FINAL REPORT:

ORGANIZATION AND SYSTEMS STUDY

FOR THE

NATIONAL FOOD AUTHORITY

JANUARY, 1985

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Agro-Processing and Marketing Project

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TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

Public Administration Service 1497 Chain Bridge Road, McLean, Virginia 22101

TABLE OF CONTENTS

Page

EXHIBITS

APPENDICES

Public Administration Service 1497 Chain Bridge Road, McLean, Virginia 22101

EXECUTIVE SUMMARY

Following is a summary of the attached report on NFA roles, organizations and systems submitted under a contract between Public Administration Service (PAS) and the Asian Development Bank. The three-month study was carried out by a team of four consultants and consisted of document review, extensive interviews and field trips.

NFA has undergone a substantial expansion in its charter and programs over the past 12 years. It has earned a reputation for fast response to crisis situations and to new program initiatives assumed by, given to or thrust upon it. The NFA of 1984 has some notable strengths: it has a young, very able staff, it has good technical competence, and it is familiar with current policy issues.

Changing Conditions

Economic and political considerations which face the Philippines today and in the near future are such as to require changes in NFA's direction and programs. Extreme budget pressures force attention to program economies and efficiencies rather than on program expansions. The recent commitment of government to deregulation, especially price decontrol, and withdrawal from direct competition with the private sector, have significant impact on NFA's major missions of stabilization and industry development and regulation.

New Directions

The consultants believe that an appropriate framework for NFA today and tomorrow can be constructed around several principles.

- That the stabilization mission be limited to the vital food staples of rice, corn, and wheat, and that the level and nature of stabilization efforts be determined on the basis of the minimum affordable intervention necessary to be effective.

- That the NFA role in commodities other than rice, corn, and wheat be limited to industry development and support, shifting away from NFA owned and operated facilities. Specifically, NFA should not engage in the highly risky business of procurement, processing, and distribution of perishables.

- That all NFA programs and facilities be subject to examination for relevance to mission and economic viability. NFA should work to divest itself of those programs or facilities which cannot be made viable and those which are peripheral to its essential missions.

Major Missions

Within such a framework, NFA would retain a number of its principal programs and activities. Within its stabilization mission, it would continue programs of procurement, processing, and distribution, supported by appropriate infrastructure and systems.

In procurement, the major requirements are to establish and maintain a minimum buffer stock level of rice, corn, and wheat and to have a range of procurement options available to it. The determination of buffer stock level is a complicated task and NFA may well benefit from external assistance in developing its proper holdings.

In processing, which is essentially the management of post harvest assets, the key challenge is to reduce post harvest losses. The Northern Philippines Grains Complex (NPGC) portion of the ADB Agro-Processing and Marketing loan takes an appropriate systems approach to that problem. Elsewhere, NFA has demonstrated its ability to construct and manage good facilities using modern equipment and techniques. Yet not all facilities or support systems are uniformly good. Current major facilities problems are underutilization because of little procurement throughout the system, lack of adequate capacity in some locations and, costly and inefficient grain and feed discharge from ocean vessels in Manila Bay. Support and control system problems range from an inadequate spare parts procurement procedure to historical problems with inventory control.

In distribution, two major issues are future of the Kadiwa outlets which, under the broad lifting of price controls, take on the appearance of normal retail operations, and the controversial takeover of flour distribution by NFA in 1983 which, on one hand, generates badly needed revenue for NFA and, on the other, files in the face of general government policy to withdraw from undue competion with or control of private enterprise.

Within the industry development mission, the urgent need is to improve private sector involvement. Major barriers to increased participation are lack of incentives to invest in new or modernized facilities and uncertainty about the NFA (or government) suddenly changing the rules, putting private collateral at risk. To break down these barriers, the consultants advocate the earliest possible adoption of a two or multi-tiered price system for rice, an increase in Quedan Program loan limits, changes in the loan provisions for private mill modernization under the ADB Agro-Processing and Marketing loan, and restraint on the development of additional NFA owned and operated facilities.

Other NFA programs supporting industry development involve research, extension, credit, insurance, business promotion, and market development.

NFA's regulation, licensing, and enforcement activities have grown rapidly. Licensing and registration activity will continue to grow if non-grains participants are added. On the other hand, decontrol of prices on most foodstuffs has major implications for monitoring/enforcement activities which heavily revolve about issues of pricing. Government will still need pricing information but could collect such data through more efficient statistical sampling means which are outside of the regulatory function. A third issue is whether registration/licensing/enforcement should remain with NFA while it is a participant in the same market in which it exercises policing powers. The consultants believe that there are better options but such would require broader study and action on the part of government.

Peripheral Programs

NFA currently engages in a number of other programs and operates several facilities which either fall outside of or are not essential to its central missions, or which fail economic tests. For example, it runs a series of production programs such as corporate and demonstration farms, piggeries and swamp reclamation which do not fit within either its stabilization or industry development missions. It has recently been assigned responsibility for a rice intensification loan program which does not fit either its major missions or agency capability.

Several facilities, such as the Southern Philippines Grains Complex (SPGC), an oil extraction plant within the SPGC, and a rice husk fueled power station at Iloilo all appear to be facing continuing financial losses. The Kadiwa operations, on the other hand, are potentially viable but lose their unique character in an era of price decontrol. NFA must pursue its options in divesting itself of losing ventures and should consider the sale or lease of Kadiwa operations to the private sector or their subsidiarization or establishment as a separate corporation with joint public and private ownership or management.

A special case is Food Terminal, Incorporated (FTI), a subsidiary whose financial condition is desperate, with accumulated losses of over 550 million pesos. This poses a dire threat to NFA's own scarce resources. It appears to the consultants that FTI is unable or unwilling to cost its individual operations in any usable or realistic fashion, may well have an overloaded administration, and engages in many activities which serve little public purpose or make little economic sense. FTI urgently needs a better information system, a hard look at its operations, and early decisions on retention or disposition of its various operations.

Organization

The consultants offer a number of conclusions and recommendations regarding organization, management, and administrative practices to support new directions for NFA. First, NFA would do well to streamline its structure around its two continuing major missions of stabilization and industry development, to further bring together under one head the various corporate administration functions, and to create a new organizational grouping devoted to new programs and to planned disposition or dismantling of existing programs or facilities which do not meet economic tests or serve program purposes.

Secondly, a decentralized field structure makes sense for NFA. The Authority needs to clarify the roles and relationships of central, regional and provincial offices, update and upgrade delegations of authority, and reduce the now excessive, duplicative and wasteful reporting burdens on the field offices. Particularly useful in this area would be the creation of a Director of Field Operations at the central office level.

Third, NFA needs to address more effectively a number of top management tasks. Planning and budgeting need to be better linked, organizational evaluation needs to be coordinated and institutionalized and executive and personnel appraisal practices need strong attention. The Authority should refine its current staffing standards and initiate a more structured approach to training.

Financial Administration

In the matters of finance and financial administration, a number of concerns are noted. The Authority is seriously undercapitalized and exists on borrowed funds. It requires major adjustments in its capital structure. The best solution would be to convert its publicly held bonds to equity and to receive annual government contributions to capital, but this will require a drastic about-face on the part of government. Yet without such assistance, the Authority may be unable to continue to finance its primary missions.

Existing balance sheets include balances that are old and unreconciliable and should be written off. Also, the Authority should tighten its management of receivables in order to reduce the capital tied up in them. The Authority should reconcile and more clearly report its investments in subsidiaries, and produce consolidated statements.

In the matter of financial administration and operations, NFA's controls are good but its systems are not particularly efficient. Minimal use is made of computers, regionalization of accounting is not satisfactory and the volume of reporting both in-house and to the Commission on Audit is excessive. Critical to correction of these problems and to achieving improved accountability for operations through more descriptive and complete financial reporting, is revision of the Chart of Accounts currently in use. The consultants outline a possible revision of the Chart which would be suitable to computerization, force review of existing reporting requirements, and provide better information on projects and functions.

Computer and System Development

From its review of computer and system development within NFA, the consultant team concludes that development and extension of computer applications is vital to improved effectiveness and efficiency in the Authority's management and operations, and that NFA has a reasonably sound five-year plan and project priority list. However, there are a number of barriers and problems associated with these plans. there are economic and budget constraints which may limit needed equipment acquisition and system installation. Further, the Management Services Division, which oversees computer development and operation, can improve the ways it sets priorities, monitors progress, involves user departments and uses training. Finally, changes in NFA's direction could have substantial effect on data needs over the next years and detailed planning must take these changes into account.

I. INTRODUCTION

This report on the roles, organization, and systems of the National Food Authority (NFA) was prepared by Public Administration Service (PAS) under contract with the Asian Development Bank (ADB) as part of the Agro-Processing and Marketing Project, T.A. No. 493-PHI.

The PAS consultants are deeply appreciative of the full cooperation, support, and assistance given them by both NFA and ADB during the course of the study. At NFA, Minister Jesus A. Tanchanco gave his full support to this review, and that was reflected in the complete accessibility to staff and records, the selection of capable and conscientious counterparts, and in the provision of necessary support services. At ADB, Dr. Aminul Islam, Paul Mampilly, Brian Webb and other staff were thorough, substantive, and supportive in their review and discussion of the consultant's Interim Report and Draft Final Report.

The project was notable for the excellent communications between and among the participants as findings, conclusions, and recommendations were developed. In particular, the extensive tripartite discussions involving NFA, ADB, and PAS at the conclusion of the project reflected the commitment of all parties to a strengthened NFA within a changing mandate.

II. STUDY APPROACH

The consultants approached the several tasks embraced within the Terms of Reference through document review, extensive interviews, and field trips. Existing authorities, working papers, and documentation were made available to and reviewed by the consultants. Interviews were held with key NFA staff in each central office directorate, 8 NFA regions, 15 provinces, and at selected key facilities within the Philippines. Discussions were held outside of NFA with a variety of private sector representatives and farmer groups. In the public sector, the consultants met with officials of the Office of Prime Minister, the Ministry of Agriculture and Food, the Presidential Commission on Reorganization, the Food and Agricultural Council, and pertinent offices of the Commission on Audit.

The consultant team consisted of four members:

- David Head — Team Leader, Organization and Management Advisor.
- James Berlin — Advisor on Post Harvest Management.
- David Fitch — Advisor on Finance and Budget.
- Jack Beilby — Advisor on Management Information Systems and Computer Development.

Messrs. Head, Berlin, and Fitch arrived on site on the weekend of September 8, 1984. Mr. Beilby arrived in Manila on October 12. The PAS project supervisor, Robert Hoover, met with the team on November 21-22 and participated in the review of the draft final report in early December.

In the course of the project, the consultants filed an Inception Report at the end of the third week and an Interim Report at the end of the eighth week of work. These reports, particularly the Interim Report, which set forth the major issues being addressed by the consultants, were discussed at length with ADB and with NFA top management.

A draft final report was made available to both NFA and ADB on December 7 and was extensively discussed with both during the following week. Particular attention was given to additions to or clarifications of analysis, conclusions, and recommendations and to strategies and plans for implementation. The consultants completed necessary follow-up work on December 17-18 and departed the site on December 19.

III. GENERAL OBSERVATIONS

This report is based on an assessment made in 1984 of NFA's missions, programs, organization, and systems. The very nature and challenge of the study has been to make that assessment in light of present and anticipated future conditions. Because of the substantial economic and public policy changes occurring in these times, this report will, of necessity, suggest and recommend changes altering the course of NFA from the directions it has followed in previous years.

It is important, then, for the reader to understand that this is not a critique of the past, but rather an agenda for the future. One of the notable strengths of NFA in the 12 years of its existence has been the speed with which it has been able to respond to the tasks given to it. It has been an extremely responsive organization, able to marshal and organize its resources rapidly and, in the main, to effectively achieve its goals. These are qualities which will serve NFA well as it faces a changing agenda.

NFA has a strong record of achievement. When created in 1972 as the National Grains Authority, NFA was given the task of "promoting the integrated growth and development of the grains industry so that it can adequately function as an institution conscious of its social responsibilities and capable of providing adequate and continuous supply to the nation and of contributing its proper share to national economy" (PD No. 4). The task was substantial. The agricultural economy of the time was volatile on the supply side and rapidly increasing on the demand side. The market side was socially apathetic and undisciplined. The government response was disorganized and inefficient.

The NFA (then NGA) set about its work on a wide range of fronts. It totally revamped its structure and personnel. It participated, with other agencies, in an intensive rice production campaign. It developed both emergency and on-going measures to deal with changing consumption patterns.

It developed intervention and stabilization techniques. It became heavily involved in the import/export of grains. It supported a wide range of production and marketing development programs. It developed a network of storage, processing, and retail facilities throughout the country. It undertook programs of applied operational research and extension and training. It extended its knowledge, coverage, and licensing of traders and operators. It instituted credit and insurance programs. It expanded its influence beyond the staples of rice and corn to all grains, then to grain substitutes and, more recently, to a range of commodities under the general heading of non-grains.

In all this activity and development, a constant companion was crisis management, whether as a consequence of nature's whims (typhoons, draught, volcanic eruptions), economic and political instability, gluts and shortages of food commodities, or market manipulations not in the interest of producers or consumers. NFA responded to each while at the same time, striving to achieve a more stable and developed framework in which the food industry could thrive. NFA had to "learn on the job" under extreme pressure.

The net result of these efforts makes the NFA today an agency with a very wide charter but with some exceptionally strong characteristics and capacities. Several are particularly worth noting because they influence the nature of this report.

First of all, NFA has put together an extremely able staff. Its rigorous recruitment standards, coupled with its freedom from civil service salary limits, have resulted in a personnel complement which has both depth and quality. Staff educational levels (77 percent are college graduates) are high. Its work ethics are noticeably strong. Its motivation to perform and its interest in the mission and performance of NFA beyond the scope of individual assignments is widely evident. There are good communications among personnel. The human resources of NFA are strong.

Second, NFA's technical capability is good. It has demonstrated that it can put together good facilities and programs. It has proven its ability to do planning, analysis, and evaluation work of high professional standard. It has not, of course, achieved uniformity of excellence in all that it does, partly because of the rapidity of change and the natural lag between crisis response and measured rationalization. But, again, NFA has established a good degree of sophistication in its professional undertakings, with the result that this report need not concentrate heavily on fundamental "how to" guidance.

Third, NFA has given thought to many of the long-term issues raised in this report. The proposed agenda contains few items of an entirely new dimension and it does not deviate greatly from directions that NFA itself recognizes as logical evolution for itself.

These three points--strong staff, sound technical competence, and familiarity with the policy issues--provide a solid base upon which future direction can be set and achieved.

IV. CHANGING CONDITIONS

As outlined in the previous section, NFA's origins and frequent expansions of charter and activity are rooted both in real and perceived national emergencies and concerns and in the broader undertaking of food industry development. What is important today is to understand how the critical missions of the Authority and its associated programs, strategies, and practices fit with and are appropriate to present and anticipated future conditions.

The two fundamental missions of NFA are to stabilize the price, supply and quality of essential food products, and to promote and develop the food industry within the Philippines. The NFA charter is built upon a range of Presidential Directives, Government Orders, Letters of Instruction, and occasionally less formal direction. The NFA is empowered, for example, to:

1. Institute the negotiable warehouse receipt or quedan system.
2. Maintain and manage a national buffer stock.
3. Own, lease, operate, or otherwise hold lands, buildings, and equipment necessary to its functions.
4. Engage in production, manufacturing, processing, and/or packaging of food products and commodities as may be necessary to effectively carry out its functions and as approved by the President.
5. Enter into, make or perform contracts and agreements directly or in behalf of the industry between the government and other governments or institutions.
6. Inspect and monitor industry inventories.
7. Seize and sell commodities to stabilize supplies and prices.

8. Register, license, and supervise warehouses, mills, grains dealers, retailers, processors, importers, and exporters.

9. Establish rules and regulations for export and import of foodstuffs and for the fuller range of NFA activities.

10. Undertake direct importation and exportation of basic commodities.

11. Coordinate governmental activities in the study, research, and promotion of measures designed to improve processing and marketing standards, practices, and processes.

12. Contract indebtedness where necessary to accomplish its functions, to invest in stocks, bonds, and other obligations.

13. Establish or restructure its own organization and to fix, within broad limits, its own pay and benefit structure.

Careful reading of the various documents supporting NFA's programs suggests that NFA is not so much mandated to do each of these activities as it is empowered to undertake almost any action it sees fit to accomplish its goals and to set its own limits as to the extent and range of its actions. In other words, wide discretionary powers are available to NFA.

The current situation in the Philippines and the probable conditions of the future should influence how NFA chooses to exercise its discretionary power. In only a few instances are there barriers to change which must be addressed by changing the formal mandates of the Authority. These will be noted where applicable. But for much of what will be proposed in this report, the opportunity for change lies with NFA. The strengths of the organization make it possible for NFA to exert leadership on these matters and, to a major degree, be in control of its destiny rather than be overrun by events.

There are several extraordinary pressures now present in the Philippines which have impact on NFA's role within government and in the economy. These pressures have their root in the national economic crises. First, there is a necessity for government to aggressively seek economies and efficiencies in its operations in order to conserve budget resources. In NFA's case, this has meant that no government subsidy has been forthcoming in the current year and NFA has been made responsible for financing its own operations, including its social and public responsibilities, through borrowings and a range of revenue producing activities. Without guaranteed budget support, NFA is compelled to take a hard look at those activities which are not at least self-supporting. Additionally, this situation tends to keep NFA in some programs, which can only be marginally considered to serve necessary public interests, on the grounds that they produce income for the Authority.

A second condition of the times is the pressure on government to disengage itself from broad intervention in the market and to pursue deregulation across many fronts. During the course of this review, price controls have been lifted on virtually all food commodities except rice. The existence of price controls has been a significant part of the working agenda for NFA and change, therefore, has effect on its programs. The increased thrust toward freer markets and privatization of government-operated activities also places a number of NFA efforts under new scrutiny.

A third pressure is to rationalize the range of government programs dealing with or affecting sectors of the economy. Particularly in agriculture, there is pressure to bring production activities together under the Ministry of Agriculture and Food, to place the marketing functions within NFA, and to tie the two major organizations together in more effective fashion. This study is of the NFA programs and concentrates on setting forth a clear agenda for the Authority. A consequence is identification of some efforts which fall outside of the redefined charter. This report does not address the question of organizational ties or placement within the broader context of the government structure, for such a review is outside the scope of work set forth in this contract.

These current constraints and conditions appear to be compelling over the near and mid term. They provide a framework in which to test current undertakings of NFA and to set forth some principles to guide future planning. The next section deals with that framework.

V. A NEW DIRECTION

In this section, the consultants propose a policy framework for NFA which is responsive to the changing conditions described above. That framework will subsequently be used to assess the missions, programs, strategies, and practices currently followed by NFA. Those which fit the framework, or which can be adjusted to fit, will be discussed in Section VI of this report. Those which fall outside of the framework will be identified and reviewed in Section VII. The organizational, financial, and systems implications of the proposed policy structure are contained in the last three sections of the report.

Stabilization Activities

The first issue in which policy direction must be set is the matter of stabilization responsibilities. In the main, the stabilization work of NFA has been to ensure the adequacy of supply and quality of basic food and feed items and to protect both producer and consumer from fluctuations in price as a result of changes in supply or of market manipulations by traders. The major questions, especially in view of changing conditions, are the scope and coverage of stabilization activities and the programs and methods by which stabilization is sought.

NFA's stabilization efforts and authorities have perceptibly expanded during its existence. Initially limited to rice and corn, they expanded to all grains, then to grain substitutes and then, at least in potential, to the broad category of non-grains. The recent lifting of price controls and the impetus toward a freer market system suggest a retrenchment in scope.

Rice and corn are the staple foods of the Philippines. In addition, wheat has had an increasing influence in consumption patterns and has become a partial substitute for rice and corn. The Philippines are almost totally dependent on imports of wheat, but wheat is and always has been cheaper for the Philippines to import than is rice. So, because of demand, substitutability, and price, wheat can be considered a third staple food. The demand for rice, corn, and wheat is inelastic in an economic sense in that consumption is only marginally affected by fluctuations in price. In other food groups, demand is more elastic and therefore more responsive to market forces. The government has a legitimate obligation to protect the consumer in those areas which are vital to life and in which the consumer has little option to switch to other substitutes. In other commodities, the necessity of government intervention is less compelling and, in the light of budget constraints and the availability of preferred options to develop a more responsive and responsible private sector, NFA can and must choose a more limited stabilization role. The first principle proposed, then, is:

> That the pivotal stabilization mission be limited to the basic food commodities of rice, corn, and wheat.

The second question is the selection of techniques and levels of intervention in the primary commodity groups. The options are limitless, ranging from a fully managed and operated production--processing--marketing system to a system in which NFA can flexibly intervene or withdraw as circumstances warrant.

In practice, NFA has exercised its stabilization roles from farmgate to consumers in excess and in deficit situations. It has protected the producer by providing a market for harvest at a guaranteed support price. In times of surplus harvest, this has meant that NFA has increased its buffer stock holdings and brought into play its exportation activities. In times of lower production and consequent higher prices paid by the private sector, NFA generally has been unable to acquire buffer stock except through escalation of support prices or through importation. This was the scenario in 1984.

At the market level, NFA has sought through release of its buffer stocks to business outlets and particularly its Kadiwa stores, to influence consumer prices by increasing supply and/or providing a low-cost alternative to the individual buyer.

NFA's stabilization concerns are not only to maintain a national stability of supply and price, but also to address the substantial regional differences between producers and non-producers, in times of surplus production and under production, and in response to natural disasters such as drought, typhoons, or volcanic eruption. Such efforts require an elaborate information and distribution system.

In the matter of wheat supplies, NFA has run a wide gamut of operations from relatively low levels of intervention and control of imports and distribution to the 1983 takeover of the nationwide distribution of flour and the resulting suspension of operations of private flour dealers, traders, and retailers.

NFA has historically used a range of intervention techniques, but the changing conditions and thrusts so rooted in economic necessity suggest a second principle:

> That the level and nature of intervention for the purposes of stabilization of supply, quality, and price of rice, corn, and wheat be determined on the basis of the minimum affordable intervention necessary to be effective.

This principle, of course, has many operational and resource ramifications. It requires an adequate monitoring, information, and decision-making system to provide informed judgment points on where, when, and how to intervene. It requires both a sufficient buffer stock and ready access to supply sources to be able to influence the supply side and consequently, the price side. It requires a facilities base sufficient to hold, process, and move stock. In general, NFA has done a good job in its stabilization activities, particularly in rice and corn. With these crops, it is experienced, capable, and comfortable in its intervention options. It has an extensive facilities base throughout the country. NFA's capacity to carry out an effective stabilization program is sufficient to the need.

But there are some negative implications to the more restricted intervention role, primarily related to finances and efficiency. To have an emergency capacity means that both staff and facilities will be underutilized during periods of normalcy. In addition, it cannot be guaranteed that NFA can recapture even its direct costs of intervention; this means that additional or emergency funding sources must be found. Ideally, government should realistically face the fact that for NFA to perform a valid, even if limited, stabilization role will require some subsidy. This is particularly true if government continues its policy of supporting producer prices. More will be written on this point in Section IX.

Industry Development Activities

The general charge to NFA to promote integrated growth and development of the food industry in the Philippines remains pertinent today. How NFA should proceed with that mission is affected by changing conditions and emphasis.

As NFA has moved into wheat and other grains, grain substitutes and non-grains, it has struggled with defining and limiting its activities. Increasingly large chunks of manpower and financial resources are being spent in and committed to these areas. Staff interviews consistently reveal concern and uncertainty about both the validity and future of NFA programs which are not tied to the staples of rice and corn. The concerns are particularly acute when non-grains work is discussed.

There are several reasons for that uncertainty. The development of commodities such as meat, poultry products, milk and dairy products, fruits, and vegetables is not the same as the development of rice and corn. The technology, standards, and facilities requirements are different and the market is more volatile. Producers are not as organized as their counterparts in the grains industry due to the diversification of commodities they produce. This means that the tested techniques used by NFA in rice and corn are not particularly applicable to non-grains and that influences its procurement, processing, distribution, and marketing options. So the first uncertainty is that NFA is in its non-grains efforts in uncharted waters.

A second reason for concern is a substantial sense that a major rationale for much of non-grains activity is to support both Food Terminal Inc. (FTI) and Kadiwa operations. This report will later discuss both and will conclude that FTI is in extraordinary financial difficulty and that the Kadiwa program is now a prime candidate for subsidiarization or privatization.

In reviewing the non-grains options, the consultants are of the firm opinion that government is making tactical and financial errors in engaging in the procurement and handling of perishables. This is a high risk undertaking requiring strong incentives to maintain the diligence and effort necessary to make it profitable. Almost by definition, government does not have such motivation and incentive, especially over the long-term. With a proper profit incentive and a range of technical support available to it, the private sector can operate in this area more efficiently.

This leads to a third principle:

> That the NFA role in commodities other than rice, corn, and wheat be clearly defined and limited to development of markets and market information, facilitating contact between producers and outlets, general oversight and limited involvement in the export/import of food products, commodities, raw materials, and related equipment and facilities.

A fourth principle is:

> That program concentration should intentionally shift away from the development of NFA owned and operated facilities to stronger support and assistance to the development of a responsive and responsible private sector.

This principle has clear applicability in terms of non-grains, but it is also pertinent to plans for supporting the basic crops. Later in this report, a detailed discussion will argue that the maximum contribution that can be made to food industry development and to the reduction of post-harvest losses will come from improvements in private sector participation. Barriers to such participation will be identified and both general and specific recommendations will be offered.

The report will also offer some favorable comments about the Northern Philippine Grains Complex now under development and identify reasons that facility addition makes sense. The force of the fourth principle is essentially one of taking a tighter posture in regard to future NFA facility development and to seek first the option of private participation.

Losing Ventures and Peripheral Programs

The effect of the first four principles is to set limits on the NFA mission to reflect both vastly tighter economic constraints and changing public policy. This requires NFA to review the balance of its programs and operations and to determine what adjustments and actions are necessary to bring these into line with the tighter charter.

The two major considerations in this review are the economic viability of the undertakings and the relationship of these to the redefined missions.

As has been noted above and will be discussed more fully in Section IX, NFA's financial status is precarious. Its debt financing costs are escalating rapidly. Its debt/equity ratio is far short of comfortable norms. It has no assurance of government subsidy or support. NFA must, then, look first to itself to achieve all possible economies and efficiencies.

The most productive search for economies begins with isolating and identifying those programs and facilities which are, and will continue to be, perennial losers. The accounting system used by NFA has inhibited that identification; but the Authority has, through ad hoc studies, begun to obtain more valid information on certain undertakings. The recommendations set forth in the sections on finances and on information systems will provide a more automatic and precise framework in which this examination can be made.

Nevertheless, the Authority can make some determinations now. The consultants, in their review, can identify several major facilities which are draining NFA resources: FTI and the Southern Philippines Grains Complex (SPGC). Within SPGC, there is an oil extraction plant that has little hope of ever achieving breakeven status. At Iloilo, a power project using rice hulls is under construction and its economic future is highly questionable. In Section VI, each of these will be discussed separately, for their origins, purposes, and history are different and alternatives to resolve the problems vary. For purposes of this section and the principle that is advocated, it is sufficient to note that these are known to be losing ventures and that NFA must confront its alternatives.

In addition, NFA should set a rigorous agenda for itself to subject each of its operations to the same kind of cost tests. A potential area surely is the extensive network of warehouses (287 owned and 420 leased) throughout the country which are substantially underutilized under today's circumstances. Not all these warehouses exist on merit or need and NFA would do well to establish and adhere to strict guidelines on placement of such facilities. Because NFA's stabilization work has fluctuations, NFA must have flexibility in both facilities and staffing. Given a fixed minimum base, that flexibility comes through adroit leasing policies and, in the case of manpower, maximum use of casual employees.

It should be re-emphasized that economic viability is not an exclusive test of whether or not an activity or facility should be maintained. The key stabilization and industry development activities embraced in the first four principles will not automatically be economically self-sustaining and this has major budgetary implications for NFA and government. Nevertheless, the economic tests highlight areas where the most careful operational control must be exercised and where the search for alternatives is most compelling.

Other Peripheral Programs

NFA also operates a number of programs which can survive strict economic tests or could be made to be viable undertakings but which are not necessary to its essential missions.

The consultants' review of NFA's programs, projects, and efforts identified several which are not clearly within a tighter NFA charter or which may duplicate efforts undertaken by other agencies. For example, NFA engages in aspects of corporate farming, farm development, model farms, piggeries, and swamp reclamation. These are production activities in the main and should fit under the aegis of the Ministry of Agriculture and Food. But the issue is not quite that simple. Corporate farming is an example. This responsibility was set by G.O. 47 and that order still applies. In reality, that initial program has been administratively retailored as times and circumstances dictated without revision of the basic order. As operated by NFA, it is at least self-sustaining, uses only minor resources and is neither a financial nor operational drain. Its continuance or its abandonment would be of no great consequence. Yet the best course would be to push for revision of G.O. 47 and, in so doing, advocate its placement in revised form with the Ministry of Agriculture and Food.

Another area in which there is noticeable duplication of effort is in the obtaining and interpreting of economic and statistical data which is at the heart of decision-making for NFA. There has been open duplication and dispute between NFA and the Bureau of Agriculture Economics (BAECON) in the Ministry of Agriculture and Food over production and consumption data. The record shows substantial differences of opinion and both sides claim better methods and greater accuracy. It is obvious, however, that NFA has felt compelled to develop its own sampling and estimating techniques in the same areas as BAECON. The differing results have led, in the past, to substantial disagreement over consequent actions such as the necessity and level of imports in a given period. The consultants note that the resolution of these differences and duplications are not within NFA control. The proper vehicle for determination is the National Economic Development Authority (NEDA) and there is evidence that attention is now being given to rationalizing data gathering and interpretation. NFA participates in those discussions and must be prepared to adjust its own efforts consistent with decisions made in that forum.

A somewhat different look can be taken at some of the programs and facilities now operated by NFA which are profitable or nearly so and which can be considered as relatively self-contained entities. An illustrative example is the Kadiwa program.

The Kadiwa program was initiated in 1981 to provide, through a network of government-operated retail stores, a check on spiralling costs of commodities brought about by world-wide inflation. In essence, the Kadiwa outlets offer consumers a range of food and other commodities at prices which are equal to or lower than the lowest prevailing prices in the area in which Kadiwa is located. The Kadiwa program was instituted quickly and it rapidly expanded to include over 300 outlets.

In this past year, NFA has undertaken a rigorous evaluation of its Kadiwa operations with the purpose of obtaining results measurement which gives a rational basis for determining optimum numbers and location of Kadiwa stores, standardization of operations, facilities, product lines, staffing, and services. The study is of good quality and has set the stage for an operation which can both be viable and continue to serve its original intent.

Partly as a result of this rationalization, NFA reduced the number of its Kadiwa centers and, by May, 1984, directly operated 178 Kadiwa centers in 169 cities/municipalities. NFA's subsidiary, FTI, operates 25 Kadiwa centers, 23 of which are in Metro Manila. To the consultants' knowledge, FTI has not subjected its Kadiwa operations to the same program of rationalization undertaken by NFA. FTI's Kadiwas are costed differently, operate with different margins, sell a wider range of goods, do promotional efforts, and, in general, are little different from ordinary retail operations.

During the first six months of 1984, Kadiwa operations run by NFA (exclusive of FTI) showed a net profit from operations of ₱14.2 million. This still fell short of recapturing interest expense on loans funding the program, and the loss after interest expense was ₱458,186. Nevertheless, the program of rationalization undertaken by NFA suggests that the Kadiwa program can operate very close to the breakeven point and the consultants believe that this makes the Kadiwas a candidate for subsidiarization or for sale or contracting out to the private sector. A Seed Capital Project presently on a pilot basis in seven provinces is a good step in this direction. Any judgment on the FTI-run Kadiwas is subordinate to the question of FTI's financial standing and multiplicity of business which is discussed in Section VI of this report.

Section VI also describes in fuller detail the examples cited throughout this subsection as well as other programs and activities which would be subject to a fifth fundamental principle:

> That all NFA programs and facilities be subject to examination for importance to mission and for economic viability. NFA should work to divest itself of those programs or facilities which are peripheral to its essential missions, and should seek, to the extent possible, to find alternatives to those which are not economically viable.

VI. MAJOR MISSIONS

This section will summarize and comment upon the principal programs and activities now carried out by NFA which remain valid under the changing conditions and the five principles set forth in the preceding section. The categorization will be by the major missions of stabilization, industry development, and regulation/licensing/enforcement. This section will not treat the subjects of management, in-house support, human resources, finances, or systems. These are organizational and not mission elements and are reviewed in later sections.

The Stabilization Mission

Within the more limited charter proposed and discussed in the prior section, the stabilization mission for NFA would remain for the basic items of rice, corn, and wheat. As such, NFA would continue to operate programs of procurement, processing, and distribution. It would maintain a timely and effective information system. It would continue to lease, own, or operate a wide range of facilities such as warehouses, dryers, and mills necessary to acquire, store, and process its buffer stock requirements. It would manage a transportation capacity through a package of owned and leased vehicles. It must have an effective inventory control system.

Much of the basic network of policy, program, strategy, and facilities for the stabilization mission is in place. The consultants take note, however, of areas which need adjustment or change in each of the three supporting programs.

Procurement

Because of the push toward decontrol of prices, NFA's capacity to maintain adequate supply and affordable price of rice, corn, and wheat is heavily dependent on its ability to acquire, hold, and release, in timely fashion, stocks into the market. This forces NFA:

- To establish and maintain adequate buffer stocks.
- To have access to funds for procurement from a variety of sources including importation when required.
- To have an effective monitoring and information system to provide planning and decision data.

Neither NFA nor any other agency is able to say conclusively what an adequate buffer stock level is. Conventional wisdom is about 90 days supply held by both public and private sector. The high estimates, based largely on the concept of two rice crops per year, is 120 days. The low estimate is 60 days based on the potential for production staggered over a year and better methods which could yield three annual crops under best conditions. In late 1984, NFA only held something like three days' supply in many locations and that is obviously not a safe margin. In more normal times, NFA has sought to maintain a reserve of approximately 30 days' supply of rice, roughly equivalent to its distribution requirements but short of providing reserves for unforeseen droughts or other calamities.

It is imperative that NFA establish and maintain a minimum buffer stock level of rice, corn, and wheat to be able to perform its stabilization mission and ensure national food security.

The determination of the proper level of buffer stocks is a difficult matter. NFA has an Inter-Directorate Committee studying this question and it is considering a formula approach taking into account such factors as per capita consumption, population change, historical ex-farm prices versus NFA absorption of marketable surplus, optimum absorption rate necessary to stabilize ex-farm prices, production figures and seasons, injection rates necessary to stabilize retail prices, periods from peak of procurement to last in period, milling recovery factors, and locations of stocks.

This is an extensive and applicable list of factors, but several, particularly the effective intervention rates, need considerable development before usage. The consultants did not attempt to make their own estimate of what an adequate level of reserves would be but believe that the factors identified are appropriate considerations in arriving at a rational figure for the Philippines.

A second consideration in the matter of buffer stocks is whether these must be physically held--engendering high procurement, inventory maintenance, and facilities costs--or whether a combination of holdings and forward commitments might be more efficient in the long term. The consultants believe that NFA might benefit from qualified outside expertise in making these determinations.

In order to acquire an adequate buffer stock level, NFA must have a range of procurement options available to it suitable to changing economic conditions. The ability of NFA to procure buffer stock historically has been a function of the level of production and established support prices. In times of high production, NFA has had little problem in stock acquisition because the support price it has offered has exceeded the price determined in the market. In times of lower production, the private sector has offered a higher price than the support price, and NFA has had difficulties in local procurement. That is substantially the case today.

The definitive move to decontrol prices may well, in the long term, apply even to rice. For the short term, it is unlikely that rice prices will be left to free float and the consultants agree in principle. Later in the report, recommendations will be made to implement a two or multi-tiered pricing system for milled rice primarily as an incentive to private sector participation and modernization. But one of the options available with a multi-tiered system is that price controls could be lifted on the higher grade rice and retained for the lower grades as a guarantee of affordable staples to the general population.

The implications of price control changes and the introduction of a multi-tiered grading system may widen NFA's ability to procure its buffer stocks not only on the basis of support prices where still relevant, but also on a buying price established by the market where control and support prices are lifted.

NFA should also, in its stabilization mission, maintain its option to engage in direct importation of basic commodities in order to both control volumes and fill national requirements. It should not place itself in a monopoly position on imports, but rather support and supplement the general supply situation and maintain its potential to influence price by release of its own holdings.

Distinctions should be made between import strategies associated with rice and corn, which can be locally produced, and wheat, which is almost totally imported. In the first instance, through the use of sound predictive indicators, NFA can make relatively accurate estimates of national supplies of rice and corn and can compare these with consumption patterns to determine and anticipate deficit and surplus situations. In the case of wheat, the relatively known quantity is consumption and what must be determined is to what extent the private sector can and is willing to assume importation of wheat in response to that need. NFA will, of course, need to acquire and hold some minimum buffer stock of wheat, but beyond that base, the relative shares of importation between the public and private sectors is dependent on a range of factors. The consultants believe that if the private sector millers and importers are permitted to operate under the same conditions as NFA, that the private sector response will fulfill all but the minimum requirements.

In the course of review of existing procurement methods, the consultants noted that NFA is frequently offered palay that may have been rejected by traders or that farmers know is of poor quality. NFA's quality assurance program is intended to maintain minimum standards. But procurement of deteriorating palay may occur because some quality assurance field personnel believe they do not have adequate support from superiors. Due to lack of clearly understood standards, farmers complain when their palay is rejected or downgraded, and these complaints frequently reach the NFA Central Office. Quality assurance technicians perceive that these complaints reflect negatively on their performance. These field teams need assurance and confidence that their strict compliance with procedures is in their own self interest and that of NFA.

Quality assurance procurement teams must be firm in accepting only that palay which can be milled to reasonable quality rice. Quality standards for palay will eventually remedy this problem.

Processing

The subject of processing is essentially the subject of post-harvest asset management, and this report treats several topics under that heading. The first is the matter of concern over post-harvest losses. The second is a general evaluation of NFA's existing post-harvest facilities. The third is a review of systems supporting the processing activities.

A fourth topic which particularly would affect post-harvest losses is improved private sector involvement. But this subject is even more fundamental to the general mission of industry development and is discussed under that heading.

Post-Harvest Losses. A critical concern is reduction of post-harvest losses. In rice, the estimates of the extent of such losses range from 10 to 36 percent of the annual crop. For the producer, whose base costs to put in the crop under intensive cultivation, approximate half the value of the potential harvest, post-harvest losses translate into a loss of profit of double that percentage: 20 percent to 72 percent. Well documented research on the subject describes many contributing factors such as:

- Introduction of higher yielding varieties of rice which may be thinner husked and more susceptible to deterioration and pest damage.

- Increased pressure on existing facilities through production increases.

- Poor timing of harvest, either when the grain is past maturity, shatters and cannot be recovered, or when premature, which produces lightweight grain and reduced milling yields. Harvest timing may be affected by labor supply and weather.

- Fragmented organization of rice handling, particularly when grain must be transported some distance to collection centers, dryers, and mills.

- Losses in threshing due to thresher wear or machines out of adjustment.

- Rice fissuring and breaking during milling. Modernized mills recover 3 to 6 percent more milled rice than older mills and a greater percentage of head rice. But fissuring still occurs, although mechanical and physical stresses are only partly responsible. Recent research indicates that fissures are also caused by moisture adsorption or desorption prior to or after milling.

- Inadequate drying techniques and facilities. In the Philippines, most rice is solar dried. The national highway has been called, only partly in jest, the largest solar dryer in the country. This is the cheapest form of drying, but is effective only when small quantities of rice are handled. Where mechanical dryers are used, because of limited mechanical dryer capacity, local managers must resort to double handling of palay during peak periods, initially drying palay from about 26 percent to 18 percent moisture content, and at a later date, drying again to the 14 percent required for safe storage. The double handling adds to losses and costs, although it is the best alternative available.

NFA is involved directly in post-harvest asset management as a consequence of both its stabilization mission and its industry development objectives. Market intervention, by itself, has required NFA to acquire or construct a range of storage and processing facilities. In addition, NFA has moved to fill needs in drying and processing capacities generally throughout the country as part of its industry development objectives. It is currently embarked on a major project through an ADB loan to develop a Northern Philippine Grains Complex (NPGC). The NPGC takes a systems approach to post-production and post-harvest operations. As such, it recognizes the interdependence of threshing, drying, storing, and milling. The NPGC concept recognizes appropriately, that upgrading only some elements in the chain of events between harvest and market, and not others, will not improve rice quality or quantity significantly.

In the consultants' view, NFA has the technical capacity to develop workable facilities; and inspections of newer installations indicate that it has up-to-date knowledge regarding storing, drying, and milling rice. This is not to say that improvements are not possible. The next section contains both general and site-specific findings and observations regarding NFA facilities.

Facilities. The major issues regarding NFA's facilities are their sufficiency in number and quality, their positioning, and their utilization. The major types of facilities are warehouses, dryers, and mills.

NFA owns 287 warehouses with 1.4 million ton' capacities and leases 420 warehouses with 789,000 ton capacities. Thus, its holding capability currently is about 30 percent of the annual rice harvest. Warehouses, of course, are also used to store corn, wheat, and feedgrains, as well as non-perishable items primarily associated with Kadiwa stock. NFA has expanded its warehouse capacity in recent years. As a government agency, it was subjected to political pressures to construct or lease warehouses in areas not of its own choosing or selection. In other instances, NFA sought to better position its warehouses in areas of need.

It is quite clear that the total warehouse holdings of NFA are in excess of its need and that a program of rationalization should lead to considerable savings. NFA has developed a standard operating procedure to evaluate utilization of its leased warehouses and uses a standard that facilities with less than 75 percent utilization be considered for immediate phase out. The low level of NFA procurement in the past two years has resulted in underutilization of virtually all facilities so that application of the 75 percent standard will have to be considerably tempered with judgment about potential use in future years. Nevertheless, the application of standard evaluation measures is valid and should be extended to owned, as well as leased, warehouses.

NFA has 731 dryers with capacity to dry 327 tons per hour, a level of about two percent of the total harvest. NFA has the majority of the country's dryers and the lack of drying capacity is the most limiting factor in producing quality rice in the country and is a major contributor to post-harvest losses. Development of additional drying capacity is a key part of the Agro-Processing and Marketing Project supported by ADB loans. Additional incentives for private sector investment in such capacity is described later in this report, especially in the adoption of a multi-tiered pricing system for rice.

NFA has 91 rice mill units in different locations in the country with a rated capacity of 216 tons per hour. The NFA mills represent four percent of the national milling capacity. In general, the NFA mills are more modern, representing seven percent of the nation's modern rice milling capacity. Neither the total NFA milling capacity nor its modern milling capacity is sufficient to handle NFA needs under normal circumstances. NFA contracts most of its milling requirements to the private ~~sector's modern mills; this is supportive of the~~ private sector and, in the long term, an incentive to modernization.

The NFA mills are necessary to support the stabilization mission and modern mills are essential to comply with export grade specifications should the nation have surplus rice. As private modernized mills come on stream, NFA should begin to phase out its older mills.

The consultants visited a range of NFA facilities during the course of the project and provide additional commentary on operations, regions, and specific complexes as follows:

Rice mills in several locations were acquired as grants from Japan. The successful bidder was Satake, a well-known Japanese manufacturer of milling equipment. Generally, in industry, machinery operating at 80 to 85 percent of rated capacity is considered to be performing well. It is difficult to assess the performance of NFA milling because it is judged, input versus output, on the basis of mill running time instead of the entire work shift when the mill should be running. Downtime, due to electrical power failure, parts breakage, lack of palay, etc., then become reasons for poor performance. There are frequent "chokes" on machines, minor breakdowns needing repair, and employee inattention which cause machinery to function at lower than rated capacity. Discussions with NFA engineers and managers indicate that there are problems in spare parts procurement. Spare parts control is necessary, but becomes a constraint to efficiency if mill operation is stopped frequently because of lack of consumable items. Instances are cited where managers or engineers and a representative from the accounting department drove to Manila, purchased a needed part from personal funds, and sought later reimbursement. A review of parts procurement procedures with recommendations from plant engineers is an obvious remedy.

- Machine capacities are rated by foreign manufacturers under circumstances and rice varieties elsewhere which may not exist in the Philippines. Such ratings are developed during long-running periods, during which mills are fine tuned and operating capacities developed. With the low level of rice procurement during the past two years, it is going to be difficult for NFA to find the long operating runs necessary to fine tune its mills. Efforts should be made to develop runs of sufficient length to enable operating staff to maximize mill capacity.

- The visit to Sultan Kudarat, Mindanao, was of interest in that farm production units in the area were larger than those observed in the Luzon area. This suggests that some elements of post-harvest activities could be mechanized to the advantage of the farmer without significantly increasing total costs. Certainly, a walking mechanical reaper could be used advantageously. This would permit better utilization of scarce labor at critical harvest time and aid in reducing harvest time. Mechanization may not improve efficiency or productivity in smallholder operations, but it can make a difference between a timely, good harvest and a water-soaked mass of palay.

The Southern Philippines Grains Complex (SPGC) in Sultan Kudarat is unique in that it is an excellent facility with modern machinery and considerable bulk handling capacity, but it is currently badly underutilized and cannot be sustained in today's economic climate. A description of the facility, its problems, and possible alternatives is contained in Section VII on Peripheral Missions. A side observation is to note the initiative of the SPGC staff in fabrication of rubber rolls. Should they achieve a technical breakthrough, producing rolls of equal quality to commercial rolls at a lower cost, then a new industry may be created, and modernized rice mills would have lower operating costs.

A visit to Isabela and the Northern Philippine Grains Complex (NPGC) provided an opportunity to speak with a farmer group organized as an irrigation association. If post-harvest grain losses are to be reduced, active farmer cooperation is necessary. Lack of dryer capacity in this region is evident. Harvest should occur when grain is physiologically mature and the moisture content is 22 to 25 percent, but this is hardly possible when it is raining continuously. During the visit, harvesting was underway in the rain and the palay was sodden. The NPGC complex and its 24 procurement warehouses and dryers will have positive impact in the area.

NFA and National Irrigation Authority management officials in Isabela should be commended for their cooperation and support of farmer irrigation associations. The group visited was proud of association money earned and deposited in the bank and of their purchase of thresher equipment from NFA. They are considering lease of an NFA warehouse and dryer. Long-term support of this nature is essential if farmers are to overcome the handicaps of small holdings and limited capital. If this basic part of the population is ever to escape subsistence farming and become self-sufficient, it will be through stronger associations.

The support they require should include economic studies of their proposed investments. The consultants believe that they should not be encouraged to invest in rice milling, but rather, in intensification of present farming or acquisition of additional leased areas to farm.

<u>Grain and feed ingredient discharge from ocean vessels</u> in Manila Bay is inefficient and costly. Imported soybean oil meal has a disappearance or shrink factor of about six percent in handling, and imported grains a shrink factor of about two percent. Despite the inefficiency, importation of grains and ingredients were among the few profitable activities of NFA in 1983. With the relatively low cost of these imports, the 1983 aggregate gross profit was ₱532 million. In times of high prices for grain and ingredients, however, NFA may subsidize these purchases so that flour and feed prices are held down to assure relatively low prices for bread, broilers, and pork. Improvement of ship discharge operations at Manila bay has been studied extensively over the years, but it is a highly-capital intensive investment requiring a deepwater site, pilings to support massive silo and grain weights, pneumatic discharge legs for discharging bulk cargoes, a silo system with appropriate distribution devices, bulk and bag load out systems, and room for truck scales and traffic. Sufficient bulk grain and ingredient handling will have the advantages of improved inventory control, reduced contamination, reduced weather losses, reduced spillage, reduced demurrage and time, reduced losses due to rodents and insects, and reduced handling.

It has been suggested that a barge and vac-u-vator would improve the situation. The consultants are of the opinion that while it would eliminate the use of clamshells to offload into barges, thus reducing one source of handling loss, it would only be a partial improvement. Eventually, a complete new system would be necessary.

If a good site could be found, it would be worthwhile to develop a joint venture company with private sector users who could share in its economies. This system could also be developed to handle discharge of non-toxic materials such as granules, powders, and cement. Increased use of facilities would permit rapid amortization of the investment. Investors would have to have confidence in the long-term profitability of th grain industry and of a favorable business environ ment. Current procedures add costs to grain an ingredients without adding value.

NFA has demonstrated its ability to plan, construct, an operate a modern bulk ship discharge facility. The have done so at the Batangas Bay waterfront for th soybean oil plant. There is further discussion i Section VI on the special circumstances surrounding thi facility and plant.

Processing Support and Control Systems. Two of th major support and control problems in processing ar facility utilization and inventory management. Procurement and processing of rice and corn for NF stabilization requirements are, of necessity, ar intermittant activity.

For the past two years, NFA has procured little rice due to effects of drought and typhoon crop damage and resultant prices above price support level. As a result, there has been little activity in milling and warehousing. Because of this circumstance, the consultants could not directly assess policies and systems in practice. Therefore, comments generally are descriptive in nature and reflective of past history, recent changes, and future directions.

Warehousing of grains and the need to control inventories is of great concern to all in the grain industry. The potential for manipulation and fraud in grain handling is always at the forefront of management thinking. Therefore, good inventory control policies are important, and close attention by management that policies are adhered to is essential. NFA experienced a major write-down of inventory in 1983 of over 200 million pesos, largely due to failure over many years to take and reconcile periodic physical inventories with accounting records. There was excessive dependence on "volumetric" inventories which are essentially estimates. A new policy requiring physical inventories to be taken semi-annually, or whenever warehouse stock is reduced to 20 percent of capacity should prevent any future write-downs of such magnitude. NFA should consider an even tighter policy, making physical verification a quarterly routine and requiring loss accounting soon after inventory.

In the earlier discussion of NFA-owned facilities, note was taken of the currently high degree of underutilization. There are only limited opportunities for converting under-utilized NFA facilities to other uses. One such possibility is installing a feedmill inside or alongside a warehouse. Any such decision to build a feedmill must be based on an economic study which would include marketing of finished feeds, census of animals, availability of ingredients, and competition in the area.

Should a feedmill be decided upon, an additional consideration should be whether a pellet mill is warranted. There are many advantages to pellets:

- Gelatinization of starches in feeds and therefore better assimilation and feed conversion.
- Less dust.
- Better mechanical transfer and handling.
- Easier salability if competition has pellets.

But a pellet mill and supporting boiler or steam generator and crumble rolls are costly items and require more technically trained staff than a simple mill. If space is planned for later installation of the pelleting equipment, a basic feed mill could be installed in a short time at small cost. Should experience indicate a need for pelleting, the equipment could be added at a later date. If the feedmill is of limited capacity, pelleting equipment probably could not be justified.

Distribution

Within the stabilization mission, distribution involves the means by which stocks of basic commodities acquired and held by NFA are transported to holding or processing facilities, shifted from one locale to another, and sold or released into the market. The components of a distribution system are an adequate and timely information base for decision making, a transportation capability, and outlets through which commodities can enter the market.

Planning traffic patterns for the movement of grain from sources to facilities for drying, milling, and storage is a complex exercise, involving consideration ofweight limitations on bridges, road construction, and determination of optimum routing to achieve the greatest number of stops at the least distance. Also, traffic patterns change each year as surplus production areas change.

Reference is made in the Information Systems section of this report to a Grain Dispersal System which is under development and in partial use. Information on warehouse inventory stocks of palay and milled rice are reported daily from the field to the Central Office Grain Directorate. There, the information is entered into the computer with data on movements of palay and rice and the time inventories will last based on current usage. This is an effective control system as it avoids surprises and provides time for management to react to surpluses and shortages.

The significant issue in distribution is the network used in releasing stock. The conventional methods of sale to dealers remain largely unaffected. But the elimination of most price controls on a range of staple commodities does impact a major outlet--the Kadiwa stores. By price decontrol, the government establishes its intent to step back from a heavily managed economy and to let market forces and competition set prices for most commodities. Through the Kadiwas, the government could absolutely ensure that prices of covered commodities would be within the set support and ceiling prices. A Kadiwa could, through wise buying and stocking, provide commodities which were not price protected at least at the lowest price levels available in the area which it served. Under broader decontrol, the fundamental rationale for the Kadiwa program appears to be eroded. Save for rice, stock for the Kadiwas must be procured by competitive methods. Because of economic belt tightening, such stock must be sold at prices sufficient to recover all costs or else the Kadiwa must make up for its loss leaders through other commodities. The result is an operation clearly like any ordinary retail store, depending on shrewd buying, competitive pricing, and efficient management to stay afloat.

If, as was suggested in Section V, the Kadiwas are potential candidates for subsidiarization, lease, or sale to the private sector, the government could still preserve its legitimate interests in protecting prices on rice through contracts, licensing requirements, or other operational devices as a condition of lease or sale. Further comments on the Kadiwas are included in the next section.

A second issue which falls primarily under the heading of distribution is the 1983 intervention by NFA into flour distribution. In 1983, a flour shortage occurred, due in part to the devaluation of the peso. NFA, responding to that crisis, took over exclusive control of flour distribution to the nation's millers and bakers. The rationale was to stabilize supply and to reduce hoarding and overcharging by those who had access to the limited stocks in the country. The intervention was considered temporary, but, as of this report, continues with no certain timetable or definition of conditions under which NFA would return flour distribution to traditional channels.

The flour intervention has been a source of continuing controversy and debate in the press. The private sector charges that the NFA action was capricious and done without consultation. NFA states that its response was in the national interest and that it held at least 10 meetings with industry representatives before takeover.

Bakers charge that the intervention reduced their earnings and forced them to the edge of business failure. NFA adopted an allocation plan based on capacity that bakers had claimed in their license applications. Since license fees are based on reported capacity, a number of bakers had underreported their capacity and thus received allocations below their real capacity.

Millers charge that, on several occasions, NFA has forced them to shut down processing because of surplus wheat in silos. NFA responds that there still remains a national shortage and that its actions are to ensure an even flow of limited supplies into the market.

Private sector representatives charge that the real reason for NFA continuing its monopoly, particularly on importation, is that it is a major revenue producer for NFA. Distribution and importation from all import activities did earn over 500 million pesos in 1983 and such revenue is essential to NFA's financial condition. The consultants understand that a legislative move to force NFA to withdraw from its intervention was dropped because of the government's inability to find revenue offsets through the budget process.

A final point on this matter is that even if NFA opened up grain importation (as it has in feedgrains) to the private sector, it may not find takers because of higher duties and taxes private firms will have to pay over that now required of NFA, the lack of credit guarantees to the private sector which are available to government agencies, and apprehension about the adverse and uncertain business and economic conditions.

The consultants make no definitive recommendation on this point other than to state that, in principle, NFA and the government should strive to achieve conditions in which NFA's monopoly position can be eliminated in policy as well as in practice. The consultants recognize that changes in a number of policies affecting those conditions lie outside the control of NFA.

The Industry Development Mission

This mission may pose the biggest and most important challenge to and opportunity for NFA in the future. As government relaxes its management and control of the food industry, it must add emphasis to its support and development roles. NFA cannot consider itself to be the "market" or to be the key player in the industry.

This section will initially focus on the question of development of a responsive and responsible private sector. The private sector's involvement and participation will be the major determinant of the success and growth of an integrated and stable food industry. The second part of this section will identify those activities now being conducted by NFA in support of industry development which should continue and perhaps be expanded. The third part of the section will comment on the regulation, licensing, and inspection roles that are legitimate concerns of the government and will pose the question of whether all or part of those control activities should remain with NFA or be organizationally separated.

Need To Improve Private Sector Involvement

Even in the crops in which NFA has had maximum stabilization responsibilities, the maximum degree of NFA intervention has been limited. In the rice market, for example, the outside limit of NFA involvement has been about 15 percent of the crop (although this varies substantially from region to region). If farmers retain an estimated 20 percent of the crop for family consumption, then approximately 65 percent of the crop is left to the private sector for processing.

So even if NFA does an excellent job of reducing post-harvest losses on all the rice it handles--and it is on track to do just that--the national reduction of these losses is not significant unless the private sector participate strongly. This point is certainly understood and emphasized in that part of the Agro-Processing and Marketing project which includes a private sector incentive plan to encourage 350 private millers to modernize their mills. To date, however, after two years, only 18 of 64 applications for loans have been approved and no funds have yet been drawn down. The consultants will later set out some recommendations for improving the attractiveness of these loan provisions, but believe the reluctance of the private sector to participate in this program has deeper roots.

Conversations with private sector representatives consistently yield the following concerns:

- Under the present system of price supports and ceilings, there is inadequate margin for profit and therefore little incentive to invest.

- Although better quality milled rice is, in practice, sold at higher than the government-controlled prices to consumers willing to pay a premium price, the absence of a legitimized two- or multi-tiered pricing system serves as a strong caution against premature investment in mill modernization.

- There is uncertainty as to what extent NFA will go to in expanding its own facilities, increasing its own participation, or suddenly intervening as it did during the period of flour shortage in 1983. Concern is expressed that NFA can "change the rules" at any time, putting private collateral at risk. Millers voice concern that their licenses must be renewed annually and that granting or withdrawal of NFA milling contracts are critical to them. They worry about the potential for capricious actions by NFA.

- There is a strong feeling that NFA is antagonistic toward the private sector, and this reaction is regularly reinforced by NFA's activities and almost daily public rationale for procurement or intervention actions to check "unscrupulous," "irresponsible," "hoarding," or "profiteering" traders.

There is some merit to each of these concerns. The consultants particularly believe that NFA should adopt a two-tiered pricing system. When current NFA-FAO studies on palay standards are completed, they should be introduced also, so that farmers can benefit from a premium price for better palay.

Another important reason for a two-tier pricing system for milled rice is that it will reduce the potential for graft existing at present. Today, if an inspector encounters a retail vendor selling rice at over the controlled price limit, the vendor may be legally cited and is subject to penalty. The consultants are informed that the inspector may be offered a bribe to overlook the offense. The frequency of these occurrences and their implications are only conjectures. An uncontrolled or higher price for better quality milled rice would offer additional incentive to quality milling and reduce the motive and temptation to cheat.

The consultants further believe that NFA should go slowly in proceeding with considerations to add as many as four additional grain complexes to its holdings. The priority should be to attract private sector participation. If that is not forthcoming, NFA will almost certainly fill the void and will move further toward a de facto nationalization of the grain processing industry. It is the very rare instance, indeed, where government-owned and operated businesses can match the efficiency of the private sector.

Finally, NFA needs to improve its public relations with private sector associations. This is not to say that it should relax its regulatory and enforcement vigilance and powers, but rather that is must develop parallel support, assistance, and incentives which bring the energy of the private sector into play.

An additional incentive, beyond the two-tiered pricing system mentioned earlier, which has little risk, would be to permit Quedan Program loans at 85 to 90 percent for cooperating millers. Quedan loans have a near perfect repayment experience, and the current 80 percent reserve requirement may be too conservative. Millers complain of lack of funds to buy palay, and this would provide additional funds at small risk.

An additional incentive to private sector involvement would be to change the loan provisions for private mill modernization under the loan agreement negotiated by NFA with ADB for the Agro-Processing and Marketing Project. As was mentioned earlier, there has been slow response to this private mill modernization program. Visits with private sector rice millers suggest that some changes should be considered in the program to make it more attractive, yet without putting the borrowed money at risk to NFA or ADB. The basic elements are in place, namely the 100 percent collateral requirements, the five-year amortization period, and the interest rates. The consultants recommend that amortization (principal and interest) be set to start six months after mill modernization is completed. At present, the schedule requires first payment in 90 days, whoh may not coincide with palay procurement.

Such a change would help, doubly so if the broader recommendations concerning Quedan loans and tiered pricing system for rice were implemented.

The following paragraph from the article "Agribusiness in the Developing World" (Newsweek, October 15, 1984) by a retired World Bank official, is included because it is relevant:

> "The past decade has tended to confirm the view that when farmers have adequate incentives, access to the inputs and technology they need and markets for their output, they respond and agricultural production increase. An important less on the 1970s was that neither public investment nor expansion of credit is a substitute for incentives, a lesson that has yet to be learned in some centrally managed economies."

Continuing Support Activities

NFA and its subsidiaries currently engage in a range of support and assistance activities which are important to the industry development mission, fit within the tightened charter proposed for the Authority, and are worthy of continued and selectively expanded support. The major lines of effort developed by NFA are research, extension, credit, insurance, business promotion, and market development. Comments on these institutional support systems follow.

The Quedan Guarantee Fund Board (QGFB) is a subsidiary created in 1978 by LOI 704, primarily as a credit device to encourage participation of the private sector in the grain industry. This is a successful program similar to warehouse receipt lending programs used in many countries.

The QGFB was initially conceived to cover procurement of palay on The concept has been expanded to include corn, feedgrains, and ot commodities, with the commodity pledged and/or mortgaged under the program 80 percent of the loan value. The repayment experience of this financi program is excellent. As the need for financing purchase of palay and oth commodities is critical to private sector participation in the grain industr the consultants suggest that the QGFB raise the present 80 percent to percent or perhaps even 90 percent of the loan value. The 85 percent figu would increase the available funding by 50 percent. There is ample precede for this as the loan reserve figure increased over the years in several ste from 66 percent to the current 80 percent. Since the repayment experience ha continued to be successful, there would not appear to be significant increas of risk at the 85 percent level.

This additional funding is considered by the consultants to be a important incentive to private sector participation in the Mill Modernizatio Program sponsored by the NFA-ADB Loan Project.

NFA operates an in-house technical and extension program to improve post-harvest handling systems and to transfer this technology to all sectors of the industry. It promotes quality control methods and standards.

NFA also conducts socio-economic surveys related to corporate and industry development strategy.

Studies are conducted of facility improvement and expansion of product and by-product utilization. Physical, biological, and chemical analyses are made in central and field laboratories. Food testing is done for the protec- tion of health of the public.

NFA has a strong link to the private sector through its range of extension programs offered to farmers and other food industry participants. Extension personnel promote improved post-harvest handling of crops. The wheat milling industry is assisted through demonstrations to bakers, retailers, and wholesalers. Technical assistance is also provided to millers to improve milling recovery and more profitable usage of by-products.

The Grains Insurance Corporation (GRAINSCOR) was organized in 1978 to facilitate the servicing of the insurance and bond requirements of the grains businessmen so as to maximize the protection of farmers' and traders' grains deposits. As an insurance general agent, it solicits non-life and surety business for the government-owned Government Service Insurance System and its accredited private insurance companies. The forms of insurance coverages handled by GRAINSCOR include bonds, fire, marine, motor car, and group life accident insurance. It receives direct commissions for its efforts from the companies from which it solicits business. The expansion of the GRAINSCOR coverages suggests that it may have outgrown its NFA home and might better fit within the Ministry of Finance.

The Business Promotions program is considered by NFA to be primarily developmental. It provides guidance to the private sector in the determination and undertaking of profitable ventures. It also encourages formation of businessmen into trade associations. Additionally, linkages with financial and banking institutions are created to facilitate credit to the private sector.

In terms of market development, NFA should retain its interest in strengthening linkages between production and marketing, development of the export market, and establishing trading posts in production centers where buying and selling transactions are monitored by NFA. To the last point, the establishment of farmers markets in strategic areas as planned in the Agro-Processing and Marketing Project is a progressive step. The consultants believe that the concept of the Valenzuela wholesale market project is logical, well-conceived, and past due. It would represent substantial improvement over the crowded, noisy, dusty, confusing Divisoria, the current wholesale market through which much of Metro Manila's fruits and vegetables changes ownership and finds its way into retail stores. The modern sheds and cold storage facilities at Valenzuela will do much to reduce the spoilage and quality losses currently experienced.

Yet the consultants are concerned over contentions by several traders that the Valenzuela site is not well located in relation to the road systems. They state that the cloverleaf market is a better location, although it is too small for the volume of produce intended for Manila from the Northern Provinces. The consultants did not have the opportunity to asses the validity of these concerns.

Regulation, Licensing, and Enforcement Mission

NFA has been engaged since 1973 in the annual registration and licensing of grains businessmen engaged in varying lines of activities such as retailers, wholesalers, millers, and bakers. Currently, about 150,000 licenses are granted annually. With the expected growth in the grains industry and the inclusion of non-grains within the NFA charter, this program will continue to expand.

Companion to the regulation, registration, and licensing programs is the activity of enforcement, that is, the perpetual task of monitoring, inspecting, and oversight of compliance with government and NFA rules and regulations. Continuous surveillance of all market places, both public and private, is carried out to ensure that prices are within the levels set by the government. In 1983, nearly 10,000 investigations of violations were conducted; 81,000 grains establishments were inspected; 1,800 warehouses were audited or examined; and 4,800 grains businessmen were served orders of suspension, license cancellation, desistance, or warning advice.

There are a number of considerations in assessing this activity: rationale for the efforts, workload, changes in requirements, and organizational placement.

There are multiple reasons for regulation, licensing, and enforcement activities. The obvious reason is protection of the public through establishment of fair rules and limits, monitoring behavior, and disciplining or bringing into line those who do not abide by the rules of responsible business behavior.

But there are other substantial reasons for the activity. One is to be able to identify the target population for purposes of taxation. Another is to ensure more rigorous tests for those who contractually or financially participate in government programs such as the Quedan credit program. A third and very vital reason is to obtain statistical data on the industry which can help shape the government's programs and policies. The consultants accept these as valid reasons for this range of activities.

In terms of workload, it is apparent that regulation, licensing, and enforcement activity will grow substantially in the years ahead and that this will put great pressure on staff resources which are unlikely to expand at the same rate. The Business Regulation Division is contemplating a change from a fixed annual licensing date to a system which would stagger renewals throughout the year. The consultants believe that such a change is appropriate and encourage early adoption to relieve seasonal fluctuations.

The government move to deregulate prices on most food products has major implications for the monitoring/enforcement activities. There will remain a residual need to continue the monitoring on rice pricing as long as price controls are retained, but the extensive monitoring pressures associated with enforcing broad price controls are eliminated and this should provide major workload relief. On the other hand, the government will retain an interest in general price information, but this will no longer be a regulatory activity, but rather a data-gathering effort which can be handled by more efficient sampling and reporting methods and by organizational units other than Business Regulation.

A general policy question is whether the Regulation/Licensing/Enforcement activities should be organizationally positioned in NFA which has been and will continue to be to some degree in the future, a participant and player in the same market in which it exercises policing powers.

On one hand, it can be argued that as long as NFA operates in the same market as the private sector; fairness requires that enforcement and regulation activities be separated from it, reverting to a direct government agency without real or potential operating bias. On the other hand, the regulation, licensing, and enforcement activities still have a relationship to the NFA's stabilization and industry development missions, and the reduced "competitor" role for NFA advocated throughout this report modifies the rationale for separation of these activities from the Authority.

The consultants take an intermediate position that, at a minimum, the regulatory functions should be self-contained in one unit and not mixed, as is the case currently, with other operational activities (e.g., business promotions). Secondly, NFA should carefully consider whether, with the removal of price controls, its remaining purposes could be reasonably served through information arrangements with the other licensing authorities in the field at the municipal level or at the national level through the Bureau of Domestic Trade or the Bureau of Food and Drugs. The consultants cannot make a professional assessment of those possibilities within the terms of this contract, but believe that a broader study of licensing on the part of the government could lead to efficiencies and economies.

VII. PERIPHERAL MISSIONS

This section identifies and discusses current NFA activities, operations, and facilities which appear to the consultants to fall outside of the recommended new directions for the Authority. Included are those which:

- Should be curtailed because of decontrol/deregulation thrusts.
- Are more appropriately handled by other organizations.
- Are economic losers that cannot be sustained in today's budgetary climate and could be transferred or sold to the private sector in line with the government's efforts to draw tighter limits on its participatory and competitive roles in the economy.

A number of these peripheral activities, programs, and facilities have been cited in previous sections of this report and these will simply be summarized. For others, additional descriptive material will be presented along with a range of recommendations concerning alternatives for disposition.

Regulations, Licensing, and Enforcement

These activities were discussed fully at the conclusion of the prior section, Major Missions. The theme developed was that the decontrol of prices on most food commodities removes the legal and regulatory basis for much of the investigation, inspection, and enforcement work now conducted by the NFA directorates involved. NFA will, of course, require some continuing regulatory work, but many of the values of a registration and licensing system are statistical in nature and could be obtained through arrangements with other authorities engaged in similar work. Government, in general, could find economies and efficiencies in a broader look at such activities. A more consolidated effort would also remove some burdens on individual entrepreneurs and firms which must now seek licenses and be subject to inspections by multiple governmental entities. It must also be pointed out that any reconstructed licensing and registration authority must be capable of producing timely, accurate, and necessary data to users such as NFA, or else the program loss may exceed the operational economy.

The recommendation made in the prior section is that the regulation, licensing, and enforcement work of NFA be self-contained in a separate organizational unit and not mixed with operational or promotional activities. A separation of these functions from NFA and their placement with a direct government agency would depend on the existence of a regulation and licensing authority capable of meeting program needs.

Production Programs

Production programs now run by NFA include corporate farming, demonstration farms, piggeries, and swamp reclamation. The NFA charter is in the marketing arena, while production is clearly the domain of the Ministry of Agriculture and Food. As was pointed out in Section V, the corporate farming activity has its roots in a government order which is still on the books, although hardly recognizable in the programs now being carried out. The order needs revision. The consultants recommend that production activities which retain public validity be transferred to the Ministry of Agriculture and Food. Should any production programs no longer have applicability--as may be the case with corporate farming--they should be abandoned. NFA has only incidental land committed to farming and among the options available to it would be sale to private interests or to employee cooperatives.

A new program to assist rice farmers was announced in early December, 1984. The purpose of the program is to encourage farmers to produce two palay crops during the next dry season. An aspect of the program consists of loans to farmers by NFA in the form of agricultural inputs.

During 1983, NFA had an experience with another program involving loans to farmers. A brief description of that program and its outcome is instructive.

This program, known as the Emergency Cereal Loan Program, was established during the drought of 1983 to provide farmers with one cavan of rice per family to tide them over until the next crop came in. The total program was to be valued at 150 million pesos, and loans actually totaled about 149 million pesos. The rice distributed was out of NFA's inventory, and was issued to farm families at ₱4.85/kg., or ₱242.50 per cavan. Thus, some 614,000 loans were created in seven regions. All that a farmer needed to qualify for a loan was a letter from his Mayor or Barangay Captain. It is reported that the program created many "instant farmers."

As of September 30, 1984, the Authority was still carrying on its balance sheet a receivable of about 133 million pesos, only about 16 million having been collected. The loans were to be repaid in cash, palay, or rice, although almost no recoveries were made in cash. Following the next harvest, NFA provincial staff made efforts to effect collection of these loans, including door-to-door visits to farmers, with very little success. Chances of collecting these receivables diminish with the passage of time, and the remaining receivable may well be written off.

Government did allot 35 million pesos to NFA for the program, but NFA is still left with a large receivable.

The new program, as mentioned, involves the provision of agricultural inputs to farmers in 20 provinces in 11 regions. This program involves some 300 million pesos of loans at 3,000 pesos per hectare. These loans will be in the form of seeds, fertilizers, and chemicals, and will bear interest at 15 percent per annum. A loan of 3,000 pesos, repayable in 300 days, will thus cost a farmer about 394 pesos in interest charges. The loans are to be repaid in kind to NFA at prevailing buying prices and specifications.

This program is very similar to the Expanded Yellow Corn Production Assistance Program, which was implemented in early September, 1984. This program operates in the same fashion: NFA will procure and distribute agricultural inputs to yellow corn farmers at 4,200 pesos per hectare, repayable in 100 days at 15 percent interest. Interest in this program will cost farmers about 176 pesos. Again, the loan is payable in cash or in kind. The yellow corn program is to be supported by a grant of 100 million pesos from the Ministry of Agriculture and Food, of which 23,750,000 has been received at this writing. The funds are established on NFA books as a domestic loan payable, as will be funds received under the Intensified Rice Production Program.

These programs are peripheral to NFA's primary missions, and have put the Authority into the business of procuring, storing, and distributing fertilizer, seeds, and chemicals. They have further put the Authority into the position of functioning as an agricultural credit bank, evaluating loan applications, maintaining loan records, and attempting to effect collections. Experience with the Emergency Cereal Loan Program has been that those loans are very difficult to collect, and the Authority claims no experience or expertise in this area. Collections are made particularly difficult since in neither of these three programs is there any collateral.

The consultants are informed that the sudden assignment of the Intensified Rice Production Program to NFA may be only temporary. The consultants strongly believe that it is completely out of position in NFA and urge the earliest and strongest efforts to find a more logical home for it.

National Post-Harvest Institute for Research and Expansion (NAPHIRE)

NAPHIRE was created in 1978 and became a subsidiary of NFA in 1980. The need for such an organization was recognized as the nation's food supply increased.

Although partly funded by NFA, NAPHIRE is autonomous in its activity, and donor funds comprise about 70 percent of NAPHIRE's resources. NAPHIRE is concerned primarily with the generation and application of appropriate post-harvest technology in the reduction of losses. The institute undertakes research, training, and extension of post-harvest facilities, processes, and systems for grain and non-grain commodities.

Information generated is made available to farmers, traders, processors, manufacturers, and others interested in this technology. NAPHIRE also collaborates closely with local and foreign institutions with related interests to expand the knowledge of applied post-harvest science and technology that directly benefit the national interest.

The consultants believe that the range of research conducted and planned by NAPHIRE reaches well beyond the proposed restricted activities of NFA. Its funding sources are heavily donor dependent and oriented. NAPHIRE may be more properly placed in the research using the Minostry of Agriculture and Food or be linked in more formal fashion with the University of the Philippines.

Southern Philippines Grains Complex (SPGC)

The SPGC is a major warehouse and milling complex located in Sultan Kudarat which NFA acquired after it had failed under private ownership. It could be the most efficient milling facility within the Authority because of its excellent equipment and bulk handling ability. But its problem is similar to a situation which faced its prior owner in that it has not been able to have sufficient throughput in the past two years to be economically viable. In 1983, SPGC losses were four million pesos; about the same loss was incurred through August, 1984.

NFA is currently doing a useful analysis of individual components of that complex, and it appears that the SPGC must, for example, operate its mills at about 60 percent in order to break even. Current use is about 10 to 12 percent because of lack of procurement. NFA does point out that during rice surplus years the SPGC was operating at near full capacity.

The question with the SPGC is whether it is logical to assume that it can generate enough throughput in future years, as an NFA-owned and operated facility, to at least break even. The consultants take a pessimistic view. The tightened role in stabilization should place restraints on the volume of palay procured by NFA. Secondly, there are a number of private mills operating in the area which are, at least currently, absorbing the rice harvest and paying prices above the support price. Third, the political climate in this area is now and will likely continue to be unsettled, and this can negatively affect the willingness to deal with government-identified operations.

There are only a few efficiencies that can be achieved within the complex. One is its oil extraction plant which seems to have little chance to be viable based on current market pricing, volumes, and cost of shipping the crude product to Cebu for refinement. But even its shutdown would not materially improve the complex's profit and loss statement.

NFA has a substantial investment in SPGC, and if the consultants' assessment is correct, will face recurring operational losses which it can ill-afford. The consultants believe that private sector interests could be attracted to the site under favorable terms. The private sector could procure stock at market prices. Should a multi-tiered price structure be introduced, the facility already includes graders and other equipment in excellent condition which would provide an early opportunity to take advantage of the higher prices associated with better quality rice.

Iloilo Rice Husk Fueled Power Station

At Iloilo, a power project using rice hulls is under construction. The hardware associated with the project is grant funded. To date, after several project adjustments, NFA has about ₱12 million invested in the project. The project appears now to be technically feasible but, in the consultants' view, may fail on two grounds: uncertain availability of rice hulls and uncertain opportunity to sell the generated power in excess of NFA's needs. The plant, at full operation, will generate two megawatts of power and the NFA compound will use only .6 megawatts. This requires finding a market for surplus power, which is not likely, and puts NFA in the power business, which is not its domain. NFA argues that the project has demonstration value (i.e., use of a by-product) and that the cost of power generated is less than the rates in this region. The consultants believe that the same values could be obtained if the power project were turned over or leased to the local power authority. NFA could contract to provide rice hulls and could be guaranteed part of the power output.

Kadiwa Operations

Two prior sections of this report have discussed the Kadiwa operations. Section V made the point that the NFA-run Kadiwas were nearly at a financial breakeven point. Section VI spoke of the impact of decontrol of the Kadiwas forcing them either into a competitive type retail operation in order to survive or, alternatively, to require subsidy to maintain low prices and, almost ironically, continue price stabilization in the face of changing government policy.

The continued direct involvement of NFA in running the Kadiwa stores is inconsistent with the proposed changes in its roles and with the government's changing policy on price controls. Yet, the concept of "fair price shops" in which some stability of price and availability of essential food items is protected has some merit. The consultants believe that Kadiwas could attract private investment and that terms of sale or lease could provide basic safeguards to those food products which are still price-protected. Another alternative would be to establish a separate corporation in which NFA would participate in ownership and management. This could permit the operation of these stores on commercial lines, free of typical government privileges, yet ensuring a public voice in policy and operational decisions protective of the consumer.

Food Terminal Incorporated

Food Terminal Inc. (FTI), formerly known as the Greater Manila Terminal Food Market, was formally organized on April 30, 1968, as an interagency effort and subsequently placed into the hands of the Development Bank of the Philippines for implementation. The corporation's purpose, as described in the Articles of Incorporation, is "to maintain and operate a general market for producers, manufacturers, and farmers covering, among other things, the buying, selling, trading, and dealing in wholesale of commodities, particularly agricultural produce of farmers."

FTI began operations in 1974, and in April, 1979, was assigned to the Human Settlements Development Corporation who were to purchase the Development Bank's total shareholdings in FTI and assume all liabilities of FTI to the bank. In January, 1981, however, PD 1770 was issued, which created the NFA out of the National Grains Authority and assigned FTI, along with its assets and liabilities, to the NFA. NFA took formal possession of FTI in September, 1984.

FTI has a Board of Directors of 10 members, 1 of whom is the NFA Administrator and President of FTI. The Board last met on December 23, 1980, when they transferred most responsibilities of the Board to FTI's president.

FTI is organized in three broad groups: Marketing, Facilities Management, and Corporate Services. Facilities Management operations include the following:

- Estate Management.
- Slaughterhouse.
- Chicken Processing Plant.
- Refrigerated Warehouse.
- Food Processing.
- Food Technology and Development Center.
- Baking Technology Center.

Marketing is responsible for the FTI Kadiwa retail program, which operates 23 Kadiwa stores in Metro Manila, 1 in Baguio, and 1 in Palawan. Corporate Services includes all housekeeping functions. Total staff at December 31, 1983, was 3,843, up from 3,348 at the end of 1982.

FTI has lost money regularly since it began operations and, at the time it was transferred to the Human Settlements Development Corporation in 1979, it was bankrupt. Since that time, the NFA has invested some 320 million pesos, mostly in the form of commodities provided FTI and carried as a liability on FTI's books. When NFA took formal possession of FTI in September, 1984, it took further responsibility for a liability of 554 million pesos to the Development Bank which is being paid off at the rate of 5.5 million pesos quarterly over the next 25 years. (It is worth noting that the liability to DBI was not shown on FTI's books.) This is another drain on NFA's meager resources which it can ill-afford. At the time of the takeover, the Ministry of Finance agreed to fund this liability, but they have not done so.

In 1979, FTI lost over 20 million pesos. The annual rate of loss has increased each year and amounted to 81 million pesos for 1983. The loss for the first six months of 1984 was over 45 million pesos, and it is expected to reach 100 million at the end of 1984.

FTI is financed by two short-term credit lines of 100 million pesos each at the Philippine National Bank and at the Land Bank of the Philippines. Stockholders' equity is 350 million pesos of common and 150 million pesos of preferred stock, now owned by NFA. Retained earnings at June 30, 1984, were a negative 551 million pesos, leaving a negative equity of 51 million, offset by an appraisal surplus that leaves net equity at about 21 million pesos. It is estimated that net equity will be a negative 70 million pesos by the end of this year. During the past 18 months, liabilities have increased over assets by nearly 164 million pesos.

FTI uses the prescribed COA accounting system, and, as with NFA, cannot report income and expense for its various components. It does report Kadiwa operations separately, but, without an audit, it is not possible to make any judgments about expense allocations to Kadiwa Centers. Following is a summary of results for FTI for 1983:

		1,000 Pesos
Income		
Estate Management Income		29,800
Sales	674,226	
Cost of Sales	633,338	
Gross Profit		40,888
Other Income		11,345
Total Income		82,033

		1,000 Pesos
Operating Expenses		
Personal Service	52,555	
Interest Expense	26,270	
Utilities	22,963	
Inventory Losses	10,561	
Depreciation	14,079	
Others	35,347	
Total Expenses		161,775
Extraordinary Loss		1,439
Net Loss for Year		81,181

Of the gross profit reported of nearly 41 million pesos, almost 40 million, or 98 percent, is reported to be from Kadiwa sales. But of total expenses of 162 million pesos, only 38 million, or 24 percent, is assigned to Kadiwa operations. Almost none of the reported interest expense is assigned to Kadiwa operations, and this may be a function of the fact that Kadiwas are financed by advances from NFA rather than from borrowed funds.

However, if the financial data the consultants have been given are correctly reported, it is possible to say that in 1983 FTI earned about 1 million pesos on its Kadiwa operations and lost some 82 million on all other operations.

In the absence of sufficient information about the various operations at FTI, it is not possible to say where the losses occur. Certainly, with current high utility costs, the refrigerated warehouse is likely to lose money. But this is only speculation. FTI staff claim that each of their operations earn money, but obviously this is not the case. They have not provided the detailed data that would make it possible to say precisely where the losses are.

The impression left with the consultants is that FTI may well have an overloaded administration, and that it lacks a clear sense of direction. FTI is engaged in a wide variety of activities which seem to serve little public purpose (e.g., selling candles and flowers in Kadiwa stores or opening Kadiwa Centers in Saudi Arabia and New York) or make little economic sense (e.g., ripening bananas, but selling them at the same price as bananas which are naturally ripened).

Elsewhere in this report, the consultants contended that government agencies should not be in the business of buying and selling perishables. FTI is a case in point. The Commission on Audit's annual report for 1983 states that over two million pesos worth of spoiled commodities were dumped in the six months ending June 30, 1983, due to various avoidable factors.

At the present time, NFA has accounts receivable of more than 320 million pesos with FTI, and a liability of 554 million pesos to DBP on behalf of FTI, for a total investment of 874 million pesos. FTI has not, as mentioned above, been carrying the Development Bank liability on its balance sheet, and they showed accounts payable of less than NFA due to the fact that they have not been recording interest on the liability.

It is recommended that the Development Bank liability be transferred to the FTI balance sheet with debits to paid-up capital and retained earnings. This will put the liability where it belongs, liquidate FTI's capital account, and further reduce retained earnings. Each time NFA makes a payment to the Development Bank, it will debit its investment in FTI, and FTI will reduce the liability with a credit to paid-up capital. In other words, NFA's payments will be treated as capital contributions. This procedure may be painful, but it will show realistically the desperate financial situation FTI is in.

Secondly, it is recommended that NFA put together a team, including auditors, accountants, and technical personnel, who should do a detailed study of FTI operations in order to make decisions regarding the future of FTI and its components. Decisions emanating from such a study would be expected to range from closing down some operations, selling others, and putting increased emphasis on still others.

FTI is a highly-developed enterprise, and one that must be preserved and made viable. It must be streamlined and unprofitable or uneconomic activities either made profitable, closed, or sold off.

Soybean Extraction Plant at Batangas Bay

In Section VI, note was taken of the well-designed bulk discharge facility built at Batangas Bay. That facility, including a warehouse, was initially built to serve a privately-operated soybean oil extraction plant. The Authority has invested about 80 million pesos in the facility from externally borrowed funds. Payment to NFA was to be in kind, in the form of soybean meal. The oil extraction plant operated for about two years, and recently closed after accumulating a liability to NFA of approximately 70 million pesos. The facility is now idle, with no cash flow to amortize the borrowed funds, and soybeans cannot be processed for oil and soybean meal.

In the past, NFA has taken over facilities and operations which have failed (e.g., the SPGC and the FTI), and the experience has been costly. The consultants see the dilemma posed by the closure of the oil extraction plant as similar to that which has led to prior takeovers. There will be a temptation for NFA to perform another attempted "rescue" in this instance. But the consultants believe that NFA should look for private sector support to operate the soybean oil extraction plant rather than operate it itself. This would correct the problems noted above. It seems logical for NFA to approach local private sector agribusinesses to negotiate a lease/purchase arrangement. These companies would have the expertise to operate the facility and operate revenue to NFA. Secondly, the bulk discharge facility has substantial potential for development and service beyond that provided for soybean extraction plants, and NFA should concentrate on those possibilities.

Implementation Factors

The consultants are well aware that implementing a program of divestiture and transfer is a complex undertaking. Typical considerations are:

- How can these programs, particularly those which have a history of losses, be made attractive and marketed to the private sector?
- What alternative financing packages, which can both attract private sector interest and protect the government's financial interest, be put together?
- What terms--loan interest, amortization periods, moratorium, or grace periods, etc.--best fit the situation?
- What clauses or conditions are necessary in any contract to protect residual government interests?
- What feasibility or cost studies can be made which would provide NFA and prospective buyers with solid data upon which to make investment decisions?
- Are there changes, such as taxation, in government policy which should be promoted as further incentive to privatization?

To answer these and other related questions, NFA must assemble and focus appropriate expertise and resources on each candidate program or facility. In the next section, the consultants recommend such an organizational change.

VIII. ORGANIZATION AND MANAGEMENT

This section addresses organizational and general management issues. The major topics will be:

- Organizational configuration within a changing charter.
- The state of decentralization in NFA.
- Top management tasks, structure, policies, and practice.
- Staffing and training norms.

Organizational Configuration Within a Changing Charter

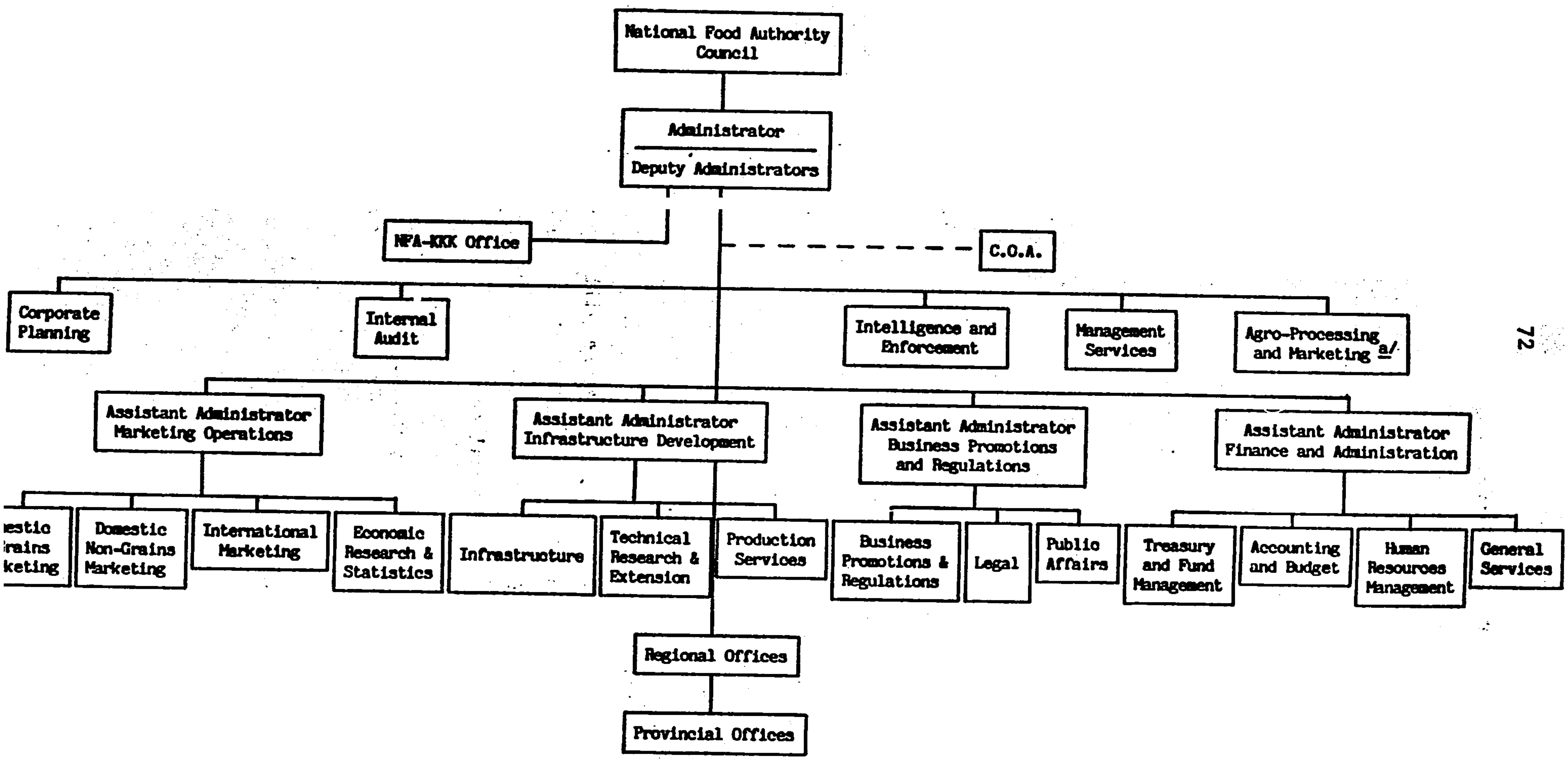
Most organizational studies offer rather precise recommendations about structure. This report will take a different approach. NFA is facing changes in policies and programs and, therefore, will be in transition over the next several years. Transition of this nature will have continuing organizational impact. Therefore, in the consultants' view, the most useful approach is to provide a conceptual framework within which NFA can make individual decisions on structure as these transitional points are faced. It should be pointed out that the NFA charter gives it authority to establish or restructure its own organization and this flexibility will serve the Authority well in implementation efforts.

It is instructive to look at NFA's current organization structure as it has evolved over the past dozen years in response to a rapidly expanding charter. Figure 1 portrays the current, official, organization chart.[1/]

[1/] Prior to the start of this project, the Management Services Division put together an extensive, largely descriptive paper on NFA's organization and systems. This was extremely helpful to the consultants in the review process. ADB has copies of this two-volume paper in its files.

Figure 1

NFA ORGANIZATIONAL CHART



a/ For Subsidiarization as required in the NFA (GOP) - Asian Development Bank Loan Agreement

Several observations can be made about the existing structure as it is depicted.

- The organization does not function in the manner suggested by the organization chart. The chart implies that each cluster of line directorates has its work coordinated and controlled by an Assistant Administrator who, in turn, reports to the Administrator's office which includes two Deputy Administrator positions. That is not a fact in current practice.

  Over its history, NFA has made a number of changes in its executive structure, but has not translated the positions created into a clear set of roles, responsibilities, and authorities. Even now, there is no operative job description for the Assistant Administrators and there is no clearly understood delineation of functional responsibilities between the two Deputy Administrators. The consequence is that there is uncertainty throughout NFA about these roles and a number of ad hoc reporting practices have developed either as protective devices ("to be sure, I provide a copy to everyone") or as means of circumvention (going to the executive most likely to give the desired response).

  A second example is that, in practice, NFA exercises much of its review and policy guidance work through committees. NFA has an unusually high number of committees, many of which have neither a formalized charter nor a termination clause. Committees have many valid purposes--communication, intra-agency concerns, and special project development--but overreliance on them as a vehicle for decision-making and review is often wasteful of time, slow in response, and indicative of unclear organization.

  A third example is that, in practice, some directorates --notably Economic Research and Statistics, Public Affairs, and Legal--are dealt with on a direct and regular basis by the Administrator. The chart implies the directional presence of intermediate executives.

- There is a general impression that there are too many directorates (19 in all) in NFA and some of these were created, not so much because they had sufficient scope of work to stand alone, but rather as ways of creating promotional opportunities to a young and capable staff which would otherwise be blocked from advancement within a tighter structure.

There are some combinations of directorates which do not make programmatic sense. For example, putting business promotion, public affairs, regulation, and licensing under the same organizational roof is an unlikely combination, mixing unlike functions and missions.

These observations on the existing organization are not unique to NFA. In fact, most organizations which have been in a crisis and expansion mode tend to develop ad hoc structures and practices and are never settled enough to permit a more reflective view of better organizational arrangements. This is an excellent and necessary time to confront the implications of a changing charter on structure.

It would make sense for NFA to tailor its organization around its basic missions, bringing together under one roof those key activities necessary to accomplish those missions. To review briefly, those missions are:

- Stabilization involving procurement, processing and distribution of vital food commodities, including supporting infrastructure and systems. This would, in the view of the consultants, include the base work of the regional and provincial offices.
- Industry development involving research, extension, credit, insurance, promotion, and market development.
- Industry regulation involving licensing, investigation, and enforcement.

To this, it is necessary to add a fourth grouping involving the planning, financing, personnel management, operational review, and support activities appropriate to any major organization.

The consultants further believe that there would be substantial merit in establishing a fifth major grouping, to be responsible for new project design and development and for planned disposition or dismantling of existing programs or facilities which have outlived their usefulness or which are losing ventures. In a sense, such a division would have the charge to "work itself out of business." In the case of new projects, it would oversee the design and development of the project to the point where it may be absorbed within one of the on-going operational groupings. In the case of NFA disposing or divesting itself of marginal or peripheral facilities, this organizational unit would oversee the development of necessary preparation of the subject facility or programs; identify options and alternatives; set timetables; and guide the actual disposition, transfer, or sale of the facility or termination of the program.

The best placement of this organizational unit within the broad NFA structure is on a direct reporting line to the Administrator's office to reflect both its transitory nature and the substantial public policy impact that its activities will have. Such additional technical assistance as may be necessary to implement the changes recommended in this report would be appropriately controlled and coordinated by this unit. The consultants envision that the core staffing for this unit will be drawn from the existing complement and that temporary assignments of personnel from representative program areas will be made for each project effort.

Figure 2 lists missions, related activities and current departments, directorates or subsidiaries whose preponderence of work is in support of that mission. The consultants allow that an argument can be made to separate the Regional and Provincial Offices from the stabilization mission on the grounds that they perform a range of functions inclusive of all NFA programs. The consultants' preference is based on a general assessment of the balance of work performed in the field which is vital to the stabilization mission. Finally, three primary top management tasks would be placed in a direct reporting line to the Administrator: Corporate Planning, Audit, and Public Regulations. Top management tasks are discussed later in this section.

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Figure 2
MISSIONS AND ACTIVITIES OF NFA

Mission	Activity	Current Directorates Involved
Stabilization	Procurement	Domestic Grains Economic Research and Statistics
	Processing	Infrastructure
	Distribution	Regional and provincial offices
Industry Development	Research Extension	NAPHIRE (subsidiary) Tech Research & Extension
	Marketing	Non-Grains Marketing International Marketing
	Business Promotion	Business Promotion and Regulation (in part)
	Credit	Quedan Board (subsidiary)
	Insurance	GRAINSCOR (subsidiary)
Regulation and Licensing	Licensing Regulation Enforcement	Business Promotion and Regulation (in part) Intelligence and Enforcement Legal
Corporate Administration	Budget and Accounting	Budget and Accounting
	Treasury & Fund Management	Treasury and Fund Management
	Human Resource Management	Human Resources Management
	Management Services/ Operation Review	Management Services/Internal Audit
	General Services	General Services

Figure 2 (continued)

Mission	Activity	Current Directorates Involved
Special Projects	New Programs	E.g., Agro-Processing and Marketing
	Transitional Planning	E.g., Kadiwas, FTI, and Production Services
	Divestiture	SPGC and other Peripheral or Losing Programs or Facilities
Top Management Tasks	Corporate Planning	Corporate Planning
	Public Relations	Public Relations
	Audit	Internal (in part); Commission on Audit (external)

State of Decentralization

NFA has a large field structure involving 13 regional offices and 80 provincial offices. The regional and provincial offices have staff structures which largely mirror that of the Central Office in that representative skills from each central office directorate are present in the field. In theory, and to a large degree in practice, the field staff reports to and is controlled by the respective regional and provincial managers, while program and policy guidance from the Central Offices is funnelled through those managers.

A decentralized field structure makes sense for NFA. Regional and local differences in the Philippines require on-site knowledge. The intervention efforts of procurement and distribution must be done in short time frames. Monitoring and reporting of supply and price information is dependent on local knowledge. The regulatory and licensing functions and the technical assistance and support to the private sector are most efficiently done through a field structure. Management and operation of NFA's geographically dispersed facilities must be on site.

The changes in mission proposed in this report will have an effect on regional and provincial resources and efforts, although the core activities will continue. NFA appears well prepared to make the necessary adjustments. It has systematically developed personnel complement standards for field offices and facilities and is currently in the process of reviewing these standards. The consultants have reviewed these standards and the approach to them and find them to be logical and workable. The standards take into account functional workload per location and complexity or sophistication of operations. The system identifies and weighs critical factors. It provides both core staff (regular appointments) and variable staff (casual hires) to adjust for fluctuations in work. The system will be completely usable in adjusting field staff as missions are changed.

The consultants' selected field visits, taken together with central office interviews, have identified several areas in which improvements in NFA's decentralization could occur.

1. The relative roles and relationships of the regional and provincial offices, particularly where those offices are co-located, is not always clear. Central office directorates deal with both in somewhat random ways with a diluting effect on the regional office's full exercise of responsibilities. In the case of co-located offices, the powers, authorities, and signature authority of the provincial office are different (less than) from provincial offices away from the regional office site. This does not make good management sense and, in fact, suggests that there is some "make work" effort on the part of the regional offices. The structural changes discussed in 4. below will help sort out both problems. In fact, definition of roles and relationships should be a first order of business for the proposed director for field operations.

2. In general, delegations of authority to regional and provincial offices need to be updated. Some of the peso limitations on commitment and authority need upward revision in light of inflationary changes. More significantly, the tests of where and when decisions need to be referred to the Central Office need to be reviewed. In general, the only sound bases for referral upward are where the decisions involve future commitment of the agency or reversal of current policy or practice; impact the agency in total or affect other units within the agency, but outside the organizational unit where the decision recommendation is made; have unique qualitative aspects involving values or social consequences; and are of rare nature not covered by proper procedural safeguards or requiring other expertise and views to ensure best choices. Beyond these, the requirements to submit regular and routine operational decisions to higher authority generally reflect either the absense or weakness of policy and procedure, distrust of operational personnel or inefficient reservation of power by officers who should be concentrating on other tasks.

The consequence of current procedures is to diffuse accountability and sometimes to cause operational inefficiencies. An example in NFA would be the requirement that regional managers need to obtain permission from the Central Office to dispose of deteriorating grain stocks. The result of this is that when approval is finally received, the stocks may be so out of condition that they must be disposed of rather than sold as feed with some residual value. It is the consultants' opinion that the requirements (including quality control testing) and documentation of such disposal actions is sufficiently well understood and practiced at the regional level to negate any value of superior review.

Similar concerns can be expressed about matters such as trucking contracts, warehouse rentals and leases, hiring, and disciplining of employees.

3. The reporting burden on the regional and provincial offices is excessive, duplicative in part, and wasteful. This subject is treated more fully in the sections of this report dealing with financial administration and with information systems, but one of the particular characteristics of the situation is that requests/directives come to the regions and provinces from various central directorates for information which is the same, or at least similar in content, but required to be in different formats. If NFA were further advanced in its computer capability and had an effective data base system, some of these problems could be treated. But the development of such capacity is in the future, and the remedy now lies in both structural change and in self-restraint exercised by the Central Office supplemented by a stronger and more rigid review of internal information requests. The consultants recommend that NFA consider adding paperwork management expertise to its Management Services Division staff to provide continuing attention to reporting requirements, paperwork management, archival and records management, and word processing.

4. The field structure does not have a clear center at NFA headquarters to control, coordinate, or evaluate its efforts; and it does not have equal standing with central office directorates in the sense that it does not have a daily voice in central office deliberations and decisions. In theory, the field structure reports to the Administrator's office, but the Administrator and his Deputies (at least under current practice)

cannot be expected to attend to the normal needs of the field structure. The consultants are of the opinion that a top-level position responsible for field operations would be of substantial benefit to NFA and to effective decentralization. Such a position should be of rank equal to that of central office directors. Among the other advantages of having such a position would be to reduce the multiplicity of reporting lines which, in practice, face field office managers and to make more clear the fact that central office directorates should engage primarily in policy development, program guidance, technical assistance and support, and that the field staff is the line operation through which those policies and programs are implemented. The consultants emphasize that this central office direction of field staff is intended to provide status, control, coordination, and evaluation for the regional and provincial offices. It is not intended to become a replication of the policy and program offices at the central level, but rather to work in concert with them.

Top Management Tasks, Structure, Policies, and Practices

Top management tasks differ from tasks of other managerial units within an organization. In the well-conceived organization, top management has set out the missions, objectives, and broad strategies of the enterprise; has organized itself around those strategies; and has given its managers full authority and responsibility for meeting goals, making work productive, and making the workers achieve. The top management tasks, therefore, are not operational in nature.

In NFA, the task of thinking through the mission of the Authority, setting objectives, developing strategies, and balancing today's objectives against tomorrow's needs is somewhat fragmented. The Corporate Planning Directorate is probably the most logical repository for this task, but currently it is preoccupied with detailed task listing and reporting which reflects NFA's mostly reactive posture. In addition, there is virtually no tie between planning and budgeting and, as a consequence, both suffer.

Another top management task is standard setting; that is, being concerned with the gap between what an organization does and what it stands for. Again, NFA works at this in fragmentary fashion with responsibility divided among the Corporate Planning, Internal Audit, and Management Services Directorates. For operating managers in the directorates and field offices, there is no sense that they are being regularly reviewed and evaluated except on a sporadic, incidental, and issue-oriented basis. Both organizational and procedural changes can strengthen this effort.

A third responsibility of top management is to build and maintain the human organization. It is very clear that NFA has created a strong spirit in the organization and works hard at setting standards of conduct, values, and beliefs. It has a rigorous recruitment program, and the results are evident in the high quality of the staff. But there are practices existing which are outdated and inappropriate. A case in point is the sudden and substantial October reshuffle of regional and provincial directors which involved little or no forewarning to or communication with the affected personnel. The consultants reviewed both the rationale and procedures involved in those decisions and are generally persuaded that, despite appearances, there was an attempt to do so thoughtfully. In fact, the consultants have no quarrel at all with a well-understood rotation policy. The consultants believe, however, that NFA management needs to be more more open about its process, clearly inform its staff about the criteria used in determining specific transfers, and use the best rating and evaluation instruments available to it.

The latter point is important to NFA's staff development. NFA has both executive and performance appraisal forms and systems, but makes virtually no use of the former and does not give much attention to the latter as a legitimate vehicle for evaluating and improving performance of staff. It is, in the opinion of most NFA staff, a ritual exercise. A by-product of a poorly used performance appraisal system is the manner in which malperformance or ineffective performance is dealt with. The term, in NFA parlance, is to put such staff in "deep freeze"--to make them "frozen delights." What this means is that the employee who has been judged to be an unsatisfactory performer is assigned to a new organizational home without specific job assignment. After the employee has served some indeterminate time "on ice," he or she may be returned to a more official assignment.

In the absence of a workable and used performance appraisal system, the affected employee may not even have warning that his or her performance is deemed to be unsatisfactory and has little chance to improve or be given assistance or training which would help performance. For those employees whose performance is totally unacceptable and irredeemable, a non-effective appraisal system deprives the agency of critical documentation necessary to discipline or even dismiss the offender.

The consultants recommend that the Directorate for Human Resource Management place a high priority on the review and development of executive and personal appraisal systems.

The durability of NFA and successful record of assuming additional tasks assigned to it speak strongly of top management's ability to maintain effective communication and standing with leaders and organizations outside of NFA. A prior section of this report does take note, however, of the need to expand and improve still further communication with the private sector.

Staffing and Training Norms

As was discussed earlier in the subsection on decentralization, NFA has developed good staffing standards for its field offices and facilities which take into account functional workload per location and complexity or sophistication of operations. The standards should be very usable in determining adjustments in field and facility staffing as NFA missions change shape.

Similar staffing standards exist for central office directorates, but have had little meaning during the hiring freezes of the past several years. Most directorates operate at staff levels below the recommended pattern. The staffing standards for the Central Office need to be reviewed and adjusted not only to take account of changes in program, but also to reflect operational efficiencies that may come from such improvements as computerization.

On the other hand, NFA does not have a systematic approach to training. Training has been requested, approved, and provided on a piecemeal basis and has been very dependent on available budget resources. Training is not codified, coordinated, or controlled either in budget or authority policy.

In 1982, NFA provided in-plant and out-plant training to 3,480 employees at a cost of about ₱578,000. In 1983, 1,923 employees received training at a cost of approximately ₱222,000. The 1984 investment in training is expected to be lower.

The Human Resources Directorate (HRD) made a recent attempt at some coordination and upgrade of training by requesting section and division chiefs to identify training needs by position with the intent that HRD would then match individual profiles against those needs to determine training requirements. The effort did not work out because of low response from divisions and sections, although it did generate specific requests on behalf of individuals.

It was clear to the consultants that training is not a high priority in the Authority's thinking. Much needs to be done to establish its validity and to provide a logical framework in which its value can be weighed against its costs. HRD has developed a major proposal for a career development framework, but the consultants believe that despite its professional merits, it is far too complex and costly to be seriously considered. Yet, within that proposal are some fundamental steps such as training needs analysis of common jobs and structured supervisory development efforts which could be building blocks of a more effective training program and accomplishable within the limited resources likely to be available for training.

IX. FINANCIAL ADMINISTRATION

The National Food Authority (NFA) was established with an authorized capital of five billion pesos, and with authority to issue an additional one billion pesos of bonded debt. At the end of 1983, 906 million pesos of capital had been issued, and during 1982 and 1983 a total of 800 million pesos of five-year 9.5 percent bonds were sold to raise funds for cereal procurement. Other sources of funds include short-term credit lines with various banks and long-term loans from both external and internal sources. In past years, the Authority has received a small amount of general budgetary support from government, but no such support has been received in 1984 and none is expected in the foreseeable future.

The Authority is in a difficult financial situation. It is seriously undercapitalized, has been existing on borrowed funds, and has reached the point where major adjustments in its capital structure are necessary. Following is a discussion of financial results over the past three and one-half years through June 30, 1984, along with suggestions for improvements. Subsequent sections will discuss financial administration and will include proposals for organizational changes and adjustments to accounting policy.

Financial Results

In the three and one-half years since the NFA was created out of the National Grains Authority, it has experienced losses from operations. These have occurred principally due to the fact that the Authority has been forced to operate on borrowed funds and has had virtually no general government support. The following summary of results from January 1, 1981, through June 30, 1984, will illustrate this:

	1,000 Pesos
Sales	19,773,881
Cost of Sales	18,072,901
Gross Profit	1,700,980
General and Operating Expenses (excluding interest)	1,302,556
Profit from Operations	398,424
Other Income	730,961
Net Profit Before Interest	1,129,385
Less: Interest Expense	1,418,456
Net Loss	(289,071)

Interest expense has risen from 158 million pesos in 1981 to an estimated 1,000 million in 1984.

Total liabilities have risen during the period from 4,400 million pesos to 6,800 million at June 30, 1984. The deteriorating financial position of the Authority may be illustrated by balance sheet changes in the past three and one-half years:

	1,000 Pesos
Increase in Assets	1,929,238
Increase in Liabilities	(2,401,428)
Decrease in Equity	472,190

The debt-equity ratio has been driven down during this period from 5.74 to 1 at the end of 1981 to 23.1 to 1 at June 30, 1984. In 1978 and 1979, NGA had a ratio of 1.7 to 1.

During 1984 the Authority financed its import program through loans from several sources, as follows:

	$1,000,000	Term
Export-Import Bank	87.88	360 days
Commodity Credit Corporation	159.00	3 years
Acada Development	1.70	360 days
Bank of Credit and Commerce International	3.34	180 days
Total Availed	251.92	

These loans carry interest rates in the 11 percent to 14 percent range. They were negotiated before the Central Bank removed forward cover facilities from letters of credit and 25 percent deposits have been made on each of them. However, they do represent a new liability of nearly four billion pesos on the Authority's books. Local currency generated from these imports has been used to support local procurement and to reduce short-term debt with local banks from 2,600 million pesos at December 31, 1983, to about 300 million at September 30, 1984. The effect of these borrowings has been to increase loan liabilities by about 2,300 million pesos, and raising the debt-equity ratio to about 30 to 1. The borrowings also have had the effect of reducing interest expense by replacing local notes payable at interest rates of about 45 percent.

There is, it would appear, only one permanent solution to the financial situation, and that is recognition by government that if it wishes NFA to continue its role in the local cereals market, it must be willing to pay the expense. NFA is not self-sustaining in present circumstances, and will be less so under the revised charter recommended in this report.

The first and most crucial requirement is to reduce the debt burden, both domestic and external. First, the bonds sold during 1982 and 1983 are held by a number of public and private banks and institutions, but 59 percent are held by the Ministry of Finance and the Philippine National Bank. It is recommended that this liability be converted to equity, and that the Bond Redemption Fund so far accumulated be credited to retained earnings. This will constitute a contribution to capital of 800 million pesos and will reduce the Authority's annual debt service expense by about 200 million pesos. This will leave paid-up capital at 1.7 billion pesos, and it is recommended that the government's investment in the Authority be maintained at this level, and future releases be taken as income.

As a second step, it is recommended that government make annual budgetary releases. Time did not permit development of a detailed formula or plan for determination of the level of general government support. Certainly during the near future, it should be related to debt service requirements and local procurement. As debt is reduced and the Authority begins to implement the revised charter, the level of support should begin to be more closely related to cereal procurement. Such support should be taken by the Authority as income, not contributions to capital, since there is no expectation that the Authority will be self-supporting. Quarterly government releases would be based on debt service requirements and estimated cereal procurement.

Profit and Loss Statements

Following this section are profit and loss statements and balance sheets for the past three and one-half years. From the profit and loss statements it will be seen that healthy profits are realized from the import program. One rationale for ending government subventions was that the import program would support the local cereals procurement program. This has not been true, since about 30 percent of all interest expense is attributable to imported cereals, and at December 31, 1983, there were liabilities on the balance sheet for 2,188 million pesos for acceptances and sight letters of credit, on which interest will be paid. It may be useful to restate the net profit or loss to demonstrate the effect interest charges had on them:

	1,000 Pesos			
	6-30-84	1983	1982	1982
Net Profit Before Interest	440,869	304,699	308,171	75,646
Interest Expense	401,976	558,549	299,885	158,046
Profit/Loss After Interest Charges	38,393	(253,850)	8,286	(82,400)

The 1984 figures for the first six months are skewed by the fact that there was little procurement and local grains being sold were charged at last year's procurement prices. What is known, however, is the fact the interest expense at September 30, 1984, had reached over 800 million pesos. (Other data for the period beyond June 30, 1984, are not yet available.)

Balance Sheets

There are an estimated 300 million pesos in net debit balances on the balance sheet that cannot be reconciled and should be written off. Examples would include accounts with RCA and NFA defaulting contractors which have been determined to be uncollectible and have been moved out of current assets to a category known as "other assets." There are a number of balances in the account "contingent assets" which have been so classified because they cannot be reconciled. Elsewhere in this section there will be a discussion of inter-branch accounts, but among these there are large balances relating to the period prior to 1978 which cannot be reconciled and should be written off. The argument against writing off these accounts to surplus is that they may affect assets and liabilities. But if the Authority has its assets and liabilities correctly valued and booked at the present time, there could be no adjustments as the result of clearing old balances. For example, the majority of balances in the old inter-branch accounts relate to inventory transfers between branches. But last year, for the first time, a complete physical inventory was taken, and major adjustments were made to the inventory asset. So there appears to be no valid reason why these balances cannot be written off to surplus.

If the Authority and the Commission on Audit are unable to reach agreement to write these balances off, it is recommended that they be identified and brought together in the equity section of the balance sheet as a contingent offset to retained earnings. Either way, it is important that the balance sheet be cleared of such balances and that it represents only actual, identifiable assets and liabilities.

Each year there are major adjustments to retained earnings for unbooked prior year transactions. During 1983 the total charge to retained earnings was over 424 million pesos, mostly relating to a writedown of cereal inventory, the result of the first physical inventory taken in over ten years. At June 30, 1984, there were net credits to retained earnings of 28 million pesos for unbooked 1983 revenue and expense. The 1983 adjustment represented an accumulated overstatement of net profits over the years. The 1984 adjustment represents an overstatement of the 1983 net loss; that is, the 254 million pesos loss reported should have been 226 million as adjusted on June 30, 1984.

There is an accounting concept known as the "clean surplus" theory, which states that all transactions relating to profit and loss must pass through profit and loss accounts regardless of the period to which they relate. Ordinarily, this is a somewhat academic matter, since adjustments to prior year profit and loss are infrequent. But where adjustments are almost routine and are material, as in the Authority's books, it is strongly recommended that the clean surplus theory be adopted; that is, all adjustments to prior year profit and loss accounts be posted to them and that no entries to retained earnings be made except when books are closed at year end.

At June 30, 1984, there were 510 million pesos of trade accounts receivable on the central office books. There were 22 of these accounts, but more than 99 percent were represented by just 10 accounts. Of these, all but two are active and current. One of these accounts involved operation of a soybean oil mill which has recently been closed. The Authority is negotiating with the owners over the amount of the receivable, and the value of the asset is close to reconciliation. The receivable on the books covers transactions in 1982 and 1983, the period during which the mill operated before it went into bankruptcy. The other receivable has balances in every year going back to 1979. The value of this receivable at June 30, 1984, was 115.5 million pesos, nearly 23 percent of total trade accounts receivable. At June 30, 1984, these two receivables represented about 40 percent of all such receivables.

At a time when the Authority is financing its operations with borrowed funds, these receivables should be vigorously pursued. In general, it is suggested that accounts receivable should be kept under close control, the present policy of considering receivables current up to 90 days should be reduced to 30 days, and that current rates for short-term borrowings be applied to receivables more than 30 days old.

The Authority maintains many dozens of bank accounts, on the theory that funds are easier to control if kept in separate accounts. But such a policy is inefficient and costly, and even the banks have complained about it. Bank reconciliations are difficult and time-consuming, and idle funds cannot be efficiently invested. It is recommended that bank accounts be reduced to the absolute minimum; ideally, one in each regional and provincial office, and one for each bank dealt with in the Central Office. The various funds can be kept under control through accounting records without having separate bank accounts.

Finally, the balance sheet does not clearly report the Authority's investment in its subsidiaries, and accounts that have been identified do not, in all cases, reconcile with those on the books of the subsidiaries. It is recommended that these balances be reconciled and that consolidated financial statements, with necessary eliminations, be prepared. The Commission on Audit has issued instructions to this effect, and consolidated statements should be prepared for 1984.

Public Administration Service 1497 Chain Bridge Road, McLean, Virginia 22101

1981 - 1984
PROFIT AND LOSS

	1,000 Pesos			
	30-6-84	1983	1982	1981
Sales:				
Local grains	2,204,952	2,692,447	767,806	1,001,303
Local non-grains	333,041	245,947	220,565	206,145
Imported grains	2,083,060	3,949,057	3,189,757	2,879,801
Total	4,621,053	6,887,451	4,178,128	4,087,249
Cost of Sales:				
Local grains	1,997,389	2,741,533	786,099	1,007,851
Local non-grains	298,338	265,478	208,975	193,532
Imported grains	1,747,624	3,417,012	2,739,998	2,669,072
Total	4,043,351	6,424,023	3,735,072	3,870,455
Gross Profit:				
Local grains	207,563	(49,086)	(18,293)	(6,548)
Local non-grains	34,703	(19,531)	11,590	12,613
Imported grains	335,436	532,045	449,759	210,729
Total	577,702	463,428	443,056	216,794
General and Operating Expenses	742,979	952,420	578,767	446,846
Loss from Operations	(165,277)	(488,992)	(135,711)	(230,052)
Other Income	204,170	200,142	119,701	123,321
Government Releases	-	35,000	24,296	24,331
Net Profit (Loss)	38,893	(253,850)	8,286	(82,400)

1981 - 1984
BALANCE SHEETS

	1,000 Pesos			
	30-6-84	1983	1982	1981
Current Assets:				
Cash	1,278,756	844,036	380,300	655,582
Receivables	1,990,065	2,395,355	1,735,980	1,064,236
Inventories	2,067,341	2,144,086	3,359,342	2,288,630
Total Current Assets	5,336,162	5,383,477	5,475,622	4,008,448
Other Assets	339,826	219,316	209,719	93,334
Contingent Assets	40,047	52,312	82,146	74,360
Long-term Investments	383,749	279,168	157,144	143,534
Fixed Assets (net)	996,118	976,038	953,439	846,988
Total Assets	7,095,902	6,910,311	6,878,070	5,166,664
Current Liabilities:				
Payables	4,248,453	5,207,470	4,902,869	3,780,263
Trust Liabilities	55,565	57,221	56,064	53,525
Depository Liabilities	79,478	81,595	45,138	62,568
Total Current Liabilities	4,383,496	5,346,286	5,004,071	3,896,356
Other Liabilities	13,988	13,766	25,445	58,311
Contingent Liabilities	18,949	3,961	-	-
Long-term Liabilities:				
Loans Payable	496,561	518,979	508,643	445,645
Bonds Payable	800,000	800,000	500,000	-
Deferred LC's	1,088,746	-	-	-
Total Long-term Liabilities	2,385,307	1,318,979	1,008,643	445,645
Total Liabilities	6,801,740	6,682,992	6,038,159	4,400,312
Retained Earnings	(618,605)	(699,547)	(24,983)	(51,615)
Contingent Surplus	6,135	20,234	2,261	-
Paid-in Capital	906,632	906,632	862,633	817,967
Total Equity	294,162	227,319	839,911	766,352
Total Liabilities and Equity	7,095,902	6,910,311	6,878,070	5,166,664

Financial Operations

Responsibility for financial administration in the Authority is shared by the Accounting and Budgeting Directorate (ABD) and the Directorate for Treasury and Fund Management (DTFM). These units are well organized and staffed, and financial controls are good.

However, financial administration operates under several severe restraints:

- No uses are made of computers.
- The prescribed Chart of Accounts does not provide for adequate cost center accounting.
- Regionalization of accounting has not been satisfactory.
- The volume of reporting is unnecessarily large.
- Requirements of the Commission on Audit are an expensive burden.

Computer Utilization

When the present computer system was acquired, a decision was made to assign first priority to the development of management systems such as inventory, commodity distribution, and registration and licensing. The only finance-related program presently operational is payroll, and this is a stand-alone system, the computer being used basically as a typewriter. The only other project underway in the Management Services Directorate that relates to finance is a system to report inter-office transactions. Again, it is a stand-alone program, using the computer as a typewriter, and will provide no real assistance to financial administration. It is worth noting that this programming was initially requested in 1978. There are no coherent and comprehensive plans for accounting mechanization in the Central Office.

It is not possible to discuss computerization of accounting and financial administration without consideration of each of the items mentioned above; that is, any decision regarding computers must include decisions about the Chart of Accounts, about how the accounting function is to be organized, about the type, frequency, and style of reports, and about the needs of outside agencies, principally the Commission on Audit (COA). In the following paragraphs these matters will be discussed, and implications for computerization will be an inherent part of each area of discussion.

Chart of Accounts

The Chart of Accounts in use is prescribed by the Commission on Audit, and is used, with a few exceptions, by all government agencies except financial institutions. The Chart is based on functional classifications, not organization units or cost centers. Expenditures are classified by fund, object, character, and function. There is also a project code which might refer, for example, to "general administration-accounting and budgeting." This is not intended to refer to the organizational entity known as the Accounting and Budgeting Directorate, although, of course, in practice to a large extent, it does. The result is an accounting system that has elements of both functions and organization units, but which is unable to do justice to either. Cost centers, such as the rice mills at the SPGC, or the various activities at FTI, are not identified separately in the accounts, with revenue and expense assigned to them, and it is difficult for the Authority to evaluate its individual operations.

It is strongly recommended that a new chart of accounts, appropriate to the specific needs of the Authority, be devised and adopted. Approval by the COA would be necessary, but if the chart is fully responsive to needs of the Authority, it should be equally satisfactory to the COA, and would be welcomed by them. A clear element of public accountability is the availability of accurate, timely, and descriptive financial information about an agency's stewardship of funds. An improved Chart of Accounts will do much to enhance the Authority's ability to report the true costs of its principal activities and programs and to develop realistic budget requests. Such information is essential in the further development and refinement of a useful planning, programming, and budgeting system.

The account coding scheme should be kept as simple and straightforward as possible. It should be designed in such a way that accounts can be easily added or deleted, and should be adaptable to computer applications. There are many ways to construct a chart of accounts, and following is a suggested format that should meet the needs of the NFA:

The entire code would appear as follows:

- NNN - Branch.
- NNN - General Ledger.
- NNN - Subsidiary, Organization Unit, or Source.
- NN - Project (where appropriate).
- N - Function.
- NNN - Object of Expenditure.

The entire code would be 15 characters long, but it would accommodate any transaction. Not all transactions would need all codes, of course. Asset and liability accounts would require only the general ledger and subsidiary codes. Revenue accounts would require the same codes, and where appropriate, a project code. Expenditure transactions would require 13 characters, or where a project is involved, all 15.

All transactions would require the branch code. This would be ignored when consolidating reports, but would be necessary when extracting data for specific units of the NFA. Three digits will serve to identify regions, provinces within regions, and subsidiaries.

General ledger codes may be laid out in the following manner:

- 1NN - Assets.
- 2NN - Liabilities.
- 3NN - Equity.
- 400 - Revenue.
- 500 - Expense.

These accounts should be incremented by 5 or 10, depending on the number of accounts in a given category, to allow for orderly expansion. Revenue and expense will be identified by one general ledger account each, since further coding will provide detailed descriptions of each transaction. This arrangement has implications for computer programming, and brings efficiency to posting, summarizing, and report generation.

The third code, for subsidiary, organization unit, and source, will vary depending on the general ledger account to which it is related. For a real account, there would merely be a three-digit number to identify the subsidiary. For a revenue account, the same digits would identify revenue source, and for an expenditure account they would identify the organization unit within the branch or subsidiary described in the first three digits.

The project code is optional, and will be used only to identify a specific project within a given branch or organization unit. This code would be used, for example, to describe the various activities at the SPGC or activities at FTI.

Function and object of expenditure codes are variables. Functions tell us what the purpose of an expenditure was, and object tells us how the purpose was met; that is, what was accomplished and how it was accomplished. Function codes might be described as follows:

- 0 - General Administration
- 1 - Production.
- 2 - Procurement.
- 3 - Processing.
- 4 - Distribution.
- 5 - Infrastructure Services.
- 6 - Business Promotion and Regulation.
- 7 - Research and Extension.
- 8 - Special Projects.

Object codes presently in use would merely need to be reformatted into the three-digit codes in the new chart.

This account coding scheme will lend itself without difficulty to computer programming and, when installed uniformly throughout NFA and its subsidiaries, will permit more rapid and informative financial reporting.

The foregoing description has necessarily been only a broad outline. Much detailed analysis will be necessary to develop a complete Chart, and as such work progresses, programming staff should be involved at every step, to ensure that the Chart of Accounts meets programming requirements.

Regionalization

Accounting was "regionalized" in 1978, the intention being that responsibility for accounting and financial reporting was delegated to regional offices. This has not been successful for a number of reasons, and needs to be reconsidered. Perhaps the principal problem with present reporting procedures is that, while regionalization was intended to reduce the volume of reporting to the Central Office, in practice reporting has remained the same, with the addition of consolidated reports prepared in regional offices.

At the present time provincial offices prepare monthly reports to be submitted to regional offices by the 15th of the succeeding month, with a copy to the Central Office. Regional offices consolidate these and submit their report to the Central Office by the 25th of the same month.

A second problem with regionalization relates to inter-branch transactions. The problem is not with accounting, which is quite straightforward, but rather with communication and discipline. When one branch transfers an asset to another, or provides a service, an asset receivable is created on the books of the provider, with a corresponding liability on the books of the receiver of the goods or services. Such a transaction is not complete until it is entered into the books on both sides.

During the period prior to regionalization there were some ten million pesos in unreconciled balances in such accounts. At regionalization in 1978 these accounts were frozen and replaced by a new set of accounts in order to take cognizance of the role of the regional offices.

There are at present two sets of inter-branch accounts in use: those between provincial and regional offices, and those between regional offices and the Central Office. The former are known as Provincial Office Accounts (POA) and Regional Office Accounts (ROA). The latter are known as Branch Office Clearing Accounts (BOCA) and Central Office Clearing Accounts (COCA). Without going into the detailed mechanics of the accounting involved, it is important to note that transferring an asset between provinces in two regions involves entries in 10 accounts in 5 offices.

For transfers between provinces in the same region, if, when consolidating provincial reports, the regional office determines that one side has not responded and the inter-provincial accounts do not balance, an entry is made in the regional consolidated report to bring them into balance. The Central Office makes similar entries for transfers between regions and had more than 34 million pesos of such entries on the books at December 31, 1983, which along with the 10 million remaining from the period prior to 1978, left a total of 44 million pesos in outstanding unreconciled balances. The value of such entries on regional office books is unknown, but it is understood to be substantial and to date back several years.

Another result of present accounting procedures is that there are no procedures for writing off inter-branch accounts. For example, a province that is a net exporter of grain will have its inter-branch receivable account accumulating from year to year, while an importer will have a corresponding liability similarly accumulating. At December 31, 1983, there were over four billion pesos on the books in regional/central office clearing accounts, dating from 1978. These are reconciled, as described above, because of the entries made in central office books for unresponded debits and credits, but there is no present procedure for writing them off.

It appears clear that regionalization has not been successful, and that some new approach is necessary. It also seems to be clear that any approach to be devised should consider computers and their applications.

There is presently a program underway known as Field Office Accounting Mechanization (FOAM). This is a project to develop programming for the use of microcomputers in provincial offices. It has been installed on a pilot basis in one provincial office and at the Metro Manila Office, and except for hardware and other problems at Metro Manila, seems to work as desired. The problem with FOAM, however, is that it does not consider the fact that accounts are regionalized. The Authority has put itself in the position of saying that computer-generated provincial reports will be manually consolidated at regional offices and at the Central Office.

Reporting Volume

Another area that needs attention is the volume of reporting required of provincial offices each month. There are 27 separate schedules which amount to a complete analysis of every general account, along with detailed income and expense reports. These are all typewritten and in order to complete them by the 15th of each month, provincial offices must mobilize all available assistance, and work large amounts of overtime, including on occasion, working through the night. Decisions about problems with regionalization and about computer uses must include consideration of this issue. It is suggested the monthly reports need to include income and expense detail only, and that the general ledger analysis should be prepared not more often than quarterly.

It is recommended that regional offices not consolidate provincial reports, but that they merely exercise a supervisory role over provincial offices' finances. Under this approach provincial offices would submit financial statements to regional offices on the 15th, as at present. Regional offices would edit these, correct any errors, and forward them, along with the regional office report, to the Central Office by the 20th of the month. In this approach there should be no need for Provincial/Regional Office Accounts (POA/ROA). Provinces receiving or sending assets will post the BOCA with the sending or receiving province, and an analysis of these transactions would be included in the provincial monthly report. Where a province reports a transaction with another province in the same region, the regional office will assure that it has been posted on the other side. Where the provinces are in different regions, the Central Office will assume this responsibility. However, no entries should be made in central office books or on statements to bring BOCAs into balance.

Rather than describe the detailed accounting mechanisms that need to be devised for branch operations, the consultants make several observations. In general, cash transactions for procurement and sale of cereals between the Central Office and provincial offices should pass through COCA/BOCA accounts. These should balance against entries made for cereal transfers between provinces made through the same accounts. Transfers of cash and other assets for operating purposes should not pass through COCA/BOCA accounts, but rather through revenue and expense accounts.

Without going into detail, ROA accounts in provincial offices will need to be reconciled and replaced by new BOCA accounts. Any balances in the accounts at either provincial offices or the Central Office that cannot be reconciled should be either written off or segregated in the equity section of the balance sheet, as described above.

One of the perceived advantages of regionalization was that it transferred responsibility for summarizing 80 provincial office accounts to regional offices from the Central Office. The proposal described above brings this process back to the Central Office. But this report assumes that there will be some form of mechanization of the accounts that will enable provincial offices to prepare and send to the central office diskettes or other electronic media from which consolidations can be prepared. It is also assumed that the volume of reporting will be reduced to more manageable levels.

Commission on Audit

The Commission on Audit (COA) has staff at each NFA office in the provinces, regions, and at the Central Office. COA has given up pre-audit of transactions, and is now strictly a post-audit agency. However, a copy of every transaction is sent to COA, and COA staff is given copies of all reports. This means that within every provincial and regional office, and at the Central Office, there are two complete files of source documents and reports. This entails considerable expense for both COA and NFA, with no obvious benefits. Normal procedures for a post-audit agency is to audit the client's books and records, and there is a certain risk involved in having two files. COA certainly should not base its audits on copies of source documents provided by its clients. It is highly recommended that NFA and COA come to agreement that copies of source documents will not be provided to resident COA auditors, and that NFA files are open to COA auditors at all times. COA is a well-staffed and competent organization, and housed as they are in agencies, they are in a position to become familiar with an organization's operations. But their performance is in no way enhanced by accumulation of complete duplicates of NFA files.

X. COMPUTER AND SYSTEM DEVELOPMENT

This section deals with computer and system development within NFA. The study contract provided for 1.5 man-months of consultant time for this review. The consultant reviewed existing and proposed staffing organization, methods, plans, projects, and equipment supporting computer and system work.

In general, the consultant concludes that:

1. Computer development in the Philippines lags behind that of other Asian nations and that there are barriers to rapid expansion, primarily rooted in an inadequate data communications infrastructure and in current restrictive economic conditions.

2. That development and extension of computer applications in NFA is vital to improved effectiveness and efficiency of the Authority's management and operations.

3. That NFA's five-year plan, which calls for substantial equipment upgrade and/or replacement, is sound in merit but faces difficulties in implementation because of economic and budget restraints and because of gaps in training, technical capacity, and uncertain Authority commitment to and knowledge of EDP.

4. That the long list of project priorities put together by the Management Services Division (MSD) represent legitimate needs but may well be overly ambitious given the restraints cited in 3. above and given the historical record of slow development, adoption, and implementation of current systems.

5. That there are a number of actions that can be taken by MSD which would improve its performance and these are concentrated on the methods by which it sets priorities, monitors its progress, involves user departments, and enhances training.

6. That a vital and major program now in pilot operation, the Field Office Accounting Mechanization System (FOAM), has promise, but faces unique problems in its extension throughout the field structure.

7. That potential changes in NFA's direction, particularly the limitations advocated on its stabilization and non-grains efforts and the potential disposition of Kadiwa operations would have substantial effects on data needs overtime.

The following sections provide supporting and descriptive material to each of these points.

Computer Environment in the Philippines

The following remarks regarding the computer environment in the Philippines are intended to provide a perspective for the examination of the computer environment and computerization activities at NFA.

Computer Hardware

A published 1983 study of the Philippines computer market showed that, at the end of 1982, there were 1,508 computers installed by business, government, and industrial users, a proportionate total which is below the average of other Asian countries. The total user population was 667, giving ration of 2.3 units per user. Of the total number of computers, 40 percent were in the large main frame category, 17 percent were minicomputers, and 43 percent were classified as microcomputers.

According to the study, growth of the Phillipine computer market during the period 1985 to 1988 is expected to be just over 44 percent, and growth in government use of computers is expected to average only about 35 percent during this period. It is interesting to note that growth in the use of microcomputers is expected to be nearly 75 percent. Since microcomputers currently do not allow on-line storage of the large data base systems required for gathering and processing of information for management use, these applications will be more difficult to design and implement. Microcomputers are better suited for processing data used in day-to-day operations such as accounting, payroll, and employee record-keeping.

Manpower

In 1981, of 2,894 people working in EDP activities in the public sector, 938 were in government corporations. NFA's contribution to this group, in 1981, totalled 50 people. Of the total EDP personnel in 1981, 47 percent were involved in control and data entry, and about 20 percent were systems analysts and programmers.

Data Communications

Data communications, necessary for implementation of decentralized or distributed data processing systems, is not viable in the Philippines at the present time. There are few microwave systems available for computer linkages. The islands, including Luzon, are covered with many short-distance, private telephone cables, thus almost eliminating, for the near future, any cohesive effort to provide long distance data communications capabilities. Consequently, any decentralized computer configuration must rely upon radio or courier methods for transporting data among computers within the system.

Past History and Current Conditions

In 1975, computer use in the Philippines was higher than in most Asian nations. Filipino computer users were invited to speak at regional seminars and Filipino expertise was sought by other Asian nations.

Today, every Asian nation has relatively more computers in use that does the Philippines. The government sector especially has lagged in computer procurement and implementation. Top officials at the ministerial level have not familiarized themselves with the advantages and capabilities of computers; and of the 1,508 computer units in use in 1983, only 83 were in government.

In February, 1984, the President issued Letters of Instruction 1380 and 1381 dealing with computers. LOI 1381 created a Cabinet Subcommittee on computers to review the role and potential of computers in the development of the economy. LOI 1380 eliminated the requirement that government and business must obtain the approval of the National Computer Center in order to purchase a computer, provided, however, that the value of any equipment does not exceed ₱2,000,000 in any fiscal year.

LOI 1380 appeared to open the door through which microcomputers might be imported into the Philippines, while, at the same time, limiting the importation of the larger minicomputer and main frame computer systems.

But the deepening economic crisis has added further constraints to growth of the EDP sector in the Philippines which will likely apply at least for the near term. The government has placed increasingly strict limits on any purchase or import activity which requires foreign exchange. In October, 1984, the Central Bank limited lettters of credit available to a corporation to US$10,000 per month. It appears that this measure may limit the amount of computer equipment that can be imported into the Philippines. This, of course, could affect NFA's planned improvements.

Present Computer Organization in NFA

Management Services Department Structure

The Management Services Department (MSD) is responsible for conducting studies and developing organizational, financial and operational procedures for the various central office directorates and for the field offices. MSD also is responsible for NFA's computer system, the core of which is a Data General C-150 minicomputer.

MSD consists of four divisions: The Organization and Methods Division, the Operations Research Division, the Systems and Programming Division, and the Electronic Data Processing (EDP) Division. Each division has a division head and consists of two sections, each with a section chief. This section of the study is limited to EDP activities and will consider only the latter three of the above divisions.

Operations Research Division. This division develops computer programs which use scientific management methods such as linear programming and statistical analysis. Its staffing consists of a section chief and five analysts in the Operations Analysts Section and a section chief and five research personnel in the Operations Research Section. At present, this division's major project is development of a Grains Dispersal System for determining sources and destinations of rice in order to insure its availability at all locations and is in partial use of this time.

Systems and Programming Division. This division provides virtually all systems design and most of the programming effort for NFA's computerized business applications. Its staffing includes a section chief and seven programmers in the Programming Section. The Systems Section's major effort is development of the Field Office Accounting Mechanization (FOAM) system which went into operation in two provincial offices early in 1984. A second project presently underway is development of a system to control inter-branch accounts.

EDP Division. This division is responsible for data control, data entry, system programming, and technical support associated with the operation of the Data General C150 minicomputer in the Central Office. There are a section Chief and 19 staff personnel in the Operations Section. Thirteen of these are data entry operators. There are a section chief and three EDP maintenance specialists in the Technical Support Section.

The EDP Division is primarily concerned with data entry and computer operating activities. The division maintains eight terminals for on-line data entry to the computer. Four terminals are reserved for entering source data for the user programs, and four terminals are used by the systems and programming personnel for program development. There are two shifts each day, 6 a.m. to 2 p.m. and 2 p.m. to 10 p.m. The computer appears to be operating at between 60 and 75 percent of peak capacity. Considerable overhead is required in loading and unloading program files from and to magnetic tape because the on-line disc storage capacity does not permit all program files to reside simultaneously on disc storage.

Personnel and Training in MSD

The total authorized personnel complement for MSD includes 76 regular and 21 casual (temporary) employees. Actual staffing is well below that authority with 67 regulars and six casuals now on the payroll. Plans for 1985 and 1986 call for no increase in the existing workforce, and such a freeze jeopardizes the planned addition of computer hardware and the continued expansion and development of computerized systems. This report will propose a range of improvements in this area which, if implemented, will require NFA to provide increased resources either through staff adjustments or through technical assistance contracts.

Formal job descriptions exist for every position in MSD. These list in detail the functions and the educational/experience prerequisites for each position. However, except for the Technical Support Section of the EDP Division, there are no formal responsibilities for training specified in any of the job descriptions.

Virtually all of the training courses attended by employees in MSD are purchased from commercial EDP schools. These are scheduled through the Human Resources Management Directorate of NFA, which has approval authority for outside training. MSD had scheduled a number of training courses for 1984, but these were disapproved because of budget constraints.

Although MSD conducts an "EDP Appreciation" course from time to time for personnel from other directorates, few in-house courses are developed for junior EDP personnel because of resource constraints, both in budget and staff capability.

Project Development in MSD

NFA has directed its initial computerization efforts to its management information needs in line with corporate and industry development thrusts; and as a result, there has been a higher priority on systems for reporting rice procurement, storage, inventory, sales, and related data than than upon the accounting functions of the organization. An inspection of Appendix A shows that virtually all computerized programs to date have served the operating functions of NFA. The only accounting applications developed to date are the Field Office Accounting Mechanization System and the Central Office/Branch Office Control Accounts System, and neither of these is as yet fully operational.

A new project is normally requested by a NFA central office directorate, top-level administrators, or suggested by MSD itself. Few proposals are refused. They are simply placed in a queue awaiting the time when manpower resources can be assigned. This practice has often resulted in long delays before a specific proposal can be acted upon. Once started, the procedures used by MSD are generally thorough and follow accepted guidelines. The efforts applied to the work plan, systems analysis and systems design, along with the approval procedures, frequently take much longer to complete than is usually acceptable for these activities.

There are several reasons for this. First, there is insufficient staff to accomplish all the projects proposed for computerization. Second, employees responsible for project development have been disillusioned by the lack of follow-through and support given to approved projects both by top management and user departments. It was learned from interviews that there have been times in the past when a directorate did not use the services provided by EDP when a project was implemented. This may have resulted from management turnover in the directorate for which the project was done. A third reason may be that the Director of MSD has major responsibility outside of NFA in another government agency. Although MSD claims that the arrangements are workable, prolonged, frequent absences by the director of a major directorate limits the normal impetus and direction expected from leadership positions.

The process of setting priorities for projects and project development are significant issues which will be discussed in a latter part of this section.

Data-Gathering Problems

NFA has one of the more advanced communication facilities in the Philippines. Its relative quality is such that it is periodically used by other government agencies which have communications networks of their own. A comprehensive radio network is used for message traffic between the Central Office and the field offices. During interviews with NFA personnel, it was estimated that more than 80 percent of the daily radio traffic consists of reports from field offices to various directorates in the Central Office, including reports for entry into the computer. Notable among these are the Daily Stock Report, the Daily Sales Report, and a daily Food Price Monitoring Report covering 19 prime commodities.

Each report is copied on a typewriter by a radio operator while listening to a voice transmission of the report. The heavy traffic and mode of transmission result in delays and errors which, according to NFA units receiving the reports, significantly reduce the utility of much of the data. Because of logistical problems involved in collecting daily stock balance, sales, and food price data, some provinces do not submit their reports every day. Although recognizing the field offices' dilemma, NFA has tried to enforce compliance by imposing a series of penalties upon the erring provinces. The real roots of the problem--overloaded radio circuits, overworked provincial personnel and excessive reporting burdens--have not, to date, been addressed by top management.

These activities and concerns will be discussed in more detail later in this section.

Current Efforts and Future Plans

Computer Resources in MSD

Appendix B lists the computers now installed within NFA and its subsidiaries. NFA contracted with the supplier of the Data General minicomputer in early 1982 for an additional 96 megabyte disc drive, but this unit has never been delivered--apparently because of financial problems within the supplier's organization. The restrictions placed by the Central Bank upon the value of letters of credit may now make it very difficult to import the new disc drive, which is urgently needed by NFA to efficiently process its increasing work load.

Introduction of Microcomputers

In early 1983, NFA signed a contract for seven IMS 5000SX microcomputers to be installed in selected provincial offices as a pilot program for the FOAM system (refer to appendices). Since MSD did not have adequate staff or experience with the proposed microcomputers, programming was done under contract by the vendor. To date, only two of these microcomputers have been installed--one in the Metro Manila office and the other in the Cabanatuan City provincial office. Because of implementation problems at Metro Manila, delivery of the remaining systems has been postponed by NFA. The volume of transactions required for data entry at the Metro Manila office was significantly under-estimated during the feasibility study. A second IMS 5000SX system was rented from the supplier and installed at Metro Manila in order to handle the monthly volume of transactions; and in December this was replaced by a larger version purchased by the Authority. Efforts began in August to prepare July reports in the FOAM system, but these reports could not be completed using the microcomputers; and in early November, they were done by hand. The larger microcomputer installed in December has not solved the problem, and the Authority now faces a dilemma. Failure to submit financial reports has caused serious difficulties in the Accounting and Budgeting Directorate, and financial reporting must now revert to manual methods.

Problems with FOAM appear to stem from data entry errors, storage capacity limits, the printer, and the software. The system was obviously not field tested in Metro Manila, but was installed based on field testing at Cabanatuan City, which has a much smaller volume.

There are two additional Fujitsu MS8 microcomputers in use at the Metro Manila office. These are used to run rice, flour, and feed grain distribution systems. These programs are considered to be successful since they eliminated a double shift and have improved service to customers at the Metro Manila office. These systems are stand-alone, and they cannot communicate with other computers in the Authority.

FIT has acquired four microcomputer systems, and one has been installed at GRAINSCORP. None of these are, as yet, operational, and they appear to have been installed in advance of system development and programming.

The Five-Year Plan

A major concern of MSD at this time is the development of a five-year plan for hardware and programming requirements in order to continue to respond to demands of NFA management for computerized systems.

The hardware plan calls for either replacing the current Data General computer, which is under lease, or upgrading the current computer to provide greater on-line storage capacity. Also included in the plan is an evaluation of microcomputers to determine how these might be utilized in a distributed-processing configuration among the field offices. As described above, microcomputers are already in use as part of a pilot program for the FOAM accounting system.

During the course of this study, MSD prepared a new list of 48 proposed systems for computerization during the next five years that are in addition to those included in Appendix A. The proposed programs have been evaluated against a set of criteria agreed upon by user groups (other central office directorates). The programs were arranged in a priority sequence for development according to ratings developed during evaluation. Since some of the programs already under development have been in process for many months, even years, it would seem reasonable for MSD to discourage further requests for new systems until the most significant of those under development can be implemented and their impact on computer facilities can be evaluated.

As an example of development delays, the Central Office/Branch Office Control Accounts (COCA-BOCA) system was originally specified in 1978. During the systems analysis phase, because of heavy turnover in the Systems and Programming Division of MSD, there was little progress. Then accounting changes in the Accounting and Budget Directorate required a complete revision of the specifications. Meanwhile, in 1981, MSD replaced its Datapoint computer with the Data General computer, which required still more design revisions. Now six years later, the COCA-BOCA system is being tested and is expected to be become operational in early 1985.

Recommendations regarding the five-year plan will be made later in this section.

Alternatives for EDP Implementation

Until 1983, NFA's computer operations had been centralized in a single location at the Management Services Department in the Central Office. Implementation of the Field Office Accounting Mechanization System required that microcomputers be set up at remote provincial offices. Now, with the five-year plan, MSD is attempting to design the optimum computer structure for serving future needs of NFA. Basic to consideration of the plan is an understanding of two important questions:

1. What is a centralized and what is a distributed computer system?

2. What are the factors that influence which type of structure to be chosen?

A centralized system is characterized by a host CPU connected to a number of local and/or remote terminals. The computer staff consist of highly trained specialists. The operating system may be complex.

A distributed system is characterized by stand-alone computers located at all field sites. There is no central computer. The data processing staff resides at the field site and need not be as sophisticated as the staff in a centralized system. CPU's at all locations should be capable of hosting any program used in the system.

Between these two extremes, there are a variety of hybrid structures that can be used. A data communications network may be utilized in any of the systems, in various configurations and for different purposes.

From an organizational viewpoint, there are influencing factors that can act as guides to the optimum structural design of the computer system. For example, if management is centralized, if the organization is monolithic in structure, if the operations are similar in nature, and if only a single product is produced (or a single service provided), then a centralized computer system is indicated.

If the organization is decentralized, is characterized by a diversity of operations, if it is divided into well-defined subunits which deal with many products, then a decentralized computer may be preferred.

NFA more closely resembles the latter description. It is in form decentralized although not entirely in practice. It has a diversity of operations. It deals with a multiplicity of products and commodities. Thus, NFA's organization has attributes that would indicate a hybrid computer system having both centralized and distributed characteristics.

In addition, there are three governing considerations which dictate policy and also limit the type of computer systems structure that NFA can implement. These are:

1. Lack of a data communications capability in the Philippines.

2. Fiscal restraints under which NFA must operate.

3. Desire by MSD management to maintain technical control as well as a measure of administrative control over computer activities in NFA.

A determination of what type, capacity, and configuration of computers to install in the next five years is influenced by how the structure and size of NFA is expected to evolve over this period. Organizational evolution involving subsidiarization, spin-off, and expansion or reduction of operations must be considered.

An evaluation of the proper computer configuration for NFA must also consider the two primary types of applications. These are, first, basic data processing functions such as payroll, general ledger, accounts receivable/payable, inventory, order entry, and personnel information, and second, management information functions, characterized by the summarizing and classifying of data and, often, by on-line inquiry capabilities via a computer terminal.

Basic data processing functions frequently involve daily or weekly update of files. They often require large data entry capacities and considerable volumes of output, usually on a printer. Management information programs frequently use large capacity, on-line storage devices containing files of historical data. These programs also may use data from files that are updated daily, weekly, or monthly.

Several factors have been discussed in this section which will affect the computer hardware configuration selected for the five-year plan. Recommendations will be made in the following paragraphs.

Recommendations

The Five-Year Plan

Because of its vital impact upon activities of MSD for the next several years, the five-year plan for computer hardware and software requires careful planning by MSD and full support of NFA management. Organizational characteristics, management policies, data processing goals, and economic factors to consider in selecting hardware components for an EDP system were described in the prior paragraphs.

MSD's proposed plan for the next five years is basically sound. It considers either replacing or upgrading the Data General C-150 minicomputer system in the Central Office. But, since its installation in 1981, this computer has experienced intermittent breakdowns of varying origins. Dealer service has given only temporary solutions. Because of this problem, MSD prefers a complete replacement of this system and the consultants, in general, agree.

As mentioned earlier, NFA has always placed a high priority on the need for management information. Since these types of programs often require access to large data files during execution, it is important that the central office computer be equipped with a large on-line storage capability. At least 120 megabytes should be sufficient to start, but an add-on requirement of perhaps three times this capacity should be anticipated.

Because NFA's 82 provincial offices perform the actual operating functions of the organization, the optimum computer configuration would be to place CRT terminals with keyboards in each provincial office, connected via data link to the central office computer. This arrangement would give the provincial offices access to appropriate files residing in the central office computer and would provide the Central Office with timely information on operations at the provincial level. But, since a data-link network is not available, other alternatives must be considered. Here, the increasing versatility of microcomputers, along with their decreasing costs, offer a viable substitute. Unlike a simple terminal/keyboard unit, a microcomputer has data processing capabilities, thus providing NFA with the distributed-processing abilities discussed earlier. In addition to the monthly FOAM reports, other NFA-wide applications could be implemented on these systems. Further, applications appropriate only at the provincial level could be developed and implemented on the microcomputers.

Implementation of this plan would require considerable manpower resources from MSD for installing programs and training provincial personnel in computer operating and data entry procedures.

Due to current fiscal problems and consequent severe budget constraints on government agencies, as well as import limits, implementation of the five-year plan will tax the creative abilities of all concerned. It is the opinion of the consultants that computerization is an important element in the strengthening of NFA's activities. Some external assistance may be needed for the procurement of the microcomputers included in the five-year plan. Such assistance could prevent fragmentation in procurement by insuring that the microcomputers are all of the same type, thus assuring programming and operating compatibility among these units.

The Field Office Accounting Mechanization System

The Field Office Accounting Mechanization (FOAM) system is an effort to automate accounting functions at the provincial level. The system is composed of seven modules as follows:

- Module I: Stock Inventory System (grain and non-grains).
- Module II: Voucher Recording System.
- Module III: Advice Recording System.
- Module IV: Collections Reporting and Recording (grains and Kadiwas).
- Module V: Cash and Check Register Journal.
- Module VI: General Journal.
- Module VII: General Ledger/Financial Reports (grains and non-grains).

Each module is a separate program. Modules I through V may be run in any sequence desired and at the user's convenience as input becomes available. Modules VI and VII will be run at the end of the month when all transactions for Modules I through V have been completed.

Each module generates one or more reports and may be run at any desired interval. However, only the end-of-month reports are transmitted to regional and central offices.

The feasibility study for the FOAM system was thorough, and properly involved key people from the Accounting and Budget Directorate, Internal Audit Directorate, and Management Services Directorate, as well as accounting managers from Metro Manila and Cabanatuan City provincial offices. As a welcome by-product, the in-depth study of the manual reporting system resulted in elimination of several reports from the automated system. With appropriate modification, the system could satisfy, for the mid-term, central office requirements for accounting information from the provinces provided that microcomputers were available in each province and trained staff were available.

If the Chart of Accounts now in use is changed to permit identification of cost centers and activities, the FOAM system, in order to remain useable, would have to be modified to conform with the revised Chart of Accounts. Such a modification could be a major exercise.

Serious consideration should be given to adding to the FOAM system the capability for generating reports on diskettes. These could then be sent to the Accounting and Budgeting Directorate in the Central Office for consolidation.

Care should be taken that microcomputers selected for provincial offices are compatible regarding programs and file formats. This does not necessarily mean that all the microcomputers in the provinces must be of the same type. But operating systems and programming languages used on the computers must permit programs run on one province's computer to be run on another province's computer. Likewise, it should be possible to produce a report or generate a file on a diskette at any province with identical formats. This will make it possible, if desired, to request that diskette files be sent from the provincial offices to the regional offices or to the Central Office where the files can be processed and the data merged into a single file or report.

Project Development Procedures

The Systems Development Division of MSD appears to be understaffed for the volume of work it has to do. some projects have been in development for more than two years. Additional qualified personnel should be obtained through hiring, staff adjustments among other NFA directorates, or technical service contracts.

There are other measures which could be instituted in an attempt to reduce project development time. Three specific recommendations offer opportunities.

First, users should be required to do more of the preliminary work now done by MSD personnel. This includes problem definition and fact-gathering activities and includes a statement of user needs, project goals, input data volumes, specifying data formats, ranges and limits, output report formats, report schedules, and other appropriate information. MSD should train users in these activities and prepare written guidelines for the purpose.

Second, more care should be taken in setting priority criteria for projects. There should be a policy of refusing those projects which cannot meet the criteria. In setting priorities, MSD has used a weighted system consisting of four criteria:

	Weight
• Impact on management control	40%
• Volume of data	25%
• Complexity of the manual procedures	25%
• Convertibility of the manual system	10%

The priority criteria should include, at the top of the list, manpower and computer resource availability and an evaluation of the costs of computerization measured against the benefits to be obtained.

Third, the MSD Project Monitoring Schedule form used for reporting on progress of a project does not now but should provide for a statement of problem areas, i.e., resources not available, user specifications incomplete, etc. Such information will pinpoint problem areas for management and can result in better coordination and faster resolution of problems causing delays in progress.

EDP Training in MSD

It is recommended that additional emphasis be placed by MSD on in-house EDP training. Currently, MSD does conduct occasional in-house courses on "EDP Appreciation." Selected users from other NFA Directorates are invited to attend. This is a commendable activity by MSD and should be continued. However, there should be a formal policy for a continuing training program at least for junior staff members. The policy could be formalized by including in the job descriptions of division or section chiefs statements regarding their responsibility for planning and conducting such training. Suggested course topics are the computer operating system, programming techniques, and systems analysis fundamentals.

The consultants recognize that existing staff assignments make the addition of training responsibilities a burden. But because advances in computer technology occur more rapidly than in most other technical disciplines, a regular program for EDP training is essential. Such programs in many companies have proved to be an effective motivator and morale builder for employees. It also provides a vehicle for the organization to present its explicit goals, policies, and standard operating procedures.

Subsidiaries

The Management Services Directorate should have responsibility for computer acquisitions in the various subsidiary corporations. It should assure that all acquisitions are well justified and that no computer is installed until all systems design and programming have been completed and tested. MSD should also, to the extent possible, strive for uniformity throughout the NFA and its subsidiaries. There are at present five different makes of microcomputers installed and this proliferation should be brought under control.

Effects of Changed Directions

Earlier in this report, a number of recommendations were offered concerning limits and changes in the directions, involvement and missions of NFA. Stabilization activities were to be restricted to rice, corn, and wheat. Industry Development efforts, particularly in the area of non-grains were to be more carefully defined and NFA was strongly urged to disengage itself from procurement, processing, and distribution of perishables. FTI operations were challenged on grounds of economics and mission. The Kadiwa operations were suggested to be candidates for subsidiarization or privatization.

These changes, if implemented, would have major effect on NFA's data needs, primarily reducing its burden. A great deal of current and proposed system activity is tied to the areas outlined in the prior paragraph including a number of the modules involved in FOAM. A restricted agency mission may give relief to data demands but the configurations discussed earlier remain valid even in a retrenchment era.

On the other hand, a revised support program intended for industry development may have additional data demands and surely the need to improve financial data affects both systems and data. NFA must be prepared to adjust its EDP programs in parallel with adjustments in its missions.

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Appendix A

COMPUTER PROGRAMS IN OPERATION, IN-PROCESS, AND PROPOSED

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COMPUTER PROGRAMS IN OPERATION, IN-PROCESS, AND PROPOSED

Name of Program	Number of Reports	Frequency of Reports
Operational Programs		
Daily grains stock balance	1	Daily
	2	Weekly
Grains sal	2	Daily
Food price monitoring	8	Daily
	7	Weekly
	6	Monthly
Empty sack balance	1	Weekly
Quality control information system	1	Monthly
KKK buyers profile	6	Monthly
Registration and licensing: grains	2	Semi-monthly
Registration and licensing: non-grains	2	Semi-monthly
Payroll-Central Office	9	Monthly
Group accident insurance plan	3	Monthly
Flour distribution system	6	Daily
	1	Weekly
	1	Monthly
Feedgrains distribution system	6	Daily
	1	Monthly
Rice distribution system	5	Daily
	1	Weekly
	1	Monthly
Rice allowance-Central Office	3	Monthly

Name of Program	Number of Reports	Frequency of Reports
Field Office Accounting Mechanization (FOAM)		
Stock inventory system	15	Monthly
Voucher recording system	15	Monthly
Advice recording system	2	Monthly
Collection reporting and recording	14	Monthly
Cash and check registers	2	Monthly
General journal	2	Monthly
General ledger/financial reports	5	Monthly
Programs in Development		
Grains situation system	9	Daily
	5	Weekly
Non-grains situation (Kadiwa procurement)	5	Monthly
Non-grains situation (Kadiwa sales)	6	Monthly
Non-grains situation (Kadiwa stock balanc	3	Monthly
KKK project monitoring	17	Monthly
Human resources information system	3	On demand
Central Office-branch office control accounts	10	Monthly
NFA gross compensation (tax records)	1	Monthly
Fixed asset accounting	3	On demand
Warehouse information system	13	Monthly
Commercial stock survey (grains)	10	On demand
Food consumption survey	8	Annual
Grains industry regulation information system	3	On demand

Public Administration Service 1497 Chain Bridge Road, McLean, Virginia 22101

Name of Program	Number of Reports	Frequency of Reports
Proposed Programs		
Farmers association profile		
Hauler/contractor profile		
Survey of bakeries and flour users		
KKK market matching		
Production/harvest monitoring		
Commercial stock survey (non-grains)		
Accounting systems		
Central office cash balance reporting system		
Central office voucher reporting system		
Central office financial statement consolidation		

Public Administration Service 1497 Chain Bridge Road, McLean, Virginia 22101

Appendix B

COMPUTER HARDWARE INSTALLED IN NFA AND ITS SUBSIDIARIES

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COMPUTER HARDWARE INSTALLED IN NFA AND ITS SUBSIDIARIES

Description of Computer	When Installed	Location
Data General C-150 mini-computer 512 K-byte primary memory 96 megabyte on-line storage 1 - 900 lpm printer 8 - CRT I/O terminals 1 - tape drive	1981	MSD Central Office
Fujitsu MS8 Microcomputer (two systems) 128K primary memory 10 megabyte on-line storage - 5 inch diskette	1984	Metro Manila
IMS 5000 SX microcomputer 646K primary memory 12 megabyte on-line storage 2 - 5 inch diskettes 2 - CRT I/O 64K terminals 1 - 200 cps printer	1984	Metro Manila
IMS 5000 SX microcomputer 256K primary memory 15 megabyte on-line storage 1 - 3-1/2 inch diskette 1 - Epson FX100 (160 cps) printer	1984	Metro Manila
IMS 5000 SX microcomputer 256K primary memory 15 megabyte on-line storage 1 - 3-1/2 inch diskette 1 - Epson FX100 (160 cps) printer	1983	Cabanatuan
Hewlett-Packard 150 microcomputer 256K primary memory 15 megabyte on-line storage 1 - 3-1/2 inch diskettes 1 - Epson FX100 - 160 cps printer	1984	Grainscor

Description of Computer	When Installed	Location
Apple II plus microcomputer	1984	FTI
TRS-80 Model 16 microcomputer (2 systems) 768K CPU memory 60 megabyte on-line storage 3 - CRT I/O terminals 1 - printer 1 - 5 inch diskette		
TRS-80 Model III Microcomputer 64K CPU memory 1 - CRT I/O terminal 1 - printer 1 - 5 inch diskette	1984	FTI