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FAMILOSA CASE

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This case was prepared by J. F. Rockart, Lee Wakeman and Miklos Vasarhelyi. Names, places and figures are omitted or changed; this case illustrates a standard appraisal problem and not the recommended way to approach it. It is designed for class discussion of practical problems of the appraisal of a project by a Development Bank.

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Introduction

On December 1, 1966, the President of CODEST, Companhia de Desenvolvimento do Estado, a regional development bank in a state of the Southeast of Brazil received a letter from Dr. João Oliveira Director Presidente of FAMILOSA, Fábrica de Produtos de Milho S. A. In the letter Dr. Oliveira requested an interview to discuss a project which he felt would fall within one of the categories of projects whose financing CODEST was allowed to participate in according to its charter and repasse agreements with the State Government and the Banco Nacional do Desenvolvimento Econômico. The letter went on to outline the history and operations of FAMILOSA, from its formation in late 1964, to extract crude corn oil and corn fodder from raw corn, to the present year. During its first year of operation, 1965, the firm, using good marketing techniques, established itself in both the crude corn oil and corn fodder markets with 9 and 15 percent respectively of the total.

FAMILOSA is located in Pereira, a small town of about 50,000 inhabitants, on the outskirts of one of the big cities in Southeastern Brazil. It has its main offices and factory in Pereira but also has a permanent office in the capital of the state. FAMILOSA is a Sociedade Anônima (Corporation) constituted on November 30, 1964, and established at the city of Pereira. The charter of the Corporation does not limit its life. Presently, FAMILOSA was considering two alternative expansion projects. The first project was an integration downstream from crude corn oil to refined corn oil, which would give the company higher profit margins. The second project was a product diversification into crude soya bean oil extraction (with the secondary product soya bean cake), which would allow FAMILOSA to offer its customers the entire range of vegetable oil and vegetable based fodder products. If the second project established (the company felt confident of their ability to successfully penetrate this market) would provide the basis for downstream integration into refined corn oil and refined soya bean oil.

Dr. Barros, president of CODEST, discussed the projects with the bank's senior lawyer, checking that the bank would be able to participate, and having received a favorable answer, wrote to Dr. Oliveira expressing interest in the projects. He requested Dr. Oliveira to call on the bank on December 10 with details of FAMILOSA's operations.

Initial Interview

Dr. Barros had then telephoned the President of BANEST, Banco do Estado, the state owned bank and asked for his opinion of the management of FAMILOSA. He was told that the Bank had already lent the firm NCr$100.000,00 for working capital, (an increase from the original NCr$55.000,00 agreed upon in February 1965), and had been approached by FAMILOSA to increase this loan further by an initial NCr$400.000,00. The BANEST had a generally favorable impression of FAMILOSA and tended to discount the possibility of FAMILOSA failing, though the management of FAMILOSA was considered to be rather adverse to receiving outside advice.

At the initial interview, Dr. Barros introduced Dr. Oliveira to the head of the Appraisal Department, Sr. Resende and the three men discussed, in a general form, the history of FAMILOSA and its intended expansion plans. Dr. Barros formed the impression that Sr. Oliveira, though of a rather prickly disposition, knew his business well and was not a figure-head Diretor Presidente. Sr. Resende then introduced Sr. Oliveira to Sr. Parente, an economist in the Appraisal section who was assigned to be the initial appraisal officer for FAMILOSA. He then left the two men to talk over, in detail, the firm and the project.

Sr. Parente had already heard of Sr. Oliveira's attitude toward advice and criticism, from Sr. Resende. Since Dr. Barros had explained that the development's bank policy tended more toward consultation than that of a commercial bank, Sr. Parente left out that point in discussion with Dr. Oliveira and began to question the Diretor Presidente about the firm and the project. Sr. Parente's initial conclusions were as follows:

> "The credibility of the borrower appeared high, and is backed by the report from the Banco do Estado. His ability to manage FAMILOSA well does not appear suspect; nor does the viability of the firm seem in doubt, though there appears to be room for improvement in profitability. The borrower does not seem, however, to have thought out his projects well and it appears that the firm's decision to go into one or both of these new markets is based to a large degree on intuition and faith in it's own ability"

Initial Company Visit

This report went to Sr. Resende, and because it contained no significant deleterious points, Sr. Parente was authorized to carry out an initial appraisal of the company "on site". This decision was communicated to the directors of FAMILOSA and arrangements were made for Sr. Parente to meet the directors and staff of FAMILOSA on January 17 and 18. Sr. Parente spent the first day looking over the plant and talking about existing operations with the heads of the departments. On the second day, Sr. Parente started by discussing the marketing aspects of the projects with the Diretor Commercial, Sr. Antonio Almeida and then discussed the production problems that the projects would entail with Sr. Julío Silva, Diretor Técnico of FAMILOSA. Finally he discussed the effects of the projects on the firm's income statements and balance sheets for the next three years with Sr. Abílio Moreira, the Diretor Financeiro. Sr. Parente finished by meeting with the board of directors as a group and after first checking with them the figures quoted to him, he discussed the project and their estimate of their financial needs to ensure that there was no misunderstanding. He finished his trip by spending December 29 visiting the Banco do Estado, several of FAMILOSA's suppliers, and two of FAMILOSA's customers, asking for their impressions of FAMILOSA's management.

Sr. Parente then returned to CODEST and prepared his initial report, telephoning FAMILOSA's directors from time to time to clarify points that occurred to him after the visit. The report is included in its entirety:

FROM: Paulo Parente

TO: Ricardo Resende, Head of the Appraisal Department

SUBJECT: Initial Report on FAMILOSA

1) Legal and Organization Model

The officer can find nothing illegal about the firm and its operations or its proposed project, and has found nothing to suggest moral turpitude amongst the senior managers. The organizational structure appears adequate, if a little excessive, but there seems to be a tendency toward empire building. This is rather unusual in a company of this small size, and as a result the departmental coordination seems very poor and the heads of department seem unable to accept criticism or take advice. This lack of coordination at upper levels seems also to have affected management-labor relations, since there appears to be friction between the heads of department and the workers under them - a condition which should not exist in a firm this size. But it should be pointed out that managers of this firm all seem involved, and all are working for salaries that are definitely lower than they might expect to receive.

2) Marketing Model

The marketing record of the firm has been excellent and is probably one of the firm's strong points. FAMILOSA broke into the market well in 1965, trading on good delivery date performance and competitive prices to establish their reputation, and the marketing department appear confident of selling anything that the firm produces.

The forecasts that the marketing department has prepared for crude corn oil and corn fodder for the next three years (Exhibits 1 and 2) seem reasonable (even though part of the forecast sales increase will be at the expense of competitors). The marketing logic behind the two projects seems acceptable. Refined corn oil has a much higher mark-up and is a faster growing market with a minimum growth rate of 7 percent. Crude soya bean oil is a much larger market than crude corn oil, with a slightly higher rate of growth (6percent vs. 5percent) and a slightly lower price (though the profit margin is comparable). It would provide a full product range for FAMILOSA's salesmen to offer. One problem about marketing seems of little concern to the company: though crude soya bean oil would be offered to the same type of customers that FAMILOSA's salesmen are currently selling to, the marketing organization would have to service an entirely different category of customers in the refined corn oil market. There has been no additional preparation for this eventuality and the company appears to be rather confidently expecting its salesmen to be as effective with this entirely new class of customer as they are with the crude corn oil customers.

3) Production Model

Though the basic production process is very simple, the initial set-up was carried out very smoothly and the firm's chief engineer appears highly competent. Though the current equipment is well installed and well maintained and the production management is generally good (though inventory turn-over is poor), a lack of skilled workers and the problem in labor management relations appear to have combined to produce a less than efficient cost structure, thus reducing the firm's profit margin. The plant and equipment required for either project appear to have been carefully chosen, but the technology involved in refining oil appears, from several accounts, to be considerably more complex than that for the extraction of crude oil. This fact appears to have been given insufficient attention especially in the light of the firm's current problems of insufficient skilled labor and poor labor relations. This consideration would appear to favor soya bean extraction rather than refining corn oil.

4) Financial Model

The Income Statement and Balance Sheet for the last two years are attached (Exhibits 3 & 4). It is obvious that current profits are not large and there is not a good return on assets yet - nor are the current and debt equity rates reassuring, even though a large part of the long-term debt is held by directors (see exhibit 3C) of the company, and a considerable proportion of the short-term debt is discounted accounts receivable factored by the bank.

It appears obvious that FAMILOSA needs further capitalization - expecially if it is to expand - to maintain some degree of liquidity and safety. Also further capitalization could be used to reduce Accounts Receivable discounting which is currently causing a large drain on profits.

It should be mentioned at this point that the accounting organization lacks effectiveness and management accounting records are sparse; a not unusual condition for new firms. This condition though tends to cause increasing problems as an organization grows in size and is already adversely affecting management coordination.

Projection of income statements and balance sheets for the future have not been made and it is hard to discuss future problems without them. But the figures given by the management of FAMILOSA on costs and profit margins suggest that either of the projects will have a favorable effect on the firm's profit margins. FAMILOSA intends to offer as a guarantee to obtain the FIPEME loan values the total amount of NCr$850.000,00 (see Exhibit 5).

5) <u>Recommendations</u>

a. CODEST should consider supporting FAMILOSA's expansion.

b. The soya bean extraction project should be backed, since it seems the best suited project for FAMILOSA at present.

c. The management of FAMILOSA should be urged to increase the capitalization of the company.

Initial Decision

Sr. Parente's report was discussed by the Initial Appraisal committee on January 31. The committee normally consisted of one director; in this particular case, Dr. Barros; the head of the Appraisal Department, Sr. Resende; the head of the Legal Department, Sr. Diamante; and the reporting officer, in this case Sr. Parente.

Though Sr. Diamante suggested that CODEST should not proceed further with this company until the financial accounting had been improved and the internal management problems had been solved, it was generally felt that FAMILOSA was an aggressive company that needed help. It also appeared that there was the distinct possibility that if CODEST did not help FAMILOSA the company would go gently down-hill and might even disintegrate under the increased stress as the managerial problems became insolvable.

It was, therefore, decided to proceed to the Appraisal Stage and a letter was sent to FAMILOSA stating that CODEST would be interested in further discussing the soya bean extraction project. It was felt that at this time CODEST did not feel free to consider the Corn Oil Refining project. If the board of directors of FAMILOSA agreed to the above, an appraisal team would be sent to FAMILOSA at the end of October. A letter was received from Sr. Oliveira, in which he accepted the bank's recommendation, mentioning that he considered the refined corn oil project far more profitable and more useful in the development of the State. Upon receipt of that letter, a team was picked to work with Sr. Parente on the project. The other three members of the team were Sr. Monteiro, an accountant, Sr. Cerqueira an engineer, and Sr. Lima, a lawyer. All four of this group had been working in CODEST for several years and were in the middle or late twenties.

Appraisal

The appraisal started in early March. Before leaving to visit FAMILOSA Sr. Parente and his team collected from the library at CODEST, those publications which they thought might be relevant to their study. They thus had available to them IBGE and FAO figures for the corn products industry.

Upon arriving at FAMILOSA for the first day of the appraisal, they were introduced to the marketing director, Sr. Almeida. A pleasant man, Sr. Almeida shook hands warmly and escorted the team into a well-upholstered meeting room. He then sat down at the head of the table and asked, rather seriously, just how Sr. Parente thought they should proceed. Sr. Parente replied to Sr. Almeida that although he, Sr. Parente, had a good understanding of FAMILOSA and its marketing and production situation he felt, perhaps, it might be a good idea to acquaint the other members of the team with as much of the marketing aspects of the firm as Sr. Almeida felt was necessary at the time. Sr. Almeida, therefore, spent the next half hour outlining the organizational chart and the operations of the firm. The organizational chart may be seen on Exhibit 6.

Sr. Monteiro took notes on this discussion and later summarized his notes as follows: "The firm currently produces crude corn oil and corn fodder. It distributes throughout all of Brazil. Crude corn oil is sold to refiners who refine it into edible oil. Corn fodder is used for animal feed.

The firm proposes to improve its product line in the project.

"There are two types of refined oils which are consumed by the people in this country. One refined oil is animal in origin, the other type of refined oil comes from vegetables. Vegetable oils appear to be demanded more today by consumers than animal oil. Sr. Almeida feels that the market for vegetable oils is by no means fully tapped. He feels that the demand for vegetable oils, especially corn oil and soya oil, is increasing quite rapidly, with soya bean oil having a very large market - larger than corn oil.

"Sr. Almeida also explained that soya bean oil has a comparative advantage because of its low cholesterol content. He feels that the consumption of soya bean oil is increasing basically because of this characteristic which more and more people seem to be aware of.

"During the discussion, Sr. Almeida was most enthusiastic about the increase in growth of fodder over the next several years. He was somewhat vague when asked by Sr. Parente as to what percent increase he feels the market will have over the next three or four years, but finally stated at least 8 to 10 percent when pressed on this matter by the team. Sr. Almeida's assistant, Sr. Costa, who had come into the room during the discussion, volunteered the fact that perhaps the increase in the market for corn fodders would not be quite this high. Sr. Almeida did not comment on this, and the team did not question it.

"Sr. Almeida then discussed the change in the distribution system of the firm which would be required to handle the new products.

"Initially he described the existing distribution process for crude corn oil and corn fodder. The crude corn oil was bought by a few companies that had refining facilities and two of these also produced crude corn oil but not enough to meet their refining capacity. The sales were made directly by telephone, between Sr. Almeida himself and the buyers' purchasing agents. He also felt that, in some sense, his prices were controlled because at the same time he wasn't able to negotiate different prices with different customers. He thought that maybe during the meeting of the "Federação das Industrias de Refinação de Óleos Vegetais" there was some kind of exchange of information on prices for crude vegetable oil.

"Corn fodder was sold in a different way - by traveling salesmen to big retailers and wholesalers under direct supervision of Sr. Almeida. In this area, prices differed from region to region because of transportation costs and competition. Salesmen were paid a fixed minimum salary and a variable percentual on sales depending on the prices by which the fodder was sold. There was also a bonus for new customers. This made their salesmen aggressive and very sensitive to purchaser's demands, but sometimes Sr. Almeida wondered how much this price-push mechanism was costing FAMILOSA in terms of sales volume.

"The deliveries were made by freight trucks but this process was slow due to the fact that they were not always available when needed. They were also too expensive to run, especially because only very seldom was it possible to allocate "return-load" of raw materials when on a delivery trip. Deliveries were direct because FAMILOSA didn't possess and didn't think worthwhile to have distribution warehouses.

"Once, some time ago, Sr. Almeida suggested to Dr. Oliveira the purchase of some trucks to make deliveries. This would enable them to plan those deliveries and make them coincide with raw material purchases. But, in his very characteristic manner, Dr. Oliveira said that they were in the Production business and not in the transportation business. The matter wasn't worth discussing further.

"The suggested distribution plan to the soya product was similar to the one of corn products. It was argued that it wouldn't require big increases in the sales force because most of the time consumption required for fodder sales was on route and therefore, the time consumption wouldn't have to be duplicated.

"He also stated that he 'felt that the firm's introduction of soya bean oil and soya fodder as products would help to further round out the firm's product line and that it would stimulate the firm's sales by making FAMILOSA more of a full-line company.' Many of FAMILOSA's customers have been asking for these products, and he felt that their introduction would make the company more competitive in the market place.

"Sr. Parente questioned Sr. Almeida closely about proposed production rates for the new products. In attempting to answer this question, Sr. Almeida stated that he expected the firm to produce 978 tons of crude soya bean oil in 1967 and to sell most of this. He also stated that he expected the firm to produce 3,912 tons of soya products. He further stated his expectation that the firm's sales of crude soya bean oil would increase by something less than 10 percent per year. The production of soya fodder would have to follow suit since soya fodder is a by-product of the crude soya oil extracting process. Sr. Almeida ended the afternoon's conversation by stating that he saw no problems from a marketing viewpoint of breaking into the market and of obtaining a good share of it rather quickly."

The team returned to their hotel to talk over what they had seen. Before discussing the project, they turned to the statistics which they had brought with them from the CODEST library. They found that according to the FAO the edible oil consumption in the country is low; amounting to approximately six to eight kilograms per inhabitant. This figure compares with 19 to 21 kilograms in Canada and the United States, and 16 to 17 kilograms in Argentina and Uruguay. The team also reviewed IBGE figures on the consumption of edible oils from 1945-1964. These figures are shown in exhibit 7.

The team found some information regarding fodders in the IBGE publication "Brazilian Industrial Production" published in 1958. These data are shown in exhibit 8. Brazilian Industrial Production predicted an increase of demand for fodders at 2 percent per year for the period through 1970. This was the same percentage gain prediction that had been given to Sr. Parente when he talked with the officers at the Banco do Estado.

After mentioning this, Sr. Parente also informed the team of a few of the Bank's other predictions in the marketing area. The Bank suggested that since the country's population was growing at about 3 percent per year, this growth itself would provide an increased market for refined oils. One of the bank officers had strongly made the point that improvement in diet was one of the higher priorities in terms of the current economic development plans. He also suggested that as people became increasingly better educated and economically better off, the population would be able to increase its consumption of oil. He further felt that the current efforts to increase and improve herds of cattle should substantiate at least 2 percent growth of the fodder market.

In discussing FAMILOSA's competitors, the Bank official made the statement that Miranda Enterprises was trying to increase its capacity in all lines by approximately 10 percent during the next five years. Miranda was a major competitor and a full line competitor of FAMILOSA's. The Bank knew of no other plans by other competitors to increase their capacities and Sr. Parente had previously checked this out with trade sources and had found that no one knew of any other company planning to increase its capacity. All of FAMILOSA's competitors appeared to be operating at 80 to 90 percent of capacity. Neither the Banco do Estado nor trade sources knew of any startling developments among competitive products according to Sr. Parente.

In reading from his notes from his last visit, Sr. Parente pointed out to the team that the trends shown in the projects for crude corn oil and corn fodder vis à vis the three major divisions of the country were expected to continue. In essence, the FAMILOSA officials felt that the relative demand in the South would decrease over the next several years, as the demand in the middle and northern areas grew some.

The following day Sr. Parente and his team talked to two customers and a supplier of FAMILOSA. The opinion that they got from everyone was that as a marketing organization, the company had an excellent record. The marketing manager was especially praised. The supplier stated that he appeared to have an uncanny ability to understand trends and to exploit opportunities available to the firm. In both years of FAMILOSA's existence it had sold almost all the corn fodder and corn oil that it could produce. The company had limited itself to about a three to four month inventory of both products.

One of the directors of one of FAMILOSA's customers, who seemed a very competent man to the team, suggested that with the exception of an increased demand for corn fodder in the winter season in the south, there were no seasonal influctions which might influence FAMILOSA's sales. According to this executive, FAMILOSA followed standard industry practices with regards to terms of sale. He bemoaned the fact that there was very little price competition in the crude corn oil or crude soya oil industries.

The team returned to FAMILOSA for another discussion with Sr. Almeida and Sr. Costa. The talk ranged over many subjects. Sr. Almeida at one time took a great deal of the teams' time as he walked them through the new and expansive storage facilities for corn in grains which FAMILOSA had built in the last two years. It appeared that this storage was certainly sufficiently ample to maintain a large supply of this raw material. Dr. Oliveira took pains to re-emphasize that FAMILOSA was still a minor factor in the market, having a total of 9 percent of the crude corn oil market and roughly 15 percent of the corn fodder market. FAMILOSA's major competitor in crude corn oil has roughly 1/3 of the total market. In Sr. Oliveira's words, this represented an excellent situation since it gave FAMILOSA a great deal of opportunity in the markets. In the corn fodder field FAMILOSA is one of three or four approximately equal competitors.

Sr. Oliveira and Sr. Almeida were quite insistent about the opportunities in moving into the crude soya bean oil field. Sr. Almeida especially stressed that he felt that the firm's plans to break into the new markets were reasonable and conservative. FAMILOSA was postulating in taking over only approximately 3 percent of the crude soya oil market the first year and less than 5 percent of the soya fodder market. In 1967 these markets were expected to be 27,000 tons and approximately 95,400 respectively. Sr. Almeida also produced some selling prices which the firm had projected for the various products they were interested in. These prices are shown in exhibit 9. Sr. Almeida expected the Miranda Corporation which had a third of the market in crude soya oil to continue this percentage hold on the market. A second competitor had roughly 29 percent of the market in 1966 and all other competitors had about 35 percent of the market. He expected the second competitor to continue with roughly its share of the market too. In soya fodder the Miranda Corporation had approximately 36 percent of the market. A second competitor had roughly 31 percent, a third one had roughly 8 percent and all others had approximately 21 percent of the market. He felt that the third competitor, the most recent entrant into the market, might go from 8 to 10 percent of the market in the next three years, while Miranda and the second competitor might possibly increase their market share slightly. He expected one or two of the old, weaker competitors to drop out of the field eventually or to lose some of their market share both to the more aggressive competitors and to FAMILOSA.

During the day the team talked to several of the sales personnel and were favorably impressed. The younger salesmen seemed sharp and enterprising. Great respect was in evidence by most marketing personnel for Sr. Almeida's ability. One or two younger salesmen had already been hired and were being trained partially as replacements for current employees, but the team felt more for the expansion of marketing effort in the future.

<u>The Production Area</u>

In gathering what material they felt they needed to get in the marketing area, the team then turned to the production process. They started with an interview with Sr. Silva. He first provided them with a brief flow chart of the production process which had been developed about a year ago. This is shown as exhibit 10. Sr. Silva then took the team on a tour through the plant. Sr. Parente, who was beginning to develop a lively interest in machinery as a result of his last few assignments with CODEST, was especially interested in the current state of the machinery and equipment at FAMILOSA. The factory floor was reasonably clean and the equipment gave every indication of being well cared for. Sr. Parente later checked out this impression with Sr. Cerqueira and learned that his amateurish impressions were correct. According to Sr. Cerqueira, Sr. Silva had shown him a preventative maintenance schedule and log which outlined a program second to none that he had ever seen. Evidently Sr. Silva was known throughout the company as a fanatic on machine maintenance and repair. Sr. Silva had been in charge of the installation of the equipment in 1964 and is known to have almost a family relationship with it. There were several jokes about this in the factory - but the jokes were always tinged with a hint of great respect. The stockrooms were clean and well laid out. Sr. Silva commented that he had had no trouble getting unskilled labor but that skilled labor was a bit of a problem even though the company was located in one of the most industrialized states of the country. Utilities on the other hand appeared to have no trouble whatsoever.

Sr. Cerqueira was able to make some helpful suggestions about site preparation for the new construction to Sr. Silva. Sr. Cerqueira later told the team that he was quite impressed by the fact that Sr. Silva was willing to accept suggestions from him, as a matter of fact, accepted them with enthusiasm. "He was almost too enthusiastic," remarked Sr. Cerqueira, "I'll be interested in seeing what he really does in this regard. It may be that the word has drifted down to his level that we do like to make suggestions at the Bank. This could be a political smoke-screen set up to facilitate our acceptance of the loan." At any rate Cerqueira told the team that this man was of lively intelligence and good engineering background. He seems very loyal to FAMILOSA. He also seems imbued with a deep desire to get on with the production of the soya products.

The team was not as impressed with Sr. Silva's assistants whom they met during the tour of the plant. They appeared to be good men, but certainly not of the caliber of Sr. Silva. When questioned about this, Sr. Silva stated rather sadly that he had tried to recruit the best possible people to assist him. "Up to three months ago I had two of the best assistants possible. But I guess they were just too good. Each is now a chief engineer with another small company. It's a problem to get, and to keep good people. I really wish I knew how to do it."

In looking through the production record, the team noted that FAMILOSA had been able to raise its production rate to 70 percent of capacity in a two-year period without noticeable problems in the production process. They agreed that the plant chosen for the new process was somewhat too large. However, the members of the team felt that it would provide room for the firm to grow and was probably a good investment. They also agreed that the amount of excess plant was not large enough to make them feel that the firm should cut down.

Sr. Monteiro did point out that by his calculations FAMILOSA expected to be utilizing well over 80 percent of capacity by 1969. He said this made him wonder about two things. First, he wondered whether their sales forecasts were too optimistic and therefore, production assumptions might not be too high. Secondly, taking the opposite tack, he wondered whether if the sales production was correct whether the firm might not consider installing more capacity now. Sr. Cerqueira said the latter point was well made since they could obtain equipment which would double capacity for something less than one and a half times the cost of the currently projected equipment. There were large economies of scale and large-scale production he pointed out.

In a side trip to BANEST, a week later, Sr. Cerqueira discussed possible technological obsolence of the equipment chosen by FAMILOSA with an officer of the Bank who knew the vegetable oil processing industry rather well. The officer of the Bank stated that he saw no new technical break-throughs coming in the industry. On the other hand, he pointed out there was little flexibility in the equipment. The equipment being used for anyone of the four products in the firm could not be shifted to another of the products. Yet, he stated, since all four products were staples he expected the demand to continue for each of the four.

Beginning their exploration of the firm's finances, the team looked at the production costs for 1965 and 1966 for refining corn oil and corn fodder. These are shown respectively in exhibits 11 and 12. Sr. Monteiro then proceeded to work up a pro-forma production-costs statement on corn oil. This statement for the three years through 1969 is shown as exhibit 13. He has assumed an inflation rate of 40 percent in this period, he remarked to Sr.

Parente. He also worked up a pro-forma production-costs statement for crude soya bean oil and soya fodder taken together. The first two years of this pro-forma forecast, 1967 and 1968, are shown as exhibit 14. Sr. Monteiro commented that he would have to work out the third year of the forecast for the combined crude soya bean oil and soya bean fodder production, and he would have to work out a pro-forma for corn fodder.

Sr. Monteiro and Sr. Parente also spent a great deal of time looking at FAMILOSA's financial organization. They found a ledger-card system which was often up to a week behind posting. When asked about this Sr. Monteiro, the head of the financial department, shrugged his shoulders and said, "This happens. Whenever we have any trouble we get together with our local public accountant who supplies us with some extra help," he said. Sr. Monteiro later interviewed this public accountant, and stated he is distinctly unimpressed with the man's abilities. In developing the future costs of production, Sr. Monteiro was forced to do most of the work himself. Sr. Moreira either was unwilling to help or was unsure how to help in predicting the future-cost statements. Sr. Monteiro thought that he ought to develop a pro-forma funds-flow statement, pro-forma income statement and a pro-forma balance sheet. When he discussed this with the team, Sr. Parente asked him just how he would go about doing this? What questions did he have to have answered to do so? Sr. Monteiro replied that he needed answers to questions such as: 1. amounts of the accounts-receivable expected to be outstanding - i.e., the terms on which the firm sold its goods and the speed with which customers actually paid. He needed to know whether inventories were expected to be built up or were expected to be kept at their same level. He needed to know when new buildings and equipment were expected to be received and the depreciation rates for this equipment. It was necessary to have current fixed-asset depreciation schedules. Information was needed on the dividend policy or future policies of the firm, the repayment schedule of notes outstanding at the various commercial banks, the repayment schedule of long-term notes. Finally, he needed to know something about the adequacy of current administrative and marketing organization "overhead" to handle expanding growth.

Sr. Monteiro, with Sr. Parente's help, dug some of this information from the reluctant grasp of Sr. Moreira. They received most of their help from Sr. Coelho, a young man of about 23, with a degree in accounting, and who at least understood the questions that Sr. Monteiro was asking. Both Monteiro and Parente felt that often Sr. Silva did not exhibit a very good understanding of accounting principles.

Sr. Silva admitted that there was no budgetry system in the firm. Sr. Parente asked how expenditures were controlled. Sr. Silva pointed out that all large expenditures were routed through him for his personal signature before they were made. Sr. Cerqueira asked how decisions were made as to the adding of additional personnel to the firm. It became evident that decisions of this sort were routed through the president. No cash forecast was made by FAMILOSA. Sr. Moreira explained that, "We always have enough money in the Bank." Sales records on various customers were kept by FAMILOSA but the team was unable to uncover any formal periodic review of these reports. Ratio analysis on income and balance sheets were not performed except when we "really need them."

The teams talked to several other people in the accounting department about the operations of the department. They concluded that the caliber of the personnel was not very high. No other accounting graduates, other than those mentioned already, were employed by FAMILOSA in any phase of the business.

The team in its discussions came back often to the question of the cash possession of the firm. The current ratio as of 1966 was 0.9, at the end of 1965 the current ratio had been 1.4. Sr. Monteiro questioned whether the loan being asked for was enough to correct this position? Sr. Parente raised the question of getting short-term loans from a commercial bank to support working capital needs.

Accounts-receivable were found to be discounted by FAMILOSA, about 75 percent were discounted at the time of the study. The remaining 25 percent of receivables appeared fairly sound in the review of these receivables. One major customer appeared to be in danger of default, but the outcome was uncertain. With that exception only, however, the receivables appeared to be sound.

Inventories of the firm had ranged from about one to four months of net sales during the last two years. They were evaluated on a FIFO basis.

The firm appeared to have been very successful in gaining extended lines of credit from its suppliers. Sr. Coêlho laughed when he mentioned that, "every effort is made to avoid paying accounts for as long as possible." The team checked on this fact with local banks and suppliers. While putting off payment was undoubtedly true, the practice did not appear to endanger FAMILOSA since all firms in the area tried to do the same. Turning in charges for credit which FAMILOSA had at the time of the study was slightly higher than usual for the area, but FAMILOSA's officials explained that this was to be expected since the firm was a new enterprise.

Fixed-assets, as mentioned earlier, were found to be depreciated on the straight-line basis over a ten year period. No mortgages were found to be outstanding as assets.

At one of their nightly discussions Sr. Parente asked Sr. Monteiro whether he didn't feel that the rate of return as a percentage of sales for the firm was very low during the first two years. Furthermore, Sr. Parente questioned whether return on invested capital was sufficient? Sr. Lima asked whether these two rather low rates of return might be simply the result of a new enterprise? Sr. Monteiro thought they were but questioned whether the break-even point for the firm did not appear to be quite high. Sr. Parente expected that these figures would have to be calculated for the pro-forma statements for the firm. He pointed out that the soya bean oil extraction process appeared to be a higher margin process.

Sr. Oliveira felt that FAMILOSA needed a loan of NCr $900,000 to be shared by FIPEME and the BANEST. In discussing this, Sr. Parente wondered whether it was not necessary to have the stock-holders in the firm put in more share-capital first. FAMILOSA planned to pay the loan back over a four-year period, starting at the end of the second year after the loan was obtained. In calculating capacity to repay, Sr. Parente suggested that the team use a 40 percent inflation rate.

In mulling over the project, Sr. Parente's thoughts often returned to the high debt-equity ratio, which illustrated the degree of under-capitalization of the firm. If he wondered about FAMILOSA's projections to pay dividends starting in 1968 at the rate of roughly 20 percent of net profit; finally he wondered whether to recommend to CODEST to make the loan of NCr $500,000 assuming that the other NCr $400,000 could be made from BANEST. He had Sr. Monteiro draw up a list of the equipment which would be purchased. Sr. Monteiro asked whether he wanted a payback period calculated on the loan, and whether or not to use discounted cash flow in calculating the return for the project. At this point the team began to prepare its report.

CHARACTERS

Dr. Oliveira - President of FAMILOSA

Dr. Barros - President of CODEST

Sr. Ricardo Resende - Head of Appraisal Department

Sr. Paulo Parente - Economist in Charge of the Appraisal Department

Sr. Antônio Almeida - Diretor Comercial of FAMILOSA

Sr. Júlio Silva - Chief Engineer of FAMILOSA

Sr. Abílio Moreira - Diretor Técnico of FAMILOSA

Sr. Diamante - Diretor Legal of FAMILOSA

Sr. Monteira - Accountant CODEST

Sr. Cerqueira - Engineer CODEST

Sr. Lima - Lawyer CODEST

Sr. Costa - Sr. Almeida's Assistant

Sr. Coêlho - Sr. Moreira's Assistant

CRUDE CORN OIL

FORECAST FOR DEMAND

ales by eographic rea	1965				1966				1967				1968				1969			
	U	%	V	%	U	%	V	%	U	%	V	%	U	%	V	%	U	%	V	%
outh	6407	60	5789	60	6409	57	6089	57	6390	54	6390	54	6338	51	8873	51	6263	48	12251	48
iddle	3204	30	2894	30	3598	32	3419	32	4024	34	4024	34	4474	36	6263	36	4958	38	9699	38
orth	1068	10	965	10	1237	11	1175	11	1420	12	1420	12	1615	13	2262	13	1827	14	3573	14
er Areas																				
OTAL	10681	100	9648	100	11243	100	10683	100	11835	100	11835	100	12427	100	17398	100	13048	100	25524	100
AMILOSA	990	9	504	9	1042	9	990	9	1315	11	1315	11	1447	12	2026	12	1592	12	3120	12
IRANDA	3525	33	3183	33	3711	33	3561	33	3906	33	3945	33	4179	34	5851	34	4472	34	8765	34
rs	6178	58	5581	58	6505	58	6179	58	6628	56	6628	56	6711	54	9395	54	7046	54	13763	54
OTAL	10693	100	9658	100	11258	100	10730	100	11849	100	11888	100	12337	100	17272	100	13110	100	25668	100

U = Tons
V = NCr$1,000

xhibit 2

CORN FODDER

FORECAST FOR DEMAND

ales by eographic rea	1965 U	1965 %	1965 V	1965 %	1966 U	1966 %	1966 V	1966 %	1967 U	1967 %	1967 V	1967 %	1968 U	1968 %	1968 V	1968 %	1969 U	1969 %	1969 V	1969 %
outh	23857	60	3554	60	23126	57	3631	57	22356	54	3688	54	21536	51	4975	51	20675	48	6678	48
iddle	11928	30	1777	30	12983	32	2038	32	14076	34	2322	34	15202	36	3512	36	16368	38	5287	38
orth	3976	10	593	10	4463	11	701	11	4968	12	820	12	5490	13	1268	13	6030	14	1948	14
ther areas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	39761	100	5924	100	40572	100	6370	100	41400	100	6830	100	42228	100	9755	100	43073	100	13913	100
AMILOSA	6230	15	523	9	6560	16	775	12	8280	20	1366	20	9108	22	2104	22	10019	23	3236	23
IRANDA	3736	9	577	9	3933	10	617	10	4140	10	683	10	4347	10	1004	10	4564	11	1474	11
ther B	5964	15	899	15	6086	15	956	15	6210	15	1025	15	6334	15	1463	15	6460	15	2087	15
ther C	6210	16	925	16	6210	15	975	15	6210	15	1025	15	6210	15	1435	15	6210	14	2006	14
ther	17520	45	—	—	17783	44	3047	44	16560	40	2732	40	16047	38	3707	38	15820	37	5146	37
TOTAL	39761	100	5924	100	40572	100	6370	100	41400	100	6830	100	42228	100	9755	100	43073	100	13913	100

U = Tons
V = NCr$1,000

BALANCE SHEET

(1)

ASSETS

	1965	1966
CASH	310	354
SHORT TERM		
Accounts Receivable	359	485
Inventories	356	428
Misc. Items	2	3
LONG TERM		
Shares and Participations	-0-	-0-
Compulsory Loans	5	5
Misc. Debtors	24	34
FIXED ASSETS		
Lands	75	75
Building	290	290
Machines and Equipment	330	330
Furniture	90	90
Vehicles	50	50
Trademarks and Patents	-0-	-0-
Monetary Correction	165	767
less Depreciation	(42)	(126)
DEFERRED ASSETS		
Anticipated Payments	810	930
TOTAL ASSETS	2824	3 715

BALANCE SHEET
(In Thousands NCr. $)

(2)

LIABILITIES

	1965	1966
SHORT TERM		
Suppliers	374	613
Commercial Banks	-0-	-0-
Discounted Accounts Receivable	185	373
Lines of Credit	55	100
Provisions	-0-	-0-
Dividends	-0-	-0-
Income Tax	9	24
Doubtful Debtors	-0-	-0-
Misc. Items	120	228
LONG TERM		
Bancos de Desenvolvimento	0	-0-
FINAME	-0-	-0-
Misc. Items *	235	311
NON DEMANDABLES		
Capital Social	1000	1000
Reservas	-0-	-0-
Monetary Correction of Imobilized Working Capital	36	136
Suspended Profits	-0-	-0-
DEFERRED LIABILITIES	810	930
TOTAL LIABILITIES	2824	3715

*See exhibit 3 C

Miscellaneous Debtors - Long Term (Thousands of NCr.$)

Debtor	Date of the Contract	Amount Outstanding	Conditions of the Contract		Guarantees
			Interest	Duration	
João Oliveira, Director of FAMILOSA	31.12.64	68.5			Promissory Notes
	31.12.65	64.			"
Abilio Moreira, Director of FAMILOSA	31.12.64	68.5			"
Antonio Almeida, Director of FAMILOSA	31.12.64	68.5			"
National Equipment Mfg. Co.*		43.5	4**		Mortgage on Equipment sold.
TOTAL		311.0			

* Amount Outstanding to be repayed in 10 installments at the end of each fiscal year.

** In addition to monetary correction.

Miscellaneous Debtors - Long Term (Thousands of NCr.$)

Debtor	Date of the Contract	Amount Outstanding	Conditions of the Contract		Guarantees
			Interest	Duration	
João Oliveira, Director of FAMILOSA	31.12.64	68.5			Promissory Notes
	31.12.65	64.			"
Abilio Moreira, Director of FAMILOSA	31.12.64	68.5			"
Antonio Almeida, Director of FAMILOSA	31.12.64	68.5			"
National Equipment Mfg. Co.*		43.5	4**		Mortgage on Equipment sold.
TOTAL		311.0			

* Amount Outstanding to be repayed in 10 installments at the end of each fiscal year.

** In addition to monetary correction.

Exhibit 4

INCOME STATEMENT

	1965	1966
NET SALES	1027	1520
less Cost of Goods Sold	695	976
GROSS PROFIT	332	544
less Selling Costs	216	316
less Admin. Costs	56	79
less Financial Costs	15	25
OPERATING PROFIT	45	124
less Eventual Receipts		
less Eventual Payments		
PROFIT BEFORE INCOME TAX	45	124
less Provision for Income Tax	9	24
NET PROFIT	36	100

DISTRIBUTION OF NET PROFIT

	1965	1966
Participations	-0-	-0-
Provisions	36	100
Dividends	-0-	-0-
Reserves	-0-	-0-
Earned Surplus	-0-	-0-

Guarantees Offered by FAMILOSA to Obtain FIPEME Loan

Mortgage of Properties....................................	NCr. $450.000,00
Promissory notes of FAMILOSA guaranteed by the Investment Co. of Pereíra....................................	200.000,00
Mortgage on the machines, equipment and metalic structures to be bought under this project..................	200.000,00
TOTAL...	NCr. $850.000,00

Organization Chart of FAMILOSA

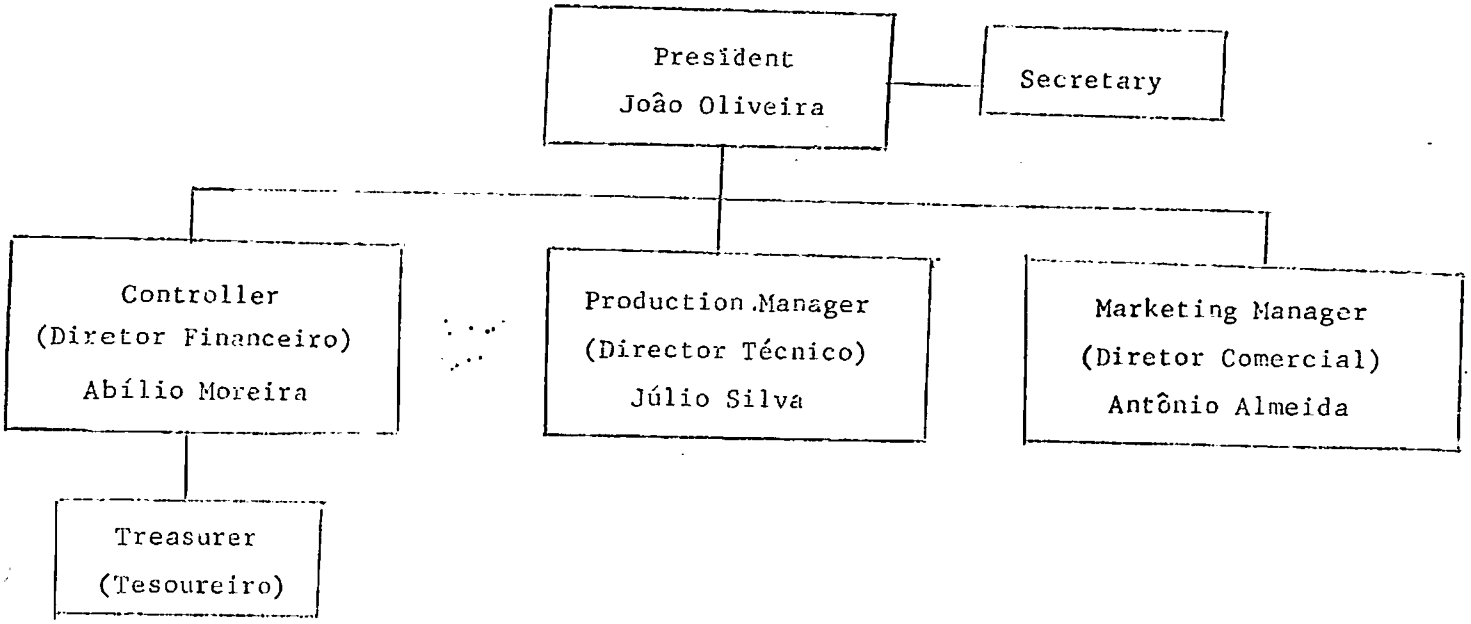


Exhibit 7

Consumption of Edible Oils (in tons)

	1945	1950	1955	1960	1964
Crude Corn Oil	5220	5750	7180	8830	10162
Crude Soya Oil	10810	12410	15300	19320	23200
Refined Corn Oil	3540	4280	5480	6810	8240

Exhibit 8

Consumption of Fodders (in tons)

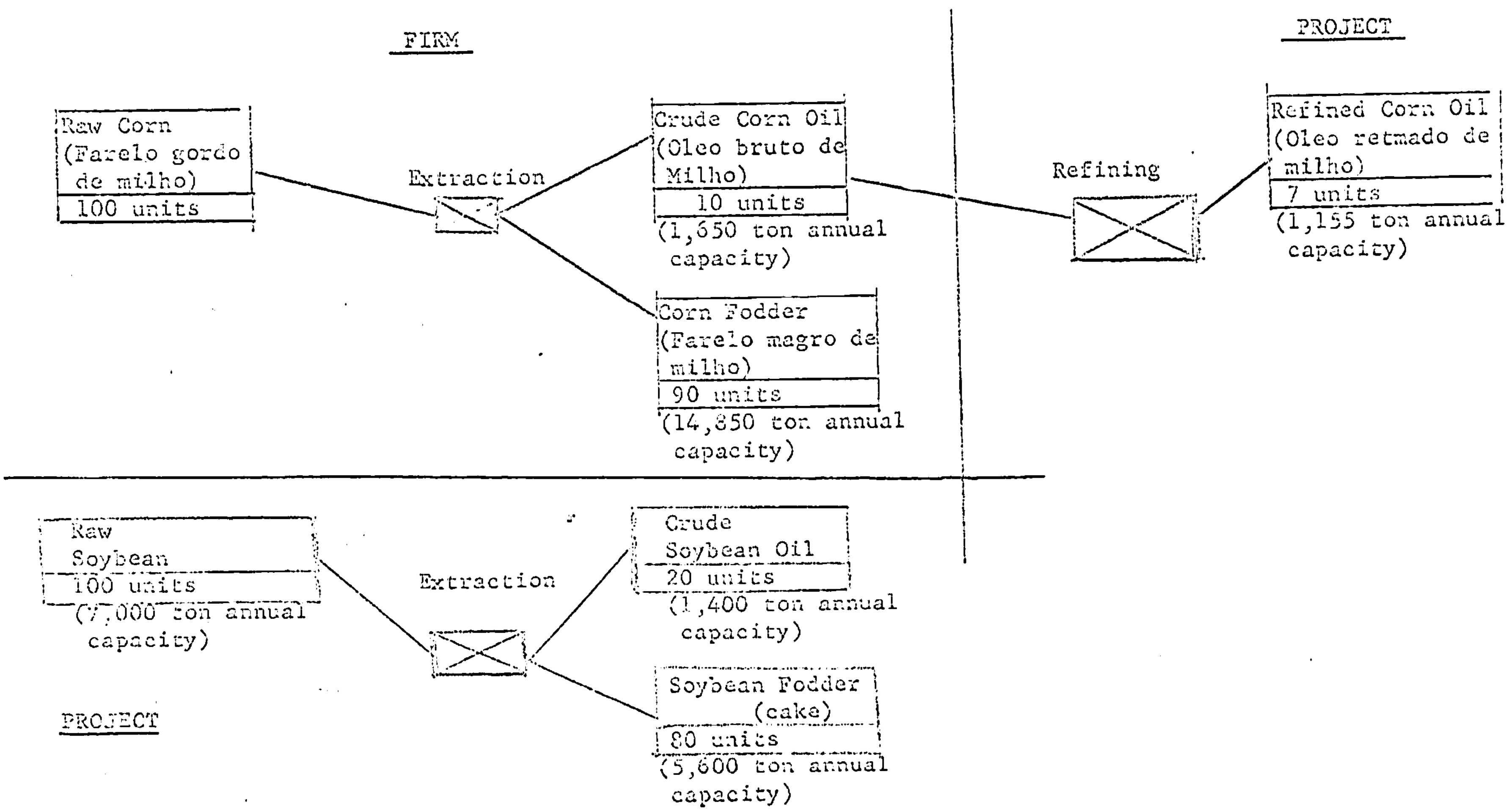
	1945	1950	1955	1960	1964
Fodders	61820	67370	74010	79700	85320

Estimated Selling Prices in NCr. $

	1965	1966	1967	1968	1969
Crude Corn Oil	510	715	1,000	1,400	1,960
Corn Fodder	84	118	165	231	323
Refined Corn Oil	1,546	2,164	3,020	4,240	5,950
Crude Soybean Oil	450	630	882	1,240	1,730
Soya Fodder	74	104	146	204	292

Exhibit 10

FLOW CHART OF PRODUCTION PROCESS



PRODUCTION TABLE

For the Years Ending at December 31, 1965, 1966

(In Units and Thousands NCr.$)

	1965 Company Units	1965 Company Value	1966 Company Units	1966 Company Value
CRUDE CORN OIL EXTRACTION PROCESS				
Production Load (Value and In Units)				
Variable Direct Cost[2]		465		462
Variable Indirect Cost[3]		39		39
Fixed Indirect Cost[4]		11		14
Production (Factory Cost)		515		515
(+) Partial Inventory (Finished Goods) (Unfinished Goods)				174
(-) Final Inventory (Finished Goods) (Unfinished Goods)		174		210
Sales Cost of Sold Merchandise (crude corn oil)		341		479

1. In Units, Weight, or Volume.
2. Labor and Direct Costs.
3. Power, Gas, Water, Steam, Indirect Costs (To be discriminated if over 5 percent of indirect cost.)
4. Indirect Salary and Social Engagements, Rent, Depreciation, Others (To be discriminated if over 5 percent of indirect cost.

PRODUCTION TABLE

For the Years Ending at December 31, 1965, 1966

(In Units and Thousands NCr.$)

	1965 Company Units	1965 Company Value	1966 Company Units	1966 Company Value
CRUDE CORN OIL EXTRACTION PROCESS				
Production Load (Value and In Units)				
Variable Direct Cost[2]		481		476
Variable Indirect Cost[3]		40		39
Fixed Indirect Cost[4]		15		18
Production (Factory Cost)		536		533
(+) Partial Inventory (Finished Goods) (Unfinished Goods)				182
(-) Final Inventory (Finished Goods) (Unfinished Goods)		182		218
Sales Cost of Sold Merchandise (corn fodder)		354		497

1. In Units, Weight, or Volume.
2. Labor and Direct Costs.
3. Power, Gas, Water, Steam, Indirect Costs (To be discriminated if over 5 percent of indirect cost.)
4. Indirect Salary and Social Engagements, Rent, Depreciation, Others (To be discriminated if over 5 percent of indirect cost.)

PRODUCTION TABLE

For the Years Ending at December 31, 1965, 1966

1967 - 1969 (Estimated)

(In Units and Thousands NCr.$)

	1965		1966		1967			
	Company		Company		Company		Project	
	Units	Value	Units	Value	Units	Value	Units	Value
CRUDE CORN OIL EXTRACTION PROCESS								
Production Load (Value and In Units)								
Variable Direct Cost [2]		465		462		828		
Variable Indirect Cost [3]		39		39		71		
Fixed Indirect Cost [4]		11		14		19		
Production (Factory Cost)		515		515		918		
(+) Partial Inventory (Finished Goods) (Unfinished Goods)				174		210		
(-) Final Inventory (Finished Goods) (Unfinished Goods)		174		210		326		
Sales Cost of Sold Merchandise (crude CORN oil		341		479		802		

1. In Units, Weight, or Volume.
2. Labor and Direct Costs.
3. Power, Gas, Water, Steam, Indirect Costs (To be discriminated if over 5 percent of indirect cost.)
4. Indirect Salary and Social Engagements, Rent, Depreciation, Others (To be discriminated if over 5 percent of indirect cost.

1968				1969			
Company		Project		Company		Project	
Units	Value	Units	Value	Units	Value	Units	Value
	1204				1884		
	109				149		
	27				42		
	1340				2075		
	326				464		
	446				546		
	1220				1993		

Units = Tons

Value = Ncr $1,000

PRODUCTION TABLE

For the Years Ending at December 31, 196[illegible], 196[illegible]

1967 - 1968 (Estimated)

(In Units and Thousands NCr.$)

	1965 Company		1966 Company		1967 Company		1967 Project	
	Units	Value	Units	Value	Units	Value	Units	Value
CRUDE SOYBEAN OIL EXTRACTION PROCESS Production Load (Value and In Units)[1]								
Variable Direct Cost[2]								975
Variable Indirect Cost[3]								72
Fixed Indirect Cost[4]								17
Production (Factory Cost)								1064
(+) Partial Inventory (Finished Goods) (Unfinished Goods)								
(-) Final Inventory (Finished Goods) (Unfinished Goods)								272
Sales Cost of Sold Merchandise (crude soybean oil and soybean fodder)								792

1. In Units, Weight, or Volume.
2. Labor and Direct Costs.
3. Power, Gas, Water, Steam, Indirect Costs (To be discriminated if over 5 percent of indirect cost.)
4. Indirect Salary and Social Engagements, Rent, Depreciation, Others (To be discriminated if over 5 percent of indirect cost.

1968			
Company		Project	
Units	Value	Units	Value
			1133
			75
			24
			1232
			272
			290
			1214