & Recommendations for Action	22
GOALS NOT MET AND REASONS	24
Exports	25
Import Substitution	26
Domestic Marketing	27

LESSONS LEARNED THAT MAY GIVE FUTURE GUIDANCE TO EXPORT AND MARKET DEVELOPMENT	28
OTHER DONOR ASSISTANCE	29
FUTURE PROSPECTS FOR EXPORT DEVELOPMENT	30
APPENDIX A - Export Opportunities for Vietnam Agricultural Products By Niernberger, McArthur, Bollenback, Hoofnagle	
APPENDIX B - Demand and Supply Potentials for South Vietnam's Fishery Industry By L. Steele, C. Lampe, D. Niehaus, S. Hoofnagle	
APPENDIX C - Timber Development in the Republic of Vietnam	
APPENDIX D - Outline of the Report on the January 1973 Trip to Observe the Banana Production and Exportation of the Philippines	
APPENDIX E - Framework Outline for Training Vietnamese Foreign Trade Officers By J. Nesius	
APPENDIX F - Import Substitution - A Summary of Recommended Actions By M. Cantor Associates	

PROJECT SUMMARY

This review covers work under these projects in FY 1972 through FY 1974. Work accomplished in Agri-Business and Input fields are not included as this work is on-going in project 314 "crop production." The work reported on is Agricultural Exports and Marketing.

Expenditure under these projects has amounted to almost \$850,000 including about 100 man months personnel, \$390,000 PASA investigations by ERS and one contract for \$50,000. There are three Participants currently studying in the U.S. for Masters Degrees and 25 GVN officials have worked on overseas investigations under the project.

The main thrust of these projects has been to facilitate improvement in the GVN foreign exchange balance. Efforts were directed toward:

- export development
- import substitution
- improvement in domestic marketing.

Work included:

- appraisal of opportunities in each of the areas above
- assistance to institutions involved in these activities
- training of personnel.

EXPORT DEVELOPMENT

Joint teams (US and GVN) investigated export opportunities for crops, livestock, and forestry and fishery products in a number of foreign markets. The capacity to produce for export was appraised along with facilities to market and process for export. Recommendation to the GVN and private sector have been made for each product line.

Forest products appear to have the greatest immediate potential for expansion of foreign trade. Good markets at profitable prices are available for Vietnam's timber species. A processing industry needs to be developed and GVN policies clarified. Under reasonable policies and plans up to \$US 100 million per year of timber products could be exported to East Asian markets. Longer range prospects indicate potential exports of up to \$US 500 million per year, with optimum management of forest resources.

Fishery development in Vietnam also offers promise for export expansion. Singapore and Japan offer profitable markets for about 16 species of fish and shell fish from Vietnam. Estimates of resource available and potential catch indicate that \$US 50 million per year in exports could reasonably be attained. Improved fishing methods, some improved gear, and processing would be necessary. GVN policies need improvement to attain catch levels which would provide export expansion.

With expansion of production a number of products processed from crops grown in Vietnam could enter international markets. Processing facilities need some improvement and training is needed in food technology. Immediate opportunities exist for the export of manioc starch, monosodium glutamate, papian, vegetables in brine, fruit purees, castor beans, and coffee. Other products have opportunity for development over a longer period of time.

Import Substitution. Short run opportunities for production and processing for import substitution can save up to \$US 25 million in foreign exchange. About 20 percent of Vietnam's food is currently imported. Opportunities exist in manioc starch, monosodium glutamate, yeast, infant foods, and dairy product substitutes. Training in basic food technology is necessary.

Bananas. Japan provides a large market for bananas. The market was investigated and production and marketing was observed in Taiwan and the Philippines. It was concluded that Vietnam should only try to enter a joint venture. Standard Fruit Company indicated interest in investigating the opportunity. The investigation was not made because of security problems which have existed since April 1972.

Domestic Marketing. A number of studies were undertaken and recommendations made in regard to improvement in the handling and storage of rice and paddy. Further recommendations were made on price policy and paddy and rice purchase. Market analysis of sorghum, pork, and edible oil were undertaken. A number of seminars and workshops were conducted with private sector and GVN participation.

Most of the work conducted under these projects has been documented in publications by USAID or USDA/ERS. These publications are noted in the text.

PROJECT OVERVIEW

SECTOR GOAL

To increase the efficiency of production and distribution of agricultural products; increase and equitably distribute farm income; provide an adequate diet for the people of Vietnam at reasonable costs; achieve surplus production of commodities with favorable economic advantage; and expand exports of agricultural commodities and of products derived from agricultural commodities.

STATEMENT OF PURPOSE

The project purpose is to develop viable and effective agricultural marketing and export institutions, marketing and export services, and the necessary infrastructure to meet current and projected marketing needs of Vietnam's agricultural production.

BACKGROUND AND HISTORY

Historically South Vietnam's economy has been based on agriculture. Until the big increase in war related activities about 15 years ago almost 80 percent of the population lived in rural areas. Current estimates of the rural population range around 60 percent. Traditionally, the major exports from Vietnam have been agricultural products, with rice and rubber being the two most important. Over the last several years, agricultural products have accounted for more than 80 percent of all exports.

The Government of South Vietnam (GVN) has a strongly stated national policy favoring economic development. A statement of economic reform measures

proclaimed November 15, 1971, directs all Government agencies to work toward economic development. The investment Law of 1972 created a favorable climate for foreign and local investment in economic expansion. It provided among other things, tax benefits, import privileges, repatriation rights on earnings, and assured the cooperation of Government agencies.

The name of the Agri-Business Project 291.01 was changed to Agricultural Marketing at the beginning of Fiscal Year 1972. Emphasis continued to be placed primarily on work related to the marketing and processing of agricultural inputs. During the fall of 1971 two marketing positions were filled in the Agricultural Economics project 363.01. One employee was assigned to work on rice and oilseeds and the other on other agricultural products, particularly fruits, vegetables, and livestock products. Later during the year the emphasis of the latter position was shifted to export expansion activity.

At the beginning of FY 1973, the marketing activity in Agricultural Economics, projects 363.01 and 291.01 were combined and given the title Agricultural Exports and Marketing. The Support and Agricultural Economics Divisions had been combined in April 1972. During this period a Livestock Marketing position was added for about eight months and an Agricultural Export Advisor for about four months. The livestock position was transferred to the Production Division and the Export Advisor resigned in February 1973. In May 1973 the position was filled with the assignment of Dr. Pollock. Another rice marketing advisor in Can Tho was assigned in late FY 1972 to work with the advisor located in Saigon. Both rice marketing advisors were transferred in August 1973 and the positions were eliminated.

Activity in rice marketing was concentrated on the development of a series of suggested policies for the GVN and the recommendation for development

in storage and milling. The remainder of the activity was concerned with the appraisal of export opportunities for agricultural products.

For the next several years, agriculture will be source of most GVN exports. In addition, many industrial enterprises need to be developed utilizing agricultural products as raw materials.

The sound future development of Vietnamese agriculture requires careful attention to the following three important marketing considerations:

- The development of exports from the agricultural sector.
- Import substitution. Locally produced products need to be used to replace imports, when this can be done without building enterprises based on high protection and uneconomic production.
- Improvement in domestic marketing systems to improve efficiency, reduce costs, and provide services required to effectively handle the expected and needed increase in agricultural production.

A PROP was prepared for this project, approved, and submitted to Washington May 8, 1973. The results of a Washington review have not been received. Early in FY 1974 it was decided to terminate the project on June 30, 1974.

Expenditures under this project for FY 1972 through 1974 were as follows:

ESTIMATED PROJECT EXPENDITURES FY 72-74

<u>PERSONNEL</u>		<u>\$US</u>
Direct Hire	25mm	72,000
PASA	71mm	<u>279,600</u>
	SUB-TOTAL	351,600
 <u>PASA INVESTIGATIONS (ERS/GVN)</u>		
Crops & Livestock Products		157,000
Fishery & Forestry Products		233,500
 <u>CONTRACT</u>		
Import Substitution		50,490
<u>PARTICIPANTS</u> - Three Masters		
Degrees (continuing)		16,000
 <u>COMMODITIES</u>		

<u>OTHER COSTS</u> (Invitational Travel)		<u>40,000</u>
	ESTIMATED TOTAL	848,590

ACCOMPLISHMENTS

Although total exports have increased steadily from US\$ 12 million in CY 1971 to US\$ 24 million in CY 1972 and US\$ 60 million in CY 1973, the impact of this project has not been as important as it could have been. The 1972 Easter offensive followed by continued military activity after the January 1973 "ceasefire" has restricted opportunities for expanded production. A specific example is the inability to bring Standard Fruit

Company representatives to Vietnam to investigate development of bananas for export.

Course of Action. The PROP indicates the "Course of Action" to be followed on this project. The discussion of accomplishments follows the plan presented below:

This project is designed to improve the GVN foreign exchange balance and to improve the domestic marketing of agricultural products. It is planned to accomplish this through:

- (1) export development,
- (2) import substitution, and
- (3) improvement of domestic marketing activity.

These three interrelated phases of the project are dependent on: (a) the effective organization of production including the adoption of appropriate varieties, (b) the use of adequate production and processing inputs, (c) the development of appropriate marketing facilities for handling, packaging and storage, (d) the availability of improved transportation facilities, (e) the ability to furnish high quality standardized products, and (f) a comprehensive understanding of local and foreign market conditions and requirements.

Agricultural Export Development

Successful expansion of agricultural exports will require the: (1) identification of market opportunities in foreign markets, (2) production of adequate quantities of products identical to the opportunity identified, and (3) provision of the incentives and infrastructure that will permit, and enable export to happen.

The steps planned under this project are as follows:

- (1) Select in order of priority products and

target markets. This involves definite quality specifications and reasons for exploiting the market opportunity.

Crops. Work under this objective has been completed. Market opportunity investigations have been completed in Singapore, Japan, United States, France, and Germany. These were selected as representative markets that would indicate the kinds of Vietnamese products that might be able to enter world markets. These investigations were undertaken by joint teams from USDA/ERS under a PASA and GVN personnel from eight different Directorates in the Ministry of Agriculture and Ministry of Trade and Industry plus the Agricultural Development Bank. The results of each of these investigations has been published either by the Mission or the ERS. The publications are as follows:

- | | |
|---------------|--|
| December 1972 | Sang, Ho Quang and four others, <u>Singapore's Agricultural Import Market</u> , USAID/ADFA in cooperation with EDC, MALD and USDA/ERS. |
| October 1973 | Frye, Robert E. and nine others, <u>Export Opportunities for Agricultural Products in Japan</u> , USDA/ERS and VN MALD, USDA FDD Field Report 36. |
| October 1973 | Linstrom, Harold R. and five others, <u>Export Opportunities for Vietnam Agricultural Products in the United States</u> , USDA/ERS and VN MALD, USDA FDD Field Report 37. |
| April 1974 | Linstrom, Harold R. ; Duymovic, Andrew and eight others, <u>Export Opportunities for Vietnam Agricultural Products in Selected European Markets: France, Germany and the Netherlands</u> , USDA/ERS and VN MALD, USDA FDD Field Report 44. |

Another team under this PASA investigated the production potentials to supply the demand indicated in the foreign studies. In addition they appraised available facilities for processing and marketing these products. A brief summary of the report is attached as Appendix A. The final complete report is in process. The main opportunities are as follows:

MANIOC -- For manufacture into starch and also further processing into monosodium glutamate (MSG). The market for starch is primarily in Japan while the MSG market would be U.S. with a number of other markets possible. Consumption is high in all of Eastern Asia and exports have been restricted from Japan and Taiwan because of supplies.

VEGETABLES IN BRINE--Cucumbers, scallions, eggplant, ginger and other vegetables packed in bulk for further packaging and processing have a market in Japan. There are some small contracts shipping now and two plants have been built to tap this market. This is a direct outgrowth of work on this project in Japan.

FRUIT PUREES--There is a demand for exotic fruit purees to be remanufactured into juice drinks in the United States and Western Europe. These would be packaged in bulk for remanufacture in the consuming markets. The most likely fruits are mango, papaya, pineapple, and guava.

CASTOR BEAN--The Japanese market is desirous of expanding purchases of castor beans from Vietnam. The market for oil might exist in the United States but the price fluctuates greatly from year to year creating a questionable profit picture.

COFFEE--There is a market opportunity for Vietnamese coffee in East Asian countries. The quality and methods of handling must be improved in order to tap these markets. This would be an expansion of current exports.

PAPAIN--This product is derived from a part of the papaya tree, and is an enzyme used in meat tenderizers. A market for up to 100,000 pounds exists in the United States and in Western Europe.

✓ Canned fruits and vegetables, fresh fruits and vegetables, and spices were investigated intensively. At the present time there does not appear to be a viable and profitable export market for these products. In all of the investigations the problems of production of the correct varieties of the right quality and maturity came strongly to the fore. In all cases the teams reported that in order to successfully enter an export market a product must (1) be at least equal in quality to the competition, preferably better, (2) that regular and timely delivered supplies must be available in quantities wanted by the buyer and (3) the price must be no higher than competition, preferably a little lower to begin with.

Recommendations to capitalize on these opportunities are being prepared. An appraisal of necessary facilities to accomplish export of these products is being completed.

Fishery and Forestry Products. After the PASA was developed with USDA/ERS to appraise market opportunity for export of crop and livestock products, ADCCA decided to undertake a similar investigation of forestry and fishery products. We assisted in the development of the PASA and then the work on the two studies was transferred to ADFA and our supervision July 1, 1973.

Fishery Products. Work under this objective for Fishery and Forestry products has been completed. On fishery products two reports have been published "Demand for Selected Vietnam Fish Products in Singapore" and "Export Opportunities for Selected Vietnam Fish Products in Japan". The results of the resource appraisal and facility analysis to accomplish export have been presented to the GVN and the Mission and the report "Demand and Supply Potentials for South Vietnam Fishery Industry" is in draft form.

The market potential is sizable in both Singapore and Japan for selected species of fish and shell fish. The supply is believed adequate, under

improved fishing procedures, to supply at least US\$ 50 million in exports annually. A summary of these findings is attached as Appendix B.

Forestry Products. The forestry export market opportunity investigations indicate that Vietnam is in a unique position to capitalize on one of its major natural resources, timber. Vietnam has an excellent combination of land and climate which provides optimum growth conditions for timber and indigenous species are desired by world markets especially Japan and Taiwan. The market situation is excellent for the expansion of exports. Adequate planning and GVN decisions are required to maximize the returns from this resource. Improved forestry practices are necessary if these resources are to yield their maximum in generating foreign exchange. Security is a problem as well as "hidden" taxes which increase the cost of marketing the product harvested. With improved forestry practices this resource could contribute immediately up to US\$ 100 million in exports and increase to about US\$ 50 million in a few years. Large increases in employment of up to 300,000 to 400,000 people would come from the effective exploitation of these resources.

Market analysis of opportunities for export are published in "Export Opportunities for Vietnam Timber Products in Japan, Korea, Taiwan and Singapore" Hutchison, Gillespie, Schumann and Lam, USDA FDO Report 42, February 1974. Development opportunities are described in "Timber Development Opportunities in the Republic of Vietnam," Hutchison, Schumann and Evans, February 15, 1974, in draft. A summary of the opportunities in forest export development is attached as Appendix C.

Again from the PROP

"(2) Develop marketing plans and assist in making contacts between exporters and importers of agricultural products."

The Forestry and Fishery staff have been following through on these contacts in their

respective areas and the Export and Marketing staff has turned requests for assistance over to them. The investigative staff has been of considerable assistance in suggesting contacts in importing markets that have been uncovered during their work in the various countries.

In the area of crop and livestock products, the staff has worked closely with the Export Development Center and the various parts of the Ministries of Agriculture and Trade and Industry in suggesting contacts for export opportunities. Work with the private sector in Vietnam has developed contacts with various interested people to develop export opportunities. The investigative personnel has been in contact with these people and has arranged, contacts with importers in several countries. The contacts made by the Vietnamese while in other countries have led to the development of export opportunities. For example, the team, while in Japan, learned of an opportunity to sell vegetables in brine to the Japanese market. Contacts were made and two plants are now in operation under contract to sell this product to Japanese importers.

Banana Exports--Special Case

In February 1972 a small banana importer from Japan came to Vietnam to try to arrange sources of bananas to supplement those coming from Taiwan. The independent importers in Japan handle all of the bananas from Taiwan and compete with United Fruit, Standard Fruit, and Del Monte with their trading company affiliates who handle bananas from South America and more recently from the Philippines. Little or no knowledge was available in Vietnam on acceptable varieties or production and marketing practices necessary to enter the Japanese market.

In order to determine what was necessary to produce and market export bananas, a series of observation tours was planned with Vietnamese

participation. A USAID representative observed the production and marketing of bananas in Taiwan. An attempt was made to have a joint GVN/USAID team make this observation but the request was refused. A joint team did make a survey of the marketing of bananas in Japan in May 1972, and while there made contact with a representative of Standard Fruit Company. Later, in October 1972, an additional contact was made in Japan with the Standard Fruit representatives and the President of Castle and Cooke, the parent company.

As a result of the appraisal of the Japanese banana market the team recommended that the only way that Vietnam should try to enter the market would be in a joint venture with a large banana production and marketing concern either from Europe or the United States. United Fruit indicated no interest when contacted. Standard Fruit did indicate interest and invited a joint GVN/USAID team to visit their operations in the Philippines in January 1973. A comprehensive report of this trip was prepared by the Vietnamese members of the team and was translated into English (attached as Appendix D). The original recommendation not to try to enter export markets without joint venture was confirmed and detailed information on production practices and marketing methods was documented.

Standard Fruit indicated an interest in looking at opportunities in Vietnam to diversify their Southeast Asian operations. Considerable information on soils, climate, investment opportunity, taxation and highway and port facilities was supplied to them. Their team was prepared to come to Vietnam to begin investigations. However, security of most of the areas suggested for development broke down in the summer and fall of 1972 and is still questionable. For this reason no contact with their team has been made since May 1973.

Plans were prepared to implement a banana development program and a draft PROP prepared to

provide assistance needed for training and facility development. This was never submitted for approval.

From the PROP:

"(3) Help plan, organize and implement required production."

One of the major constraints to development of exports from the crops area is the lack of coordination of production. The knowledge of logistics planning for production to supply processing or other markets is almost totally unavailable in Vietnam. The need to provide supplies over a long period of production and to supply this at times when processing can take place is a real planning problem. Any processing facility must schedule its supplies over a long enough period of time to allow it to have raw materials to operate efficiently. A country such as Vietnam has the natural conditions and capacity to grow raw materials over a long growing season. The only limiting factor is water, which in many areas can be provided by either surface or sub-surface irrigation. With water supplied, the raw material for agricultural products processing can be supplied 12 months of the year. This fact could be one of the strong points in the development of export of crops from Vietnam.

Under current circumstances it has become apparent that almost any production for export must be developed outside the existing domestic production and marketing system. This is necessary to assure adequate supplies for processing and to insure against the high costs that are developed in handling products for the domestic market. Numerous middlemen and agents participate in handling products for the local markets that add excess charges which are necessary to get products to the local markets through the complex marketing system. This excess cost cannot be tolerated if products are to compete in export

trade. Examples of this system can be cited for Fishery, Forestry, and Crop and Livestock products.

The staff and a number of PASA TDY personnel have been working with entrepreneurs in the private sector in trying to resolve problems in supply of raw materials. In some cases the private sector has been unreceptive to ideas for trying to cope with the problems, notably in oilseeds. In other cases the understanding of the problems has led processors to develop core production of raw materials and to convince nearby farmers to provide additional raw materials, particularly manioc for starch and vegetables in brine for supply to Japan.

From the PROP:

"(4) Train GVN and private sector personnel to appraise and report on market conditions for farm products, both in domestic and foreign markets."

Late in FY 1972 a PASA was developed with USDA/ERS to appraise export opportunities for agricultural products in several foreign markets. The PASA was also to investigate the opportunities for supplying these markets and to recommend and estimate costs of needed facilities to enable products to be exported. A similar PASA was executed at the same time to conduct investigation on Fishery and Forestry products. The Fishery and Forestry PASA was initially associated with ADCCA but was transferred to ADFA on July 1, 1973.

Twenty-one Vietnamese on 28 separate assignments have participated in appraisal of export opportunities in foreign countries. These people have seen that to enter export markets it is necessary to provide products of quality equal to those found in the markets,

at prices that are equal to or under those being offered, and in quantities and supply desired by the importing market. In addition they have learned some of the barriers that must be overcome in placing products in international trade. They have been exposed to some of the requirements to enter trade in the foreign markets and the regulations with which they must comply. The grades and standards that must be met will in the future be reflected in the grades required for domestic marketing and influence the development of necessary domestic standards.

Foreign Trade Officers Course

A Foreign Trade Officers course has been approved by the GVN and the Mission. The GVN budget for this course has recently been approved and Mission funding is available. This USAID activity is being undertaken through a PASA with the USDA/ERS/FAS. It will provide a one year combination classroom and job training experience with additional on job experience in a Vietnamese Embassy plus work in an Agricultural Attache's Office in an overseas post. These trainees will be employees of the Ministry of Trade and Industry and will be assigned to the Ministry of Foreign Affairs for the overseas posts. After training the officers will be assigned overseas and will assist in developing exports as Trade Officers in the Embassies. An outline for the course is attached as Appendix E.

Three Masters Degree candidates are currently in the United States studying Agricultural Marketing, one at Mississippi State, another at the University of Florida, and one at the University of West Virginia. These all began study supported by the FY 1973 budget. The participant program which was planned for FY 1974 was cancelled. A contract under this project to identify import substitution opportunities was carried out by Sidney M. Cantor Associates with FY 1973 funding.

*Last graded 4/30/74
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A PASA was developed using FY 1973 funds to provide seminars on domestic marketing of fruits and vegetables, poultry products, and pork. This was cancelled early in FY 1974.

From the PROP:

"(7) Recommend to GVN, policies on taxation, investment, credit, infrastructure development, prices and wages that will facilitate expansion of exports."

In regular consultation with the GVN the staff counsels with counterparts and others in the development of policies and decisions in these areas. The staff also works with the USAID advisors in fishery, forestry, and crops in developing and implementing these policies.

Import Substitution

Foreign exchange balances can be improved through reduced importation. Substitution can be done about through: (1) increased local production of presently imported products, such as vegetable oils, sugar and kenaf; or (2) the development of substitutes for products currently being imported; (care must be taken not to select and promote import substitutes that are likely to become overly protected and inefficient businesses) and (3) planned reduction in consumption of imported items not considered necessities.

Steps planned to assist in expanded import substitution are:

(1) Select target products, taking into consideration the economics of local production of imported products and local product development opportunities using modern processing technology.

(2) Appraise the economic feasibility of product opportunities selected.

(3) Suggest GVN policies for duties, taxes, credit, and investment that will promote production of substitutes.

Work under these steps has been completed and a report is in draft form. An oral report has been made to GVN and Mission staff but additional work is necessary to relate this to private sector activities. The basic work on import substitution has been carried out under a contract with Sidney M. Cantor Associates. Cantor's report identifies opportunities in a number of areas and makes recommendations to reduce imports. The products and the amount of imports that would be affected in the short run are as follow:

SUGGESTED REDUCTIONS IN FOOD IMPORTS
AND SAVINGS TO BE ACHIEVED

<u>Classifications</u>	<u>Savings U.S. \$ Millions</u>	<u>Proposed * First Phase Reduction %</u>	<u>Savings U.S. \$ Millions</u>
Sugar & Sugar Products	60.1	10	6.0
Wheat	19.3	15	3.0
Dairy products	18.2	25	4.5
Infant Dietary	2.0	100	2.0
Edible Oils	2.7	100	2.7
Animal Feed	<u>9.3</u>	33	<u>3.1</u>
TOTALS	111.5		21.3

* First Phase to be accomplished in one year.

Recommendations made for import substitutions by Cantor include:

1. Development of a starch industry based on Manioc as the source of raw material.
2. Investigate possibility of production of monosodium glutamate (MSG) and bakers yeast using starch as the basic fermentation medium.
3. Restrict then prohibit importation of infant foods to force internal development of replacements.
4. Reduce wheat imports by extending flour with manioc flour.
5. Reduce and then eliminate edible oil imports. Tax adjustments would be necessary thus allowing development of the domestic industry.
6. Emphasize artisan production of products such as sugar, edible oil, fish meal to reduce imports of these products.
7. Assist in formulation of sweetened condensed milk from domestic sources to reduce the import of milk products.
8. Place emphasis on the development of sweetened soy beverages on a commercial scale for domestic consumption.
9. Provide technical assistance to a number of food industries to help attain the above recommendations and to improve the quality of food processing.
10. Provide incentives for Vietnamese to become entrepreneurs in the food industry.
11. Establish an in-country training program in basic food technology.

12. Establish a clearing house for technical information on food and nutrition.

13. Organize a plan and an organization with responsibility for following up on the many recommendations made in various studies of food and agriculture in Vietnam.

A summary of recommended action in import substitution is attached as Appendix F.

Improvement in Domestic Marketing

Any expansion of agricultural exports in the near future must come largely from production developed specifically for this purpose outside the current domestic marketing system. Subsequently, larger scale expansion can come only when domestic demand is more nearly satisfied through increased production of basic commodities. One way effective production increases can be attained is through reduction in the loss and spoilage in the domestic marketing system.

The adoption of improved varieties and production practices for export products will also beneficially affect those offered for domestic sale. The improvement of facilities, packaging, and transportation for export products will carry over to those products marketed internally. Likewise, improvements in domestic marketing will benefit the handling and quality development of products for export.

Improvements in the marketing of agricultural products are necessary to deliver the larger quantities required by urban consumers. The facilities for handling, storage, and transportation are generally inadequate to handle products necessary to feed expanding urban populations.

This project is designed to improve domestic marketing systems for rice, feedgrains, oilseeds, fruits, vegetables, and livestock and livestock products.

Investigations and Recommendations for Action

1. Paddy purchase, storage, milling and transportation studied and recommendation made to the Ministry of Agriculture and Ministry of Trade and Industry.

Report: Owens, Carpenter and Clark: "A Proposal to Improve Paddy and Rice Marketing in South Vietnam" dated USAID Saigon, October 1972.

2. A study of grain sorghum storage and processing was completed and a demonstration drying and storage facility set up in one production area.

3. Six participants from the Ministry of Trade and Industry made an observation tour of rice and feed grain handling and storage in Taiwan and Thailand during July and August 1973. Two Masters degree candidates are now in the United States studying grain marketing and storage.

4. A number of investigations of possible paddy pricing policies along with approaches to improved drying and storage were made in FY 72 and 73. These have been made to assist the National Food Agency in arriving at improved policies to increase shipments of paddy from surplus areas.

5. Recommendations and a report of feasibility study of a rice and flour mill complex at Da Nang have been completed. Assistance in attempts at implementation has been given. The executive summary of this report was translated into Vietnamese.

Report: Owens and Carpenter "A Rice Milling, Flour Milling, Grain Silo Storage Complex for Da Nang - GVN" USAID Saigon, July 1973.

Differences over policy toward export activity in the USAID Mission created a less than favorable attitude for cooperation. This created some inefficiency in export development work. An example was the duplication necessary for ERS working with ADFA and ADCCA before Fishery and Forestry returned to ADFA July 1, 1973.

Adequate personnel has not been assigned to this effort. Several times staff plans were developed and each time delays were encountered and no personnel were added.

Early in FY 1974 it was decided to terminate the project as of June 30, 1974. At the same time it was decided to try to bring all of the activities which were already underway to an orderly conclusion on that date. This included implementation of the Foreign Trade Officer training program for which a competent training course director has been recruited. The personnel assigned to export development and marketing work were given new assignments in addition to the conclusion of the activities. The two positions in Rice Marketing were eliminated when the personnel departed in August 1973.

Exports

Additional steps needed to accomplish goals listed in PROP were:

1. Develop marketing plans and assist in making contacts between exporters and importers of agricultural products.
2. Help plan, organize, and implement required production.
3. Train GVN and private sector personnel to appraise and report on market conditions for farm products, both in domestic and foreign markets.

4. Organize the presentation and promotion of agricultural products in trade fairs or missions in target markets.
5. Develop and carry out promotion plans for expanding sale of Vietnam agricultural products in selected foreign markets.
6. Recommend to GVN, policies on taxation, investment, credit, infrastructure development, prices and wages that will facilitate the expansion of agricultural exports.
7. Recommend policies to GVN on the control and use of foreign exchange earnings that will foster further economic development.

Some beginning was made on a number of these steps but generally the progression from one step to another was not followed. Some work has been accomplished in the training of GVN and private sector but only a start was made. Some contacts were made between importers and exporters but the real push of this activity should be just starting. Some beginning has been made in working on policies and control of foreign exchange earnings but again these were to have started in later stages of the project.

Import Substitution

For reasons stated above under "export" the following steps were either only started or were not approached as they would have been undertaken in later stages of the project.

1. Appraise the economic feasibility of product opportunities selected.
2. Help plan, organize and carry out production providing the necessary engineering, food technology and processing techniques.

3. Suggest GVN policies for duties, taxes, credit, and investment that will promote production of substitutes.

4. Determine the need for and develop necessary marketing facilities and infrastructure.

Domestic Marketing

The steps that were to be followed in improving domestic agricultural marketing were as follows:

1. Seminars and institutes that demonstrate improved methods of procurement, handling, packaging and processing.
2. The appraisal and design of more modern facilities to handle products and protect quality.
3. The development of meaningful grades to facilitate trade.
4. The provision of accurate and timely market news reporting for major products.
5. Technical assistance for improving food processing including facility engineering, food technology and marketing.
6. Training GVN and private sector personnel through academic courses and the observation of improved marketing activities in the United States and third countries.
7. Recommending pertinent GVN policies that will help facilitate improvements in the domestic marketing system.

As detailed before a number of accomplishments have been achieved in several of these steps. On the other hand no real in depth approach has been made to solving the problem addressed in number 2, 3, and 5.

LESSONS LEARNED THAT MAY GIVE FUTURE GUIDANCE
TO EXPORT AND MARKET DEVELOPMENT

1. More work was laid out under PIO/T's in FY 1972 and 1973 than could be accomplished with personnel available at the Mission to supervise and carry out the work. Additional personnel was expected but the project expansion did not materialize.
2. Time and personnel have not been available to work as intensively as desirable on the implementation phases of the project. Many of these recommendations would require technical personnel which was planned in the original PROP.
3. Technical personnel should be made available to work with food processors to plan and develop processes for export and import substitution products. The personnel should be generally acquainted with a number of food processing businesses. They should be able to call on short-term specialists for specific technical problems.
4. Quality control and grades should receive more attention in training in the food processing and marketing businesses. Training should be in markets where export opportunities exist and where Vietnam might be expected to market its products. The training for export and domestic quality go hand in hand with export needs taking the lead.
5. Food processing capacity is larger than expected in many fields. Assistance should be given to help in utilizing this capacity to tap export markets and to manufacture products to substitute for imports, especially food. Food technology training is necessary.

6. From some source, continued technical support in Agricultural Exports and Marketing is necessary, if Vietnam is to attain rapid and logical growth in foreign exchange earnings.

OTHER DONOR ASSISTANCE

Assistance from other sources has been indicated from governments, private investments, and lending institutions. Examples:

1. The UNIDO is planning an investment promotion meeting in Saigon during CY 1975. This will be in cooperation with NEDF. The UN will bear the expense of preparation of brochures, promotion materials and the personnel for planning the sessions. Investors from private areas and lending institutions from several countries will be invited to the sessions. A number of opportunities in the agricultural, fishery, and forestry fields will be considered as projects for promotion. This would be a logical next move for a number of opportunities that have been discovered.
2. The Asian Development Bank is appraising a number of projects that would assist in furthering the objectives of this project. These include fishery activities and possible paddy and rice marketing facilities.
3. Private interests in Japan and New Zealand have indicated interest in assistance in rice storage and processing facilities.
4. Private investment coupled with technical assistance from government have been discussed in connection with forestry, fishery, and agricultural developments.

FUTURE PROSPECTS FOR EXPORT DEVELOPMENT

As with all economic development prospects in Vietnam, given peace, the prospects are good. In many areas the facilities are here with small amounts of capital investment. A good basic start in food processing technology is here, production potential is available. Assistance in coordinating these ingredients is the pressing need. The specific prospects for individual products is included under Accomplishments above.

A P P E N D I X A

EXPORT OPPORTUNITIES FOR VIETNAM AGRICULTURAL PRODUCTS

(Summary)

Niernberger, McArthur, Bollenback, Hoofnagle

Primary Group

MANIOC -- The best potential for this product appears to be starch. The major market demand is Japan and East Asia. The second use of manioc would be as a base for monosodium glutamate (M.S.G.) with the United States as the major market. Direct competition with Japan would then result for the U.S. market. It is doubtful that sales of manioc starch to Japan and M.S.G. sales to the U.S. are simultaneously compatible export goals. The third possibility is the export of pelleted manioc to the European Economic Community (EEC) as an animal feed ingredient. Pelleting of manioc is required to increase bulk density in reducing ocean transport costs. Technology and some equipment are available in Vietnam for pelleting as a result of the USAID formula feed program. The pelleted manioc alternative is marginal in profitability at present prices and has a high risk because of Thailand competition. Presently, discriminatory grain levies in the EEC have artificially priced manioc into animal feed use. Reduction in grain levy rates or increases in EEC grain production could reduce the large size of this market considerably.

Manioc root delivered at factory site in Saigon area is estimated at US\$52/M.T. Estimated production returns to farmers were not high for manioc, but in order to compete against Thailand and other Asian growers emphasis must be on reducing cost of production through yield increase and not price increase.

VEGETABLES IN BRINE -- The best potential for this product appears to be as bulk, wet-pac to Japan and East Asia basically on a contract basis. The size of the market does not appear large in the near future unless customers will accept Vietnamese varieties on which favorable production costs were estimated. So far little interest has been shown by Japanese for sponsoring Vietnamese vegetable varieties because of the Japanese preference for highest quality and uniformity of taste. Customer packaging direct for export from Vietnam does not appear competitive when estimating

processing costs based on market size. Cucumbers and scallions, the vegetables presently being handled for Japan under contract, for processing at Saigon are estimated at US\$90 and US\$118 per metric ton, respectively, at factory site.

FRUIT PUREES -- The best potential for these products appears to be bulk drum packaging operations which could be performed on a relatively small pilot basis in the existing processing plants without the necessity of rapid speed large size can lines. The market is primarily for beverage products in the North American market with some potential in the EEC. However, a variable levy on most fruit purees in the EEC would indicate an unsweetened fruit puree as most competitive. It is believed many of the existing varieties of Vietnamese fruit would be suited for this process that are not suited for export as fresh or canned form. The market price for fresh fruits in South Vietnam during much of the season is effectively pricing mango use out of the export potential although much of the demand is for mango puree. It must be possible to obtain large amounts of mango at lower prices during some part of the season in order for this fruit group to achieve significant volume to gain and hold ultimate export markets. Mango, pineapple, papaya, and guava factory site delivered estimates were US\$555, 170, 115 and 115 per metric ton, respectively.

CASTORBEAN -- The potential for this product is in beans not oil. The bean market is Japan and possibly Korea and Taiwan. Some market potential exists in the EEC particularly France, if favored nation status for South Vietnam is achieved. Castorbean prices gathered at Saigon are estimated at US\$196/M.T. This relationship is favorable because of general oil price rises throughout the world since 1972. If castorbeans could be processed into oil in Vietnam some other customers such as the U.S. would be possible, although much of the Japan market for beans would be lost. Because of doubtful ability to competitively operate a castorbean extraction plant in South Vietnam only export potential for beans is believed possible for some time. The difficulty of establishing a steady supply of beans in the quantity needed to operate an oil processing plant of the size required for competitive costs as well as past failure to start-up and operate the existing oil processing plant at Viet edible oil refineries leads to a recommendation against such a venture for export potential.

Preliminary Investigative Products to Move to Primary Group

COFFEE -- The potential for this product appears to be as bean export to the Asian market. The soluble coffee processing plant in the Bien Hoa industrial park is presently inoperable after trials

in 1973, and does not appear price competitive for the export market in our estimation. Coffee beans gathered at Saigon were estimated at US\$925/M.T. The estimated net returns to the grower compared to other crops was not large. However, at the green bean price estimated, Vietnamese coffee is effectively priced out of all markets except local Asian and high premium for quality i.e., small but steady market outlook.

PAPAIN -- The market for this product appears to be mainly in the United States although the EEC is a potential customer. Its primary use is as a meat tenderizer. A restriction on production culture is apparently plantation operation of a single variety of papaya plant for uniform proteinase extraction. Synthesized production and extraction costs lead to estimation of a profitable export of perhaps 75,000 to 100,000 pounds yearly.

Preliminary Investigative Products Shelved

CANNED FRUITS OR VEGETABLES -- Generally it is believed most of the present varieties of commodities grown locally are unsuited for processing. Furthermore, strong Asian competition for export markets in the U.S. and EEC exists for mushrooms, bamboo shoots, and mung beans. Without a regional market for volume it is doubtful canners could operate profitably for the United States or more distant markets. Existing canners in Vietnam have investigated markets in Singapore without coming up with contracts except for tie-in on excess cannery business. Unfavorable estimated processing and canning costs combined with lack of incentives in the present marketing system for quality of fruit or vegetables did not appear to be problems easily overcome in the near-future for which this export potential evaluation was made. Estimated producer returns for both vegetables and especially fruits indicated market clearing prices above required processor prices to generate entry on a competitive regional Asian market.

FRESH FRUITS OR VEGETABLES -- Markets in Singapore were proposed for many fresh Vietnamese fruits and vegetables. The Asian market appeared to be the only available market of those studied because of distance, inspection regulations, and preferential treatment. Asparagus, strawberries and the tropical fruits should be promoted on the individual grower direct-contract basis with the exporter, through facilitating government services. It was not apparent that costs would returnable from sales and quality increase to justify a central marketing system to purchase from a variety of growers.

SPICES -- Demand for spices, particularly black pepper was evident in all markets analyzed. Further investigative efforts by DURKEE did not appear promising because of inability to satisfy three major requirements: good quality, stable supply and competitive price. Although black pepper was relegated to be shelved due to a believed inability to achieve near-future solving of lowering production costs and increasing market quality, special relations should be continued with potential purchasers in the United States to overcome quality limitations. Net returns to the grower for black pepper were estimated to be extremely high. Some investigation as to whether export prices could be lowered through less return to producer might in fact lead to a market potential not evident to this team analysis. Generally market demand for black pepper exists, the Vietnamese may gain entry through price reduction until quality can be upgraded to high standards required in spice procurement.

A P P E N D I X B

DEMAND AND SUPPLY POTENTIALS FOR SOUTH VIETNAM'S
FISHERY INDUSTRY

(Summary)

by

Howard L. Steele
Harlan C. Lampe
Robert D. Niehaus
William S. Hoofnagle

Joint Vietnamese-American teams visited Singapore and Japan in 1972 and 1973 to appraise the import potential for 38 Vietnam fisheries species and products in an effort to help Vietnam earn more foreign exchange. Exports were studied in detail for the most recent five-year period in each country. Information was obtained by personal interviews and from secondary data about quantities, prices, sources of imports, destinations of exports, methods and cost of trade, major firms handling each product, health regulation, packaging, and other factors affecting trade.

Importers in the two countries showed particular interest for 16 of the species and products. The total quantities imported yearly of these 16 exceed 188,000 metric tons (M.T.) in the two countries, valued at more than US\$388 million. The 7 species and products of particular interest in both countries are: shrimp, lobster, cuttlefish, squid, snapper, processed eel and eel fry, and mackerel. Nine products are of special interest in one or the other market, but not in both. Japanese importers show particular interest in tuna, jellyfish, hard clams, crabs, and aquarium fish. Singapore traders show special interest in threadfin, shark fins and meat, abalone, and sea cucumber.

It was concluded that demand for these imports is sufficiently strong in Japan and Singapore, not to mention other areas such as Hong Kong, Europe and the United States, that exports from Vietnam can be expanded greatly by 1980 if the following criteria can be met. 1) That cost + insurance + freight (CIF) prices in the importing country for a given product are equal to or greater than the total Vietnamese cost of procurement, processing and transfer to that country; 2) that products from Vietnam meet the quality specifications in the importing country on a sustaining basis and at competitive prices; 3) that Vietnam's domestic fish utilization

needs are met concurrently with export activities, and 4) that the fish resource base in Vietnam's waters will not be adversely affected by harvest pressure to meet supply contracts.

It became evident that the important restrictions to expanding exports from Vietnam to earn foreign exchange and create more employment and income at home related more to the industry's supply capability, its profitability and the domestic needs and marketing system than to whether export markets existed in other countries. These matters became the subject of intensive study by the authors in late 1973 and early 1974.

All of the major fishing ports in Vietnam were visited during October and November 1973. More than 200 fishermen, boat owners, middlemen, processors and government officials were interviewed. In many instances access was given to accounting and production records so that representative cost and return analyses could be completed for various size fishing boats, processing and marketing activities.

An evaluation of published research about demersal and pelagic fish stocks in the Mekong Delta region of the South China Sea and the Gulf of Thailand was made. This plus catch records made available by fishermen and published reports from Vietnam and Thailand government sources permitted development of estimates of potential yields.

Additional stocks of between 100,000 and 350,000 metric tons of demersal fish would seem to be available for exploitation off the Mekong Delta and in the Gulf of Thailand, Table 1^{1/}. The potential catch of pelagic fish in these same waters may run as high as 496,000 metric tons. However, the fish are spread over a vast area, probably exceeding 531,000 square kilometers.

^{1/}Demersal fish are those that live on or near the ocean bottom. Pelagic fish, however, tend to live somewhere in the water column; they may be middle or surface feeders and may live and move in large schools. In any event, different fishing gear and technology are required for each.

Table 1.- Estimated Yearly Potential Yield and Catch, Demersal and Pelagic Fish, Mekong Delta Region and Gulf of Thailand, Vietnam^{1/}

	Demersal Fish	
	Trawlable	Total Ground
 Metric Tons
Potential Yield	950,000	1,200,000
Yearly Catch (all nations)	<u>850,000</u>	<u>850,000</u>
Potential Catch	100,000	350,000
	Pelagic Fish	
	Mekong Delta	Gulf of Thailand
 Metric Tons
Potential Yield	566,000	380,000
Yearly Catch (all nations)	<u>188,000</u>	<u>262,000</u>
Potential Catch	378,000	118,000

Production per boat, either on a yearly or per trip basis, is low in Vietnam. Consequently, costs per kilogram of fish landed are high by comparison with other developing countries. Recent increases in fuel and ice costs in Vietnam have only served to aggravate an already difficult situation.

The following production data were developed from information furnished by Vietnamese fishermen by interview or from records made available to the authors. The data are representative of the productivity of Vietnam's current commercial fleet, approximately 2,200 of its largest boats. They do not represent productivity for the thousands of itinerate fishing boats of all sizes plying the coastal or inland waters. The production data in Table 2 show that only a few large and medium trawler, and a few gillnetters currently fishing in Vietnam meet or exceed one generally accepted standard for a "good" fishing operation, i.e., 2.5 metric tons of fish caught per year per gross ton of boat ^{2/}.

^{2/} Most trawling done by Vietnamese fishing boats is done in pairs, i.e. two boats set, pull and hand one trawl net.

Consequently, operating costs per kilogram of fish landed are high, Table 2. The medium size trawlers had the lowest average cost, US\$.13 per kilogram. Two points should be kept in mind: 1) these costs were based on data obtained in the fall of 1973 when fuel cost approximately 52 piasters per liter (the exchange rate was 535 piasters per US\$1.00), and 2) these represent operating or trip costs only, and include no depreciation, interest or owner equity charges. It is not unusual today in developing country fisheries for total costs per kilogram to average from US\$.10 - US\$.12.

Table 2.- Estimated Vietnam Commercial Fishing Fleet Production Levels and Operating (Trip) Costs, Autumn-Spring, 1973-1974

<u>Vessel Type</u>	<u>Production/Trip</u>		<u>Production/Year</u>
	<u>Metric Tons</u>
Large Pair Trawlers (average size = 120 gross tons)	20-40		300-500
Medium Pair Trawlers (average size = 40 gross tons)	1-15		110-120
Gillnetters	2-10		30- 60
		<u>Operating Cost</u>	
	(Fuel @52 VN\$/lit.)	(Fuel @95 VN\$/lit.)	(Fuel @125 VN\$/lit.)
Large trawlers	.22	.27	.32
Medium trawlers	.13	.16	.19
Small trawlers	.18	NA	NA
Gillnetter	.17	NA	NA

When the components of Vietnamese fishing fleet operating costs are analyzed, it again becomes very evident that fuel and ice costs are too high, Table 3. Fuel and ice costs, as a general rule, should not exceed 20-30 percent of total operating or trip

costs in developing countries. It is obvious that ways must be found to 1) increase each boats total catch per trip and per year, and 2) find some relief for the fleet from the high prices charged for fuel and ice.

Table 3.- Estimated Vietnam Fishing Trawler Operating (Trip) Cost Distribution, Autumn-Spring 1973-74

<u>Item</u>	<u>Autumn 1973</u> Percent	<u>Spring 1974</u>
Fuel	40	57
Crew	35	24
Ice	8	10
Food	5	3
Other	<u>12</u>	<u>6</u>
Total	100	100

Two other problem areas requiring solution if Vietnam's fishery industry is to continue to grow and be profitable relate to the domestic marketing system. 1) The current system is extremely complex and costly, and 2) raw fish collection systems around and in the country ports will not be able to handle additional thousands of tons of catch with present facilities and methods of operation. The latter point is particularly true for shrimp and trash fish for fish meal manufacture.

The fish marketing margins and costs shown in Table 4 do not seem out of line by general standards, given the complexity of the present system, and the risks and financing advanced by middlemen. However, it is evident that there is much inefficiency built into the present system. Shrinkage and quality losses are high, delays are significant, fish are handled and rehandled too many times in extremely small lots, and the system will not be able to handle additional thousands of tons of product as now operated.

The best evidence of the inadequacy of the present fish collection system is the difficulty shrimp and fish meal processing plants are having obtaining supplies to operate profitably. With

present output capacity, it is estimated that the 1973 frozen shrimp export of 3,840 MT could all have been processed in 41 working days. Fish meal plants are operating at 20 to 30 percent of capacity, or in several cases, have ceased operations completely since the fall of 1973.

Table 4.- Vietnam Estimated Fish Marketing Margins and Distribution of the Fisherman Wholesaler Margin Cost, Autumn 1973

<u>Price Level</u>	<u>Gross Market Margins</u>	
	<u>US\$</u>	<u>Percent</u>
Saigon Retail	.47	100
Saigon Wholesale	.28	60
Country Port, Fisherman	.17-.20	36-43
<u>Item</u>	<u>Cost Dist., Fisherman-Wholesaler Margin</u>	
	<u>US\$/Kilogram</u>	
Official Taxes	.010 - .013	
Porters in Ports	.020 - .055	
Transportation	.030 - .066	
Port Collector - Middle- man ^{1/}	.020 - .030	
Saigon Commissions ^{1/}	<u>.020</u>	
Total	.100 - .184 ^{2/}	

Domestic utilization of fish has been increasing rapidly in Vietnam since 1960 as population and incomes have increased from an estimated 262 thousand MT in 1960 to 687 thousand in 1973. These projections were made to 1980 utilizing selected explanatory

^{1/} Not profits only - includes operating costs such as labor, boxes, ice, credit cost, etc.

^{2/} The typical margin, including fish retained locally, is probably in the range of .08-.11.

variables at conservative, average and optimistic levels. The projections show potential domestic utilization demands of 778,900, 850,000 and 938,000 MT respectively. The reported Vietnam catch (marine and fresh water) in 1973 was 713,566 MT.

It is evident that the total Vietnam catch must continue to increase rapidly if domestic needs are to be met and foreign exports expanded. The potential catch data for waters fished in the Mekong Delta and Gulf of Thailand presented above suggest that an additional 596,000 to 846,000 MT of demersal and pelagic fish are available to be harvested. These fish are spread over a wide area in international waters and are available to other nations as well as to the Vietnam fleet. How much of this potential catch the Vietnamese industry can harvest depends on improvement in the technological and economic factors discussed in detail above. By way of summary, the following conclusions and recommendations point up significant change factors necessary if Vietnam's fishing industry is to experience the profitable expansion needed by 1980.

Conclusions:

1. Fish production costs are high in Vietnam.
2. Fish marketing costs are high in Vietnam.
3. Additional demersal and pelagic stocks are available and exploitable.
4. Fishing fleet expansion has left gear, fishing and vessel technology underdeveloped.
5. Shrimp and fishmeal processing capacity greatly exceeds raw material supplies.
6. Export expansion depends on improved collection systems as much as on increasing production.
7. Port facilities are inadequate.

Recommendations:

1. Expand gear, fishing and vessel technological development.
2. Expand market technological and organizational development.
3. Improve the ports at Rach Gia and Vung Tau immediately.
4. No vessels over 75 gross tons receive subsidies and support in the intermediate run.
5. Vessels of 50-75 gross tons will be feasible only with cost reductions (more time fishing at sea, more efficient labor productivity, shorter turn-around time, better maintenance, etc.), single trawl capability and better managerial control.

6. Shrimp exploration in coastal waters be initiated immediately.
7. Chartered vessels be used with air reconnaissance for locating and charting pelagic stocks and their movements.
8. Basic policy changes be made at the highest government levels to help fishermen improve their productivity and profit levels. The most urgent need is to permit and encourage the use of navigation charts, marine compasses, two-way radios and electronic fish locating gear. Some method must be found to reduce the high cost of fuel. Sanitary ice should be made available in larger quantities and at lower cost. Other recommendations are presented in the text which follows.

A P P E N D I X C

TIMBER DEVELOPMENT IN THE REPUBLIC OF VIETNAM

(Summary)

Forest land is the most extensive of the Republic of Vietnam's land resources. Between 13 and 14 million hectares of the total land area of 17 million hectares can be classified as forest in that it bears or once bore trees and has not been converted to permanent cultivation or settlement. Allowing for the expanded needs of agriculture and other land uses it seems likely that at least 9 million hectares in South Vietnam will in the long run be best suited for timber growing.

In a productivity sense the forest is presently a diminishing and deteriorating resource. Centuries of shifting agriculture, fires, destructive cutting and, in recent decades, warfare have taken a heavy toll of timber and timber growth. Millions of hectares that once bore mature stands of merchantable and potentially merchantable timber now are covered with scrub vegetation.

There still remains in the hinterlands, however, a sizable area of productive forest--apparently totaling about 6.4 million hectares. This forest can contribute substantially to the development of South Vietnam if it is properly used and managed. If in addition, the timber productivity of the rest of the land best suited for timber growing is restored the total contribution of the forest can be remarkably high. The annual output of timber products in South Vietnam is presently worth about \$100 million. It could be raised to \$1 billion or more by the end of the century. For a country looking for ways to "lift itself by its bootstraps" this is a very important opportunity.

At this stage however a \$1 billion output of forest products has to be regarded as but a theoretical possibility because of the almost total lack of forestry and the limited constructive industrial development up until now.

In pondering the decision as to what priority should be given to forestry and timber industry development on a national scale several realities are of exceptional importance. The population of South Vietnam is likely to double the present 20 million people by the end of the present century, creating a great additional burden on economic development. Barring the discovery of great

new mineral wealth, the forest land is the principal natural resource upon which economic growth can be based. Because the forest land is widely dispersed it offers a unique opportunity to strengthen South Vietnam's rural economy and attract more people away from the cities to the country where the quality of life can be greater and energy requirements less.

Although the forestry potential is excitingly large there is a question as to how much of that opportunity can be captured under the circumstances surrounding South Vietnam today. It requires establishing a control over the forest (non-existent at present) and the institution of highly disciplined timber management. It requires forbearance in the use of the existing sawtimber to spread it over the next several decades, along with a large tree planting program to more quickly harness the enormous production potential of the forest. Timber industry expansion must be carefully designed if it is to do the most good.

What it boils down to is that although South Vietnam can make some big economic gains by developing the forest resource, the task will not be easy. An aggressive, continuing and consistent public effort will be required. Six issues should have top priority at this time.

1. An official policy decision is needed soon specifying the reliance that will be put on timber development in South Vietnam's effort to gain economic muscle. Without such a goal it will be impossible to have a consistent and efficient program of development.
2. Land use commitments must be made soon to minimize misuse, destruction and wasted effort. Land classification based on soil and hydrologic characteristics, community needs and other factors is necessary to definitely establish which areas are to be used for timber growing and which for other purposes.
3. The most capable brains available should be assigned the task of outlining the long-range strategy, in all of its ramifications, for protecting and managing the forest and guiding industrial development. The quality of such blueprints for future action will be a crucial factor in the success of any national effort.

4. The government structure for forestry and timber industry development should be overhauled to handle greatly increased responsibilities. South Vietnam is presently unprepared to handle a large forestry and timber development program. Steps should be taken to develop a dynamic organization with adequate authority, to increase the number of trained professionals, and to upgrade technical knowledge through expanded research.
5. The effort to attract and coordinate assistance from international agencies and developed countries should be increased. South Vietnam needs all of the help it can get but the growing world demand for timber should provide some leverage for getting forestry assistance and for drawing upon some of the developed countries for technical aid and advice.
6. A crash effort should be made to restock lands deforested by centuries of neglect and abuse and decades of war. Continued fighting prevents moving ahead immediately with forestry development in much of South Vietnam. However, there are several million hectares of deforested land that are militarily "secure". These lands should be planted at the rate of 150,000 hectares or so annually until productivity is restored on most of the area. Such a massive program would have the immediate advantage of providing very much needed employment.

A P P E N D I X D

OUTLINE OF THE REPORT ON THE
8-15 January 1973 Trip

to

Observe the Banana Production and
Exportation of the Philippines

- A. Purpose and Team Composition
- B. Visitation Program
- C. Findings

- I. Outlines on the Philippines
 - II. The Banana Exportation of the Philippines
 - III. Standard Fruit Company in the Philippines
 - IV. Production Techniques
 - V. Harvesting, Packaging and Exporting Techniques
- CONCLUSION: Project for Banana Exportation of Vietnam

Translation:

Vu Huu To
ADFA/AES
March 1973

Agricultural Development Bank
NO. 440/VP/1

REPORT

ON

THE JANUARY 8-15 OBSERVATION TOUR OF THE BANANA
PRODUCTION AND EXPORTATION IN THE PHILIPPINES

A. PURPOSE AND THE TEAM COMPOSITION

Considering the Official Letter No. 016/P/Th.T/PC3-6 of January 3, 1973 of the Office of the Prime Minister.

Considering the Mission Orders No. 34/CCDDNNM/LLQT-3/NVL of October 5, 1972 and No. 03/CCDDNNM/LLQT-3/NVL of January 5, 1973 of the Ministry of Land Reform, Agriculture, Fishery and Animal Husbandry Development and the Mission Order No. 03/BKT/HC/NV/NVL of January 5, 1973 of the Ministry of Economy.

A joint Vietnamese American group composed of the following members made a trip to the Philippines during a week from January 8 to January 15, 1973 to observe the banana production practice of the Stanfilco Company and the banana exportation of the Philippines.

Group Composition:

On the Vietnamese side:

Messrs. Nguyen Dang Hai, Director General, Agricultural
Development Bank Chief of the Group
Vu Huu De, Banana Project Manager, Agricultural
Products Service
Nguyen Dinh Tuan, Specialist, Export Development
Center

On the American side:

Messrs. S. A. Robert, Jr., Agricultural Economist, USAID/ADFA/
Econ and Sup.
Walter C. Tappan, USAID/ADFA/Prod/Crops

B. VISITATION PROGRAM AND THE OFFICIALS CONTACTED

January 8, 1973: The group started leaving at 1230 and arrived in Manila Airport at 1500 hours. Continued proceeding to Davao at 1630 hours and arrived in Davao at 1700 hours. At the Davao airfield the group was welcomed by Messrs. F. Homer Eston, Vice President of the Far East Region, William S. Swinford, General Manager and Luis M. Claire, Assistant General Manager.

January 9, 1973: Proceeded to General Santos under Mr. Luis M. Claire's guidance.

- Visited the pineapple plantation and the packing plant of the Dolefil Company. Met Mr. P. Schrader, General Manager. The Group was escorted and briefed on the pineapple cultivation by Mr. Dick Rogers.

- Visited the banana plantation of the Stanfilco Company under the direction of Mr. Luis M. Claire. Visited one packing plant under the direction of Mr. Malayang and the dock under Mr. Ayalde's direction.

January 10, 1973: Proceeded to DAPACO under the direction of Messrs. P. Chango and Apena.

- Visited the Diamond plantation and met with Messrs. P. Chango, R. Belgira, R. Pagvio.

- Visited the Dapco plantation

- Visited the Checkered plantation

- Returned to Davao and paid visit to the Stanfilco company's office.

- Held the last discussion at Mr. Swinford's office.

- Thanked Mr. Swinford and other officials for their assistance to the Group during the visitation and farewell them.

January 11, 1973: Returned to Manila.

January 12, 1973: Processed papers, airtickets to be prepared for home return.

January 13, 1973: Visited the International Rice Research Institute.

January 14, 1973: (Sunday) No program

January 15, 1973: Returned to Saigon

C. FINDINGS FROM THE TOUR

I. OUTLINES ON THE PHILIPPINES:

The Philippines is composed of 7,100 assorted islands covering a general area of 297,410 ksq. The biggest island is Luzon with an area of 64,982 ksq. Next is the Mindanao island covering an area of 59,193 ksq.

According to the 1970 statistics, the population of the Philippines was 37 million and the yearly growth rate was about 3.4 percent.

Although the Philippines has 82 different dialects, 40 percent of them (of its population) use the English language. The main dialects are consisted of Cebuano (24.1 percent of population use), Tagalog (21%), Ilocano (11.6%), Iloungo (10.4%), Bicol (7.8%), Waray (5.5%), Pampango (3.2%) and Pangasinan (2.5%).

The Philippines is divided into 8 regions:

- 1) Ilocos and Mountain Province
- 2) Cagayan Valley
- 3) Central Luzon
- 4) Southern Luzon
- 5) Bicol Region
- 6) Eastern Visayas
- 7) South-western Mindanao
- 8) North-eastern Mindanao

The group had the opportunity to visit the area of southern Mindanao. Around Davao city is a concentration of banana plantations and the Standard Fruit Company division (Stanfilco) is headquartered there.

Davao is the most rapidly developing city of the Philippines. Almost all the Philippine dialects are being used here. The reason is that this is a concentration point for migrants from other islands who search for jobs. 4/5 of the population are refugees.

Those of Cebuano origin using the Visayans dialect is the largest group. According to the statistics in 1903 there were only 6,099 people in Davao, 21,204 people in 1918, 95,546 in 1939, 111,263 in 1948, 224,712 in 1960 but in 1970 the number of population reached 750,000 people.

The climate in Davao is quite pleasant. Davao is endowed with a cool climate all year round and not affected by the storm winds originating in the Pacific Ocean. Davao has no clearly rainy nor dry season and the yearly rainfall is regularly divided (DAPCO's Rainfall Record).

January	3.25 inches	July	8.25 inches
February	14.25 "	August	1.00 "
March	12.75 "	September	9.25 "
April	4.50 "	October	7.25 "
May	10.75 "	November	2.50 "
June	12.15 "	December	6.50 "

Since rainfall is spread over the entire year, it is quite favorable for banana production and in many places the bananas need not be irrigated to maintain yields.

The soil of Davao is recognized as Volcanic soil created by sand mixed with aluvium, soft, very favorable for plant development.

II. MATTER OF BANANA EXPORTATION IN THE PHILIPPINES

The banana is now a large resource for the Philippines. In 1971 its export accounted for 17 percent of the total bananas imported by Japan and took the third rank in Japanese markets after Ecuador and Taiwan. In 1972 the share of the banana market reached 40% and this is projected to be increased to 52% by the end of 1973.

In 1971 this country earned US\$11,375,000 from exporting 187,000 metric tons of fresh bananas to Japan. During the first 8 months of 1972, the exported volume amounted to 210,006 metric tons (19.6% increase over 1971 during the same period). The 1972 export was estimated at about 377,000 metric tons valued at US\$22,043,000.

Most banana plantations are centered in Davao covering total area of about 6,000 hectares including the following companies:

Standard Fruit, Hijo Plantation, Tagum Agric Dev. Company, Davao Fruit, and some other small plantations.

Among the plantations mentioned above, that of the Standard Fruit Company is the largest and is organized most systematically and on a large scale.

III. STANDARD FRUIT COMPANY IN THE PHILIPPINES

1. Background and Achievements

The Standard Fruit Company, specialized in developing production and exportation of tropical fruits, has its subsidiaries in Honduras, Ecuador, Costa Rica and Nicaragua with most operation devoted to banana production. Initially, the company established a banana plantation in Latin America to provide bananas to the U.S. and Canadian consumers. Later, recognizing a continuously increasing market in Japan, this company decided to develop banana plantations in the Philippines.

In 1960, the Company set up a division in General Santos south of Cotabato (Davao) with an initial capital of 100 million pesos (approximately 6 billion VN piasters) and submitted to the Philippine Government a project to establish a joint corporation named Stanfilco in which 60% of the shares were of Standard Fruit Co. and the remaining 34% were Philippines.

Six years later, i.e. on September 6, 1966, a shipment of 150,000 banana suckers from Honduras and Costa Rica arrived in General Santos to start production of banana young plants. After one year, approximately August 1967, the associated banana plantations were established and managed either by the Company itself, local cooperators or other companies. The young plants were originated from the above mentioned center.

The first ship exporting bananas from Stanfilco from the South of Cotabato to Yokohama was on September 2, 1968 with 4,000 boxes of 12 kg. each.

In 1969, the value of bananas exported to Japan from the Philippines was US\$1,500,000. Of this, 0.8 million dollars were of Stanfilco. In 1970, the export value amounted to US\$3,300,000 of which 2/3 was from Stanfilco. In 1971, US\$1,375,000 were derived from exported bananas and Stanfilco accounted for 7,900,000 US dollars.

The company is now producing some 388,000 12 kg. boxes each week and a level of 16,000,000 boxes may be reached for the entire year 1973.

Besides bananas, the Company has a pineapple plantation and canning plant. According to Mr. Charles J. Bauman, Vice President and General Manager of Stanfilco, 21,500,000 boxes of bananas are projected for export and a considerable amount of pineapple will be canned in 1973.

2. Infrastructure Organization

- Office
- Plantation
- Processing and canning site
- Temporary warehouse at the port
- Plastic sack manufacturing plant

1.2 The Company's main office located at Sasa, Davao City is composed of Accounting, Personnel, Technical Staff, Supply, Salary and Wages, Quality Control sections and an office specialized in transportation for export.

The second office--Lagao--is located at General Santos to manage plantations in South Cotabato. Its organization is similar to that of the main office.

The third office--Stanfilco's Matakil--is located at Manila in the 8-storey Don Madrigal Building on Ayala Avenue. The function of this office is to manage the import-export services and contact Government authorities, banks and markets. In addition there is a technical research center in DAPCO consisting of an experimental bureau and a variety selection site. The varieties were recorded under coding numbers so that the Group were unable to collect much details.

The plantation areas are equipped with hospital, dental office and compound for workers.

A special area reserved for administration personnel in General Santos is equipped with full facilities, recreation center, school and hospital, etc.

The plantation also has a private airfield and airplane of which some are used for transportation and some are used for spraying insecticides.

Workshop for machine and vehicles repair.

2.2 The area of plantations of the company total 4,500 ha and is divided into two segments: the key zone, consisted of 1,250 hectares, a half hour flight from Davao City, is managed by the Company itself. The second zone consisted of 3,250 hectares divided into four small plantations and mostly managed by private cooperators under the technical guidance of the Company's specialists. All the three plantations--Mabuhay, Dapco and Checkered or PWEA (Phil Women's Employees Association)--are about 40km by highway from the main office in Sasa. Particularly the fourth plantation--Luna--the farthest one, which is bigger than the three above plantations, is about 62 km. from Sasa.

The Group also visited the plantations in General Santos, plantations of Dapco, Checkered and Diamond (sub-branch of Checkered, recently established).

3.2 The packing plants were located in the plantations to have the shortest distance to move bananas to packing plants after cutting. Generally, every 200 hectares need a packing plant. There are 7 plants in General Santos (1,250 ha). At the four plantation areas (3,250 ha) there are 18 plants and some other plants are under construction. The packing plant is equipped with a cutting machine, a framing box machine and a stapler yielding approximately 200 boxes per hour. All box making facilities were installed on the upper floor of the plant. Particularly, the ground floor was equipped with conveyor system and fungicide sprayer. The work carried on in the packing house will be described in the latter paragraph.

The cost for equipping each plant was about US\$40,000 including construction, machines, tractors, trailers and van trailers.

4.2 At the port, a temporary warehouse is established to store bananas moved from packing plants. A quality control office is located here with specialists who inspect the bananas before being loaded in the refrigerated rooms of the ships.

5.2 Because bananas need to be wrapped to prevent insect damage when they are still at plantations; banana plants also need to be strengthened to resist lodging and when being packed, banana fruits also need to carefully wrapped so that a large amount of perforating plastic bags and ropes are required. The company manufactures these items for their use. The polythylene raw materials are purchased in Japan and accounted for about 100,000 MT yearly. The manufacturing plant equipped with the following machines:

<u>Type of Machine</u>	<u>Output</u>	<u>Quantity</u>
1. Film Extruder	36kg/hour	3
2. Perforating Machine	36kg/hour	3
3. Twine Extruder	20kg/hour	4
4. Stretching Machine	40kg/hour	2

The cost for equipping the plant was about US\$200,000. Workers are divided into three teams working 24 hours on seven day week basis. Each team is consisted of six people.

- 1 operates film extruder
- 1 operates twine extruder
- 1 operates stretching machine
- 1 operates cutting & perforating machine
- 1 assistant

The workshop producing bags and plastic ropes is under the general supervision of an engineer.

3. Regionalized Management Program

As mentioned above, the company is now operating in the two areas under different kind of operation: The General Santos area covering 1,250 hectares is managed by the Company itself since this was the initial plantation of the project. The second area, generally called the Davao area which is composed of four plantations covering 3,250 hectares, is primarily managed by private cooperators and was established under the following procedures:

Initially, the company studied a project named Regionalized Management Program for which the company selected the area which met the feasible farming conditions for bananas. Farmers who owned land in the area might contact the Company to sign a farming contract. If approved, the company would provide the farmers with inputs such as operation loans without interest, banana suckers, fertilizers, insecticides, planting techniques, irrigating system (dike system, motorized pump) and other needed facilities to stimulate farmers to quickly complete the pre-production period. With adequately supplied materials, farmers only managed and hired labor to carry out the work. When the plantation becomes productive, the company would sign a contract to assure a market for the bananas produced

by the farmer for a period of 10 years. To encourage the quality improvement of product, the company has organized each year a bonus for those plantations which produced a high amount of export standard and a low ratio of cull bananas. During production, the Company's technicians regularly visit the plantations to guide farmers with proper techniques.

The Regionalized Management Project of Stanfilco was quite successful and has brought a more comfortable living for a large number of farmers. The company indicated that at least 1 employee was required by every 2 hectares and a manager and 5 technicians were required by every 1,000 hectares. So a total area of 6,000 ha had accommodated a minimum of 3,000 local employees. This did not include employees working in packing plant, plastic workshop and dock warehouse.

IV. PRODUCTION TECHNIQUES

Although the visitation was relatively short the Group conducted general observation, study of organizational procedures, operating method and essential facilities of the plantations. The Group also made an effort to benefit from the break and lunch times to raise prepared questions which were considered necessary. After this the question were re-checked when the Group made objective observations.

1. Farming Method

The Group had no opportunity to observe bananas at early planting stage but was told that the plantations were established by planting clones. The best method is selection of a young 2-3 kg. clone with one part of the trunk and a top of only about 10cm height left. When the first plantation was established in 1966 in the Philippines the clones of Giant Cavendish variety were brought in from Honduras and Costa Rica and propagated at the General Santos' nursery. A year later, the nursery had provided enough young suckers for the establishment of plantations. The nursery is now not necessary and one may get planting stock at the plantations operation. Estimated cost for establishing 1 hectare of bananas was about 3,000 US dollars, i.e., 1,400,000 VN\$ based on the exchange rate of 465 VN\$/US dollar.

2. Spacing

When entering an older plantation it is hard to tell what the original spacing was since the growth and selection of successive suckers changes the pattern drastically. But the plantations' technicians indicated that careful cultural practices had to be followed such as the major practices:

- Planting square: 2.5m x 2.5m
- Equilateral triangle with 3 meters each side
- Hexagonal with 3 meters each side, there were two opposite sides with 2.5 meters

There was little difference in yield among these three methods and the square distance of 2.5m x 2.5m was recommended because the distance between the two plants can save time while moving to cut banana stems or to control insects and disease. On the other hand, by using this method, about 1,500 plants per hectare--a reasonable amount--can be grown.

3. Weeding

For the plantations which are over one year old, the time used for weeding can be saved because the banana shades the open spaces. Again, the falling of dead leaves and the regular pruning of banana sheaths, the trunks of banana plants which, after having been cut into small pieces, have created a cover for the surface which keeps the weeds from growing. In newly established plantation weeding must be carried out regularly. The Group visited some plantations where weeding is conducted continuously but weeds continue to grow. The Group also observed weeding by using a small sickle which was about 1/4 of a normal sickle and had a long handle. The weeder handled this and lashed strongly down to the weed root. However the main weeding is by chemicals. The herbicide, Granoxone, is now used and the spraying is conducted once every 20-30 days. The mixture ratio is 1/2 liter granoxone and 100 liters water. The spraying is continuous up to 6 months from the date of planting. The shoulder carried sprayer with a capacity of 10 liters with a permanent pumping crane was used by the plantations.

4. Pruning

The number of suckers left for each plant, which sucker will be pruned and the time of pruning are important decisions that the plantation manager must carefully study so that banana harvest is regularly spaced during the year. Otherwise packing plants are not occupied adequately and banana quality will be reduced. A work shortage for employees can cause losses for the company.

The Group visited a plantation where the planting was just 10 months old (Diamond plantation of Mr. Pedro Changco). This plantation had been harvested once. The pruning of suckers at this plantation was done once every eight weeks. However, pruning

at the plantations managed by Stanfilco in the General Santos area was done once every 12 weeks. The method of leaving young suckers was as follows: When the stem of the first (mature) plant was cut, the clone will be left with a second plant which is 4-5 months old and a third sucker which has just sprouted is also left.

Those suckers which have large leave (water suckers) will yield less and the stem will also be of low quality and must be weeded out. Only suckers which have narrow and sharp leaves are kept.

The method of weeding out the young suckers was very simple: After using a knife to cut the sucker at its bottom, the cutter used a sharp auger with a long handle to stick into the central point of the recently cut sucker. The cutting must be as deep as the banana clone then the cutter turns the auger round. This turn can destroy the banana core up to the vegetative point that keeps the banana sucker from sprouting. Before sticking, the bit of the auger must be dipped in a Formalin solution for killing germs.

5. Fertilization

At the plantation of the private organizations in the Davao area, the Group was told that the two types of fertilizers-Urea and Potassium--have been used with a ratio of 2.5 bags of Urea and 3.75 bags of Potassium for each hectare (50 kg. bag). The plantation is fertilized once every two months. Different from Vietnam where the fertilization is normally conducted at the beginning of the rainy season, the fertilizer application in the Davao area is normally conducted 6 times per year after the rain falls, due to the fact that there is not a clearly rainy or dry season in this area and that there is a regularly divided rainfall for the year. Based on the mentioned above ratio, the annual amount of fertilizer needed by each hectare is as follows:

- Potassium: $3.75 \times 50 \times 6 = 1,025$ kgs
- Urea : $2.5 \times 50 \times 6 = 750$ kgs

The banana growing does not require a careful selection of soil. For example, in the General Santos area, a farmer named Gregorio Pigar who initially agreed to cooperate with the Company in planting 5 out of his 12 hectares of land. The remaining land, because of a too high Ph ratio, had a low quality soil and has been abandoned. However, after realizing a good return from the farming of 5 hectares of banana, he then contacted the company for a study to improve the

remaining land and asked the Company to extend additional farming land for bananas. The company provided him with cash outlay and facilities to dig ditches for drainage and use scientific measures to improve the soil. He was successful and is now an owner of a 12 hectare banana plantation. The above example remind us that the land potential of Vietnam is quite immense. If necessary, 1,000,000 hectares of the alluvium soil in the Dong Thap area, if improved by a system of drainage ditches, may be an area where many agricultural items, not only bananas, can be produced.

6. Irrigation and Drainage

An irrigating and drainage system was installed at all plantations. The motorized water pumps were not available at the private owned plantations in the Davao area and in the course of visit the Group saw that the canals and ditches in this area were dried up. However, the Group was told that there was sufficient rain during the year in this area and when the rain occurs, there will be a tremendous down pour so that the ditches have an effect of drainage rather than irrigation. In the General Santos area, the Company has utilized a type of a large motorized pump with the output of 1,500 gallons per minute. The motor runs at 1,800 RPM. The motor, Target Master Brand was purchased from Hawaii and valued at about 3,000 US\$/FOB/Philippines. The pump run by a diesel motor and took water up from ditches along the road and sprayed the water over the banana field. The nozzle could turn automatically and sprayed water to cover a whole area of a 50 meter radius circle. Hence, the plantation is laid out with roads each 100 meters and the length depends on the shape of the plantation. These 100 meter strips are separated by a 2.5 meter wide road having ditches along both sides. The tractor moved each time on a marked 50 meter distance to spray in such a way the whole farming area is completely covered. At the plantations in the General Santos area the water spraying was conducted once every two days. The best irrigated practice was to apply about 2 inches of water every week. The company has a total of 25 similar pumps. Each pump is used for 60 hectares.

7. Care of Plantation

From planting to shoot stage, a great deal of care is given to the banana plantation. Especially regular weeding each month and suckers must be pruned once every three months.

When the plant is six months old, plants begin to shoot. The shooting is clearly seen when the last leaf has been visible for three days. 15 days after the shooting, the shoot must be wrapped by

a perforated plastic bag to prevent insect damage to the shoot and may cause spots of fruit. In the future this could cause a reduction in appearance of the banana hence a possible downgrading. The bag may remain on the stem until harvest or may be torn and blown off by the wind. This bag must however be maintained within two months from the shooting day. 18 days after the shooting, the male flowers will be cut off and at that time, about 11-13 hands have been shot.

Because of an irregular shooting of plantations, a marking must be used to know which banana plant shoots first. Either paint or colored ribbon can be used for marking. In the General Santos area a type of plastic ribbon with four colors--red, blue, green and yellow--is normally used for marking. Each color represents one week. For example, those plants which shoot in the first week will be marked with red ribbon and when they are in the second week of shooting they may be marked with a blue ribbon, etc.

To prevent lodging because of heavy stems or wind, the banana plants must be propped. Two bamboo poles can be used for propping or banana plants can be tied to one another by a rope. Rope is now used by a majority of plantations. This is a plastic rope manufactured by the Stanfilco Company with a strength of 200 kgs. But bamboo poles are also used by some plantations. Based on the estimates of technicians, if the rope is used then each stem must be charged with an expense of 25 centavos (about 17.5 VN\$) but the rope is only used once. If the bamboo pole is utilized, then the expense for each stem is 1.7 pesos (about 119 VN\$) but this can be used four times as much (about 2 years). Hence, use of rope strengthening is cheaper than that by bamboo pole. However, bamboo pole must be used when the plant grows too high (over three years) and has a heavy stem that will make the plant fall over easily. This use will reduce losses even if the cost for bamboo pole is high.

Clearing

The plantation, after 6 months of growth, must be cleared. The clearing includes a stripping of the dried leaves. If these leaves are not removed, the stagnant water will make them decayed and become a convenient shelter of insects and bacteria. Those leaves which are dead and those which may cause scratches on banana stems must be cut off. A special tool is now used for leaf cutting. This is composed of steel blade assembled with a long handle. The blade can be used on both sides: Push it up or haul it down depends on the convenient position of banana leaves.

Insect and Disease Eradication

At the plantation belonged either to private cooperators or to the Company that the Group had the opportunity to visit no banana

plants indicated disease symptoms. Technicians told us that the Giant Cavendish banana is a highly disease resistant. Therefore much emphasis is placed on the eradication of insects which affect banana quality and outside appearance. The Japanese importers require that the bananas supplied must not be damaged, no spot or even outside scratch. If the skin is scratched, when banana ripens, there will be a dark spot on the scratched skin thus reducing the commercial value.

The most important insects are THRIPS and MEALYBUGS.

Thrips, one type of hopper belonged to the Hornopteres family usually takes shelter in the shoot. At the shooting stage, these hoppers usually flock together on the female flowers to easily suck resin thus making the future fruits stunted and have many black spots. Technicians here now use SF 101 for insect eradication. When the plant has just begun its shooting and when the shoot has not stood out apart from the plant, the thrip spray must be started and alternately repeated once every 3 days until the stem has two hands shot (about 10 days). Workers use a shoulder carried sprayer with a long handle which must be pumped regularly by hand.

Mealybug is also a type of hopper which usually takes shelter in sheath to suck resin thus making sheath stunted. The Group visited a private plantation which is cultivated with great care and spraying so that the Group had no opportunity to observe these two types of insects. Malathion is used for spraying on the trunk to eradicate mealybugs. This spraying is carried out regularly every two months especially at the shooting stage. Concerning diseases, technicians said that there is only "Chock" disease similar to the "Bunchy top disease." It occasionally is found but does not do serious damage.

Airplanes are used for spraying by plantations in the General Santos area but the long crane sprayers are commonly used by private plantations.

V. HARVESTING AND PACKING TECHNIQUES

Work at the Plantation

When the shooting stage is noted, i.e. three days after the last leaf became visible, the plantation manager must think of the harvest which will take place approximately 90 or 100 days later. Since all plants do not shoot at the same time, those plant whose shootings occur within a week must be marked by a ribbon of the same color. Traditionally, the red color is used for plants whose shootings occur the first week, the blue for the second week, the green

for the third week and the yellow for the fourth week. When the harvest time comes, the plantation manager uses a caliper called "Dial Reading Caliper" to measure diameter of the middle finger of the second hand. If the caliper shows 45 steps or over then the stem can be cut. The caliper has a round shape with two pincers which are shut off by a spring and can be opened by pressing the lower part. Steps are marked on the dial and each step is equal to 1/32 inch. This is a U.S. caliper manufactured by W & A Engineers Inc. P.O. Box 7303, Metairie, Virginia, U.S.

The mentioned above caliper is not available at private plantations. However, a fixed caliper, locally made, is used by these plantations. Its shape is very simple. Below are two traced tools based on the actual measurement.

After being tested and if the stem is ready for harvest (45 steps or over) banana stems will be cut and moved to a trailer which is already parked on the road. A cable system is set up in plantations of the United Fruit Company. After being cut, banana stems will be carefully carried and hooked on the cable which will haul them to the packing plant. This system can save road construction and consequently save area for planting. Private plantations and those of Stanfilco do not have such a cable system. Stems must be carried from plantation to the road by farmers. To prevent scratches on stems, farmers must cover their shoulders by a plastic pad to carry them. A tractor can tow five trailers. Each trailer is composed of 8 stalls which are assembled horizontally and numbered from 1 to 40. Plastic pads are carefully placed on trailers as a mattress where stems are carefully loaded. These trailers are loaded with only one layer of stems and the distance between two stems is also padded carefully.

It was made known that the output of a plantation is approximately 1,000-1,500 CWTS/ha/year (1) (about 45.5 metric tons) and the cost of production per hectare is about 9,000 US dollars.

At the Packing Plant

The packing plant must be located within the plantation. Every 200 hectares has a packing plant. The functions carried out at this plant are as follows:

- Hooking stems
- Removing blooming end points
- Cutting stems into hands and handling-first grading and inspection
- Trimming hands and handling-second grading and selection

- Spraying fungicides
- Labelling
- Weighing
- Packing
- Loading on van-trailer

A tractor conveying banana stems arrived at the plant shortly after the Group arrived at a packing plant in the General Santos area. Gently, workers carried stems to the plant and hung them on hooks. This work is carried out quite quickly and gently because tractor parking is very close to the plant.

Woman workers, with their light hands, move banana's blooming end points. Followed is other team which cut stems into hands and discard those hands which have been scratched or are considered a below designed standards. Stems and low quality bananas are thrown on a moving chain which takes them outside. The grade out ratio of the remaining bananas is very small--about 5-6 percent--and this discarded amount is used as green manure and not for sale because the company signed an agreement with the government providing that local banana markets will not be disturbed. The selected banana of high quality are placed in a water tank where bananas are washed and simultaneously drifted to the other side of the tank. The purpose of releasing banana in a water tank is three folds. Firstly, to prevent scratching in moving bananas. Secondly, to get banana washed clean and thirdly, to cool the banana hands.

Along the other side of the water tank standing horizontally are workers who select bananas and put them in a weighing tray which is principally a scale table. The Group noted that weighing required much time because the selection must be carried out to have exact amount of 12.8 kg. for each tray. This 12.8 kg. will be decreased to 12 kg. net when bananas become dried at the time they arrive in Japan.

After being weighed, these trays are placed on a roller conveyor for a fungicide spraying system to prevent disease infection of cut faces. The fungicide is a solution composed of Alum and Mertec or Tecto 90 produced by Bayers' with a concentration of 380 gr. Mertec and 3.75 kg. Alum dispersed in 100 gallons water.

After being sprayed for fungus, trays are moved to a place where a worker labels every hand. Bananas are prepared for being boxed at this time.

Boxes were available at the upper floor of packing house where three persons were making boxes and padding them. The first person pads them with waste newspaper; the second one lines them with perforated plastic bags and the third one places cardboard on the bottom to keep them solid when filled with 12 kg. of bananas. After that, boxes are moved down to the ground floor where another team of workers place bananas in boxes.

Banana hands are placed in boxes with the upside down. The first two hands (normally, smaller hands) are horizontally placed; the second two hands (normally, bigger ones) are longitudinally placed over the first two hands and if necessary, the fifth hand will be horizontally placed on top. All banana hands are placed with the upside down.

After being filled with bananas, boxes are covered and moved to a nearby area for loading on trailer. Each trailer can be loaded with 1,050 boxes for movement to the port.

The distance between plantations in the Davao area and the port is about 45 to 70 km and it takes a truck about 45 minutes - 1 hour and 20 minutes of running time.

Work at the port

Facilities located at the port are composed of a quarantine bureau where trucks, on arrival, may unexpectedly be inspected, a temporary warehouse without partition-wall and a quality control bureau. Quality inspector records his assessment on a printed form in order to find out, if any, the careless work of packing personnel for future correction. This is the final phase before bananas are loaded in the refrigerated hold of the ship.

It is noted that all work is carried out very quickly so that time from cutting bananas at the plantation to loading on ship is within 6 hours. Specialists told us that they only spend 6 hours to complete the work while Japanese importers require that the time not exceed 24 hours.

The Group observed a ship of 150,000 box tonnage (1,800 metric tons fresh bananas). The temperature in the hold at the time bananas are brought in must be at 40-45°F. When the ship anchors, temperature in the hold will be adjusted up to 56°F (about 13°C). Before being loaded, the normal temperature of bananas is about 87°F. After 24 hours, bananas will be tested on temperature and they will be in the best condition, if their temperature shows 56°F.

The Company hired vessels for transporting bananas at the cost of 100,000 US dollars per year. Seven vessels are under hire with tonnage from 120,000-150,000 to 180,000 boxes.

Transporting time from Davao Port to:

Osaka	4 days and a half
Tokyo	5 days
Yokohama	5 days and 6 hours

Every two days, a ship transporting bananas leaves port. The round trip of a ship is about 15 days. The port time of the ship is only 24 hours--the maximum time for unloading bananas. In short, from cutting bananas at plantation to the time they arrive in Japan is about 7 days.

CONCLUSION:

PROSPECT FOR EXPORTING VIETNAMESE BANANAS

We were really surprised about the complete change of the Davao area within only three years. Originally coconut plantations or abandoned land this area has become large scale banana plantation and brought an important amount of foreign exchange to the Philippines. In the very near future, the Philippines is certain to out distance Taiwan and Ecuador to become the number 1 supplier of the Japanese markets. The reason why this country is successful is due to the determined policy of the Philippine Government and through joint ventures with foreign companies like Standard Fruit & Steamship Co. and United Fruit. In our opinion, Vietnam which has more favorable conditions than those of the Philippines for producing bananas such as suitable land, favorable climate, many large areas which can be exploited and developed and available manpower, when the peace is restored, may be successful if it follows the Philippines' example.

So, after making an on site observation of the organizational structure banana planting techniques, packing methods for export at plantations of Standard Fruit Philippines as well as those of associated farmers who have signed contracts with the Company, the Group realized that there would be problems but may not be serious obstacles in producing bananas for export but the main factors will be:

1) The Government must determinedly encourage and provide policies favorable to carrying out this program.

2) Prompt negotiations to approach a joint venture with large companies which already have experience in banana planting are needed. The companies should also have a marketing system in Japan like Standard Fruit & Steamship Co. of Castle & Cooke. The main problem is to be assured that there is a market for any bananas that will be produced. By so doing, a very important amount of foreign exchange can be expected for the country.

Respectfully report by Saigon
February 14, 1973
Nguyen Dang Hai

Destination:

Mr. Minister of Agriculture and Land Development
Mr. Minister of Economy

"for report"

Messrs: Director General for Agriculture
Director of Export Development Center
Director of Standardization Institute

"for info"

S.A. Robert, Jr., ADFA/AgEcon/Sup
Walter C. Tappan, ADFA/Prod
Vu Huu De, Manager, Agriculture Products Service
Nguyen Dinh Tuan, Specialist, Export Development Center

1
114
19
63

A P P E N D I X E

FRAMEWORK OUTLINE FOR TRAINING VIETNAMESE
FOREIGN TRADE OFFICERS

By

Ernest J. Nesius

Developed for United States Department of Agriculture
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Framework Outline for Training Vietnamese Foreign Trade Officers

The Government of Vietnam (GVN) acutely aware of its need for reentering the channels of international trade, established in 1971 an Export Development Center (EDC) within Ministry of Economy (MOE). Experience in that new unit uncovered the need for foreign trade officers concerned wholly with the marketing and promotion of Vietnamese produces in foreign markets. Furthermore, South Vietnam (SVN) has developed a firm national policy which clearly encourages economic development efforts for enhancing her foreign exchange position.

Over the period 1972-74, the Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA) in cooperation with the U.S. Agency for International Development (USAID), and the GVN conducted a series of market export studies in Japan, Korea, Taiwan, Singapore, Hong Kong, Europe and the United States. These studies discovered opportunities for exports of various types of fresh vegetables and tropical fruits, animal products, food and feed grains, agricultural speciality products such as spices and processed oriental food specialities, timber and timber products, fish and fish products.

Beginning in 1971 through 197? ERS in cooperation with USAID and GVN conducted a series of studies addressed to the production and marketing potential of SVN agriculture. These studies showed a significantly undeveloped potential for the products enumerated above. However, these studies also demonstrated the need for effective national production and land use policies, as well as an active program of in-country technical assistance to realize the potential. GVN recognizes these needs, but is hampered somewhat by the continued hostilities, which is a factor in all policies, plans and actions.

Therefore, except for the continued hostilities, SVN appears to be in an ideal position to concentrate on its need to strengthen its foreign exchange position. The placement of Foreign Trade Officers (FTO's) in the appropriate countries to assist in marketing and promotion of SVN products is a logical step.

Given the studies, the market, the production potential, and the placement of FTO's in foreign countries, all will be of no avail unless a strong backstop effort is provided in SVN. Such a backstop effort must include an energetic, effective, fast acting and coordinated authority in GVN, the full cooperation of potential exporters, and a willingness of the GVN, and the businessman to more than meet the competition in foreign markets. Therefore, the existence of an effective backstop effort is a fundamental requirement and is a basic assumption underlying this proposal.

This proposal takes the PIO/T (730-11-140-291) as the point of departure for development of the intensive training program framework. The stated objective in the PIO/T is:

"to train an initial carefully selected cadre of 15 Foreign Trade Officers, who will be competent to serve as Attaches in selected Vietnamese Embassies and Consulates."

As stated in the PIO/T, it is anticipated that the FTO's will be placed in countries having the most attractive market potential for Vietnamese products. SVN desires the FTO's to be

"competent, technically trained, skilled in obtaining and analyzing foreign market information, promoting Vietnamese products and implementing a sound program of export expansion."

GVN and USAID anticipate that this training program will serve as a guide for future training programs. The PIO/T recognizes the desirability of pre-planned assignments in selected foreign countries where experienced personnel could provide guidance. It is assumed that a training program would continue for 6-8 months with directed work experience running concurrently. The PIO/T makes clear the desire to include as much practical experience as is possible in the training program.

The Role and Work of the Foreign Trade Officer

The FTO is conceived as only one link in the vast private and public machinery geared to the sale of SVN products in foreign markets. The basic role of the FTO is found in the development of these markets, as he resides and works in their environment. Thus, the FTO finds himself fulfilling many closely related roles. Most of them are enumerated below.

- . Discover and promote the SVN commercial interests.
- . Help SVN businessmen make contacts and sales.
- . Discover, appraise, and report on the competitive situation for SVN products.
- . Remove or reduce obstacles to trade.
- . Brief prospective suppliers on the market and possibilities for sale of SVN products.
- . Develop contacts and provide advisory service to foreign businessmen.

- Report events and situations which may result in new markets.
- Handle complaints on quality and specifications.
- Make talks or lectures as requests warrant.
- As a member of the SVN official family, advise the embassy or consulate on the economic and political feasibility of various actions, for example, trade agreements.

To fulfill these many roles the FTO, obviously, must be well trained in a broad spectrum of topical areas, many of which can only be learned through actual experience. Nevertheless, the learning process through experience can be greatly expedited and made markedly more effective through intensive training in preparation for the various job roles. To this end these objectives are directed.

Objectives

Given the information provided by the PIO/T the following objectives seem appropriate.

1. Provide training in obtaining and analyzing foreign market information.
2. Provide training in the development of a sound program for opening of markets for Vietnamese exports.
3. Provide training in promotion and salesmanship methods in foreign markets.
4. Provide training in job and project management in a foreign country.
5. Provide training in understanding the SVN export potential.

Training by Stages

With the above objectives to guide the training program the call is for an Experience Related Training Program (ERTP).

This proposal suggests for stages of training to accomplish the objectives

Stage I	Training in Fundamentals	10 weeks
Stage II	Foreign Country Experience	5 weeks
Stage III	Market Development and Promotion	14 weeks
Stage IV	Job Management and Personal Conduct	<u>3 weeks</u>
	Total	32 weeks

Stage I - Training in Fundamentals

The purpose of this stage is to provide the needed basic information for the subsequent stages. Completion of it will assure a uniformity of knowledge by all trainees.

Stage I is composed of three components:

(1) Introduction would require about one week to explain the training program, describe the work of an FTO, elaborate on the SVN trade policies, and provide an overview of the SVN export potential. Its purpose would be to orient the trainees to what is to follow. The details are demonstrated more elaborately on the attached flow chart.

(2) The fundamentals are divided into three sections which would be handled more or less concurrently and should require about 8 weeks to complete. There is an A section covering applicable concepts and capital projects analysis; a B section covering market intelligence and communications; and a C section covering an in-plant experience. It is anticipated that two instructors would be needed for the fundamentals component, one for the A section and one for the B section. It is assumed that a locally developed plan would be worked out for the method of handling the C section. However, the C section should be closely related and dependent upon sections A and B. A typical day is envisioned to be as follows:

0800 - 1000	Applicable concepts or capital projects analysis
1000 - 1200	Market intelligence or communications
1400 - 1700	In-plant experience

A typical day for Stage III would be very similar to the above.

Even though the trainees may have had basic economics and statistics, the applicable concepts section is considered to be a necessary requirement, as much of the work that follows depends on all trainees having a similar knowledge base.

(3) The problem for Stage II: The purpose here is to prepare the prospective PTO for his foreign country experience. The boundaries of the assigned problem should be sufficiently limited so that the trainee can work it completely through in so far as he has been taught in the three sections under Fundamentals. Not only should the trainee be ready for his foreign country experience, but the appropriate offices and persons in the selected foreign country should also be ready. The experience in the foreign country will be invaluable to the future training as it is a most effective method for bringing reality into the E RTP. (See the Flow Chart)

Stage II - Foreign Country Experience

The purpose of the on-the-job experience in a foreign country is to gain first hand knowledge and experience about the export potential in the country selected.

A likely problem for the trainee would be: "Assume the country in question is a potential market for a selected VN product, and the EDC wants an appraisal of the market so it can most accurately advise the SVN potential exporters."

It is expected that this stage would require 4 weeks in the selected country and one week in travel status.

Involved in this stage would be: establishment of headquarters; assignment of counselors; collection of data; analysis of data; making recommendations; and developing an acceptable report.

Upon return to Vietnam each report should be closely scrutinized, each trainee should be questioned closely for his experiences, and advice freely given for improvement. (See the Flow Chart)

Stage III - Market Development and Promotion

The purpose of Stage III is to acquire an ability to develop market outlets for SVN products, and if the potential market appears promising, to develop and implement an effective promotion program.

Stage III is comprised of three concurrent activities. Since it is the core of the training program, at least 14 weeks in training are assumed to be necessary. The three activities are concerned with applicable concepts, with the practical problems, and with work experience.

Applicable concepts relate to a model of a total marketing system, marketing structures and market organization, consumer behavior, and money and banking.

Practical international problems include trade policies and customs, finance and credit instruments, trade relationships, commodity promotion and program planning. There are many sub-headings under each of these problem areas. (See the Flow Chart)

Experience in problem solving or decision making should be carried out with a local exporter or a government office.

One instructor may be able to handle Stage III provided he had 4-6 short-time consultants with international trade experience. However, it would be a very heavy load. Dividing Stage III into two daily periods would result in a better product. Even so, two or three consultants would be needed. A typical day would be similar to Stage I.

Stage IV - Job Management and Personal Conduct

The purpose of Stage IV is to teach principles of office management and personal conduct in the assigned foreign country.

To complete this stage it is assumed that three weeks would be required. Included in Stage IV would be three sections--A would be for office management; B for personal conduct; and C for a summary of the entire training program. Probably one person, with some local assistance, could handle all three sections.

See the Flow Chart for details.

Manpower Summary

The following summary assumes one over-all project manager and adequate assistance from GVN and businessmen. Thus these are additional instructors.

To teach applicable concepts and research methodology	Stage I	8 weeks
To teach market intelligence	Stage I	8 weeks
To teach applicable marketing concepts	Stage III	4 weeks
To instruct on practical problems	Stage III	14 weeks

The Learning Experience - Suggestions

The plan of mornings devoted to classroom activity and afternoons to directed practical experiences with an intent to complete the intensive learning in 6-8 months, dictates a carefully planned learning experience. To be realistic, variety as well as relevance in subject matter, preplanned teaching methods and materials, 4-6 different instructors, and involvement of an appropriate number of local businessmen with experience in international trade are the basic requirements for conduct of the E RTP. Each instructor in developing the teaching outline for his increment should be provided adequate advance time to provide a syllabus and workbooks for the students.

Research in teaching methods has effectively demonstrated the value of problem-oriented class work. Finding practical examples and refining them into problem exercises, while most important, will be a difficult assignment for the instructors. Therefore, the project leaders should allow for ample course planning time in contracting with individual instructors. Scanning the appropriate literature, selecting references, developing a comprehensive course outline, finding practical problems to fit the principles taught, converting these into work exercises, and development of a syllabus for trainee use is a large task.

Various Comments

It is doubtful if the training program will be successful if the trainees are expected to carry out any part of their presently assigned duties. Individual learning will be maximized when the trainee devotes full time to these studies. Because of the shortness of the training period and assuming full time devoted to these studies, the most that can be expected is an understanding of concepts, operating principles, with some knowledge on how to go about the tasks assigned.

To maximize effectiveness the trainees should be provided an advisory service for at least 1-2 years. This could involve trips to SVN for counsel, to international conferences, and/or a travelling supervisor with home base in Saigon.

FLOW CHART FOR EXPERIENCE RELATED TRAINING PROGRAM
FOR FOREIGN TRADE OFFICERS - VIETNAM

STAGE I

INTRODUCTION

Purpose: To explain the ERTTP

- . Beginning
 - Course plan
 - Expectations
 - Materials handout
- . Job Description
 - Foreign Trade Officer
- . SVN Foreign Trade Policies
 - Exports
 - Imports
 - GVN trade structure
- . SVN Export Potential
 - Overview

STAGE II PROBLEM

Purpose: To prepare FTO for Foreign Country Experience

- . Summary of Fundamentals
- . Develop Problem Statement
- . Develop Plan of Investigation
- . Trip Materials and Instruction
- . Evaluation

FUNDAMENTALS

Purpose: To lay groundwork for ERTTP

- | | |
|-------------------------------------|---|
| . Applicable Concepts | . Market Intelligence |
| -- Basic economics | -- Market research methodology |
| -- Statistical concepts | -- Sources of information |
| -- Elements of research methodology | -- Cooperative arrangement with non-competitors |
| . Capital Projects Analysis | -- Meeting the competition |
| -- Concepts | -- Consumer behavior |
| -- Classworkbook | -- Personal interviews |
| -- Practical problem | -- Interpreting data |
| . Evaluation | . Communications |
| | -- International systems |
| | -- Reporting |
| | . Evaluation |

- . In-Plant Studies VN Export Potential*
- . In Plant Studies VN Export Potential*
 - Products of the sea
 - Products of the land
 - Products of the forest
 - Products of the industries

* Done concurrently with concepts and intelligence sections

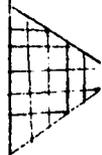
FLOW CHART CONTINUED

STAGE II

FOREIGN COUNTRY EXPERIENCE

Purpose: Gain first hand knowledge and experience

- . Headquarters Specified
- . Counselors Assigned
- . Data Collection Plan
 - Sources
 - Nature of the market
 - Competition
 - Price relationships
 - Trade channels
 - Regulations
- . Analysis
 - Capital project evaluation
 - SVN potential and costs
- . Recommendations
- . Report
 - Style
 - Content
- . Evaluation



FLOW CHART CONTINUED

STAGE III

MARKET DEVELOPMENT AND PROMOTION

Purpose: How to develop market outlets and effective promotion programs

. Applied Concepts

- Model of total marketing system
- Marketing structures
- Marketing organization
- Imperfect competition
- Consumer behavior
- Money and banking
- Evaluation

. Practical Problems

- International trade policies and customs
- Finance and credit instruments
 - + Money markets
 - + Letters of credit
 - + Terms of payment
 - + Claims settlement
- Trade relationships
 - + Vocabulary
 - + Organizations
 - + Shipping regulations and procedures
 - + Product standardization
 - + Trade practices
 - + Trade agreements
- Commodity promotion
 - + Product testing
 - + Test marketing
 - + Trade exhibits
 - + Export agencies
 - + Personal Services
 - + Sales techniques
- Program plan
 - + PERT
 - + CPM
- Evaluation

. Experience on Assigned Problem

- Office of exporters
- Office of GVN Ministry
- Evaluation

FLOW CHART CONTINUED

STAGE IV

JOB MANAGEMENT AND PERSONAL CONDUCT

Purpose: To teach principles of office management and personal conduct

- . Office Management
 - Files and records
 - Export reference center
 - Communications
 - Foreign employees
 - Programs, projects and budgets
 - Evaluation
- . Personal Conduct
 - Diplomatic practice
 - Job description
 - Personal relations
 - Evaluation
- . Training Program Summary
 - Concept review
 - Practicals review
 - Awards

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Relevant Studies

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A P P E N D I X F

IMPORT SUBSTITUTION - A SUMMARY OF RECOMMENDED ACTIONS

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Following is a summary list of recommended actions which have resulted from this investigation. These recommendations are arranged in priority order and emerge from consideration of the food classes isolated by examining import data and related source material. Food classes and areas of action are discussed in both the Overview (I) and Foodstuff Areas for Priority Attention (III).

Fundamental to advancing the recommendations is the organization of the planning agency discussed in the Overview and amplified in terms of its technological requirements in part III. Such an agency should be considered a top priority recommendation. Without an organized approach, very little of the import substitution opportunities can be realized.

1. Vigorously promote an organized starch industry in Vietnam. From our observations, the source to emphasize is manioc or cassava. Planting must be controlled so as to allow continuous delivery of root to plants for processing manioc starch. Markets exist -- textiles, paper coatings, adhesives, brewery, confectionery, pharmaceuticals, fermentation products, animal feeds. Adequate processing facilities are necessary and on-going proposals should be acted on rapidly. Food needs should be developed first. Advanced sweetener production related to already existing technology in Vietnam which could make a substantial addition to the commercial segment of the sweetener market is available for license from U.S. sources.
2. Cost to produce MSG and bakers yeast using a high percentage of manioc starch as fermentation base must be evaluated. Goals should be: (1) to arrive at MSG price that would be competitive on the international market, and (2) establish least cost yeast production in-country.
3. Imported infant foods seem an unnecessary luxury and a complete cessation to licensing such products for import is recommended. This will force internal development which are close to realization.

4. A reduction of wheat imports is recommended. Wheat-based products such as French bread, noodles and biscuits again seem luxury items beyond what are supplied to the military. Dilution of wheat flour by manioc flour should be encouraged.
5. Establish a perequation tax on imported edible fats/oils. This would allow local oil refiners a price competitive position.
6. Emphasize increased artisan production of products such as sugar cane, oilseeds (soy, peanut), corn, fish meal to ease imports of sugar and sugar-based products, edible oils, and animal feeds. Plans should be made for large scale production of these as well as coconut and such plans carried out to the limits that security allows.
7. Dairy processors should be encouraged to use vegetable oils instead of anhydrous milk fat in formulating sweetened condensed milk (SCM) consistent with least cost considerations.
8. Emphasis on the development of a commercial sweetened soy beverage is recommended. Price of sugar to the processor of this beverage should be reduced to allow competition with handicraft products. We have established that licensing or concessional arrangements are possible with the successful Hong Kong product - VITASOY.
9. Technical assistance should be solicited for the following:
 - a. formulation of indigenous forms of SCM,
 - b. formulation of baked goods based on mixed flours (wheat + manioc),
 - c. improving process control in the various food industries so as to meet quality standards,
 - d. establishing and maintaining quality standards that will encourage quality performance to domestic consumption and allow Vietnamese food products to compete on the international market,
 - e. setting up and helping conduct surveys centered on nutrition, morbidity, food behavior.

10. Make it worthwhile for more Vietnamese to become entrepreneurs in the food industry. Too much activity is now in the hands of too few producers. Some control could be maintained by the Development Banks but in concert with a planned approach and enforcement program.
11. Establish an in-country program for training Vietnamese in basic food technology. Such a program has a start but needs better facilities and outside assistance. Ex-country training of selected individuals is also recommended.
12. A clearing house for technical information on food and nutrition should be established in Vietnam, probably in conjunction with the Saigon University's now inadequate food technology department.
13. And to repeat, associate with all these recommendations as well as those made by other teams in the past is the necessity for organizing the agency to plan follow-up and expedite actions based upon all such recommendations.