

PN-ABG-421

68862

TERMS OF REFERENCE FOR A
STUDY OF THE PRIVATIZATION OF FOUR
SEED FARMS AND CONDITIONING PLANTS
IN COTE D'IVOIRE

by

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September 1988

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Abidjan, Côte d'Ivoire

PURPOSE OF THE REPORT AND SCOPE OF WORK

The Office of Market Development and Investment (AFR/MDI) was requested by the Government of Ivory Coast (GOIC) to assist with the privatization of the production and marketing activities of its four parastatal seed farms. The GOIC is concerned that national seed requirements are not being adequately met with quality seeds, and that the farms are a financial drain on government resources. The contractor has been requested to provide technical expertise to help the Office of Market Development and Investment design a seed privatization study in the Ivory Coast.

Specifically the contractor shall prepare draft terms of reference (TOR) for review by AID and the GOIC. The TOR shall consist of (at a minimum): a detailed plan for the analysis of the seed industry of the Ivory Coast, including financial, operational and regulatory environment. The TOR shall specify the tasks and responsibilities of consultants to be employed in the study including their required backgrounds and professional expertises. The contractor will make specific recommendations with respect to team size, disciplines that should be sought/employed in the study, length and depth of study, and contents/specific information that should be contained in the study.

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ACRONYMS

AID	Agency for International Development
BETPA	Bureau d'Etudes Techniques des Projets Agricoles
BNDA	Banque Nationale pour le Developpement Agricole
CDC	Commonwealth Development Corporation
CFP	Center for Privatization
CIDT	Compagnie Ivoirienne pour le Developpement des Textiles
IDESSA	Institut de l'Etude des Savanes
IFC	International Finance Corporation
IRAT	Institut des Recherches Agronomiques Tropicales et de Cultures Vivrieres
MAG	Ministry of Agriculture
OSP	Office des Semences et Plants
REDSO/WCA	Regional Development Services Office/West and Central Africa
SATMACI	Societe d'Assistance Technique pour la Modernisation Agricole de la Cote d'Ivoire
SOCIDO	Societe Ivoirienne pour le Developpement d'Odienne.
SODE	Societe de Developpement
SODEPALM	Societe pour le Developpement et l'Exploitation du Palmier a Huile
SODESUCRE	Societe pour le Developpement des Plantations de Canne a Sucre, l'Industrialisation et Commercialisation du Sucre
SORIZ-CI	Societe de Riz - Cote d'Ivoire
WB	World Bank

EXECUTIVE SUMMARY

This report establishes the terms of reference for a future feasibility study of the privatization of the production and distribution activities of OSP's four seed farms and conditioning plants. Following are the principal findings which will shape the possible privatization of the seed farms.

1. The seed farms, with the exception of Bouaffle, could probably be made profitable for rice and maize seed production at net yields (ex-conditioning plant) of three and four tons per hectare respectively. The latest net yields reported (1985) are 1.32 tons for rice, and 1.18 tons for maize. At present, because of various inefficiencies in operations and high overheads, production costs are excessive. To be profitable, the farms will need to be appropriately equipped, and very efficiently managed. Moreover, GOCI policy of the free seed distribution to non-commercial farmers will have to change.

2. The GOCI would be receptive to all legal forms a privatization might take, except a management contract. A joint venture (societe mixte) involving government participation carries the risk of controls imposed by existing legislation governing the activities of such companies, bureaucratic delays when timely decisions and actions are needed, and extended delays in the payment of receivables and contractual obligations. The choice thus becomes one of outright purchase or lease of the facilities and equipment. Land would be leased from the government for a "symbolic" amount. 

3. The GOCI states that the only type of investor it will consider is one who will be truly committed to the objectives of meeting farmer demand for improved seeds and who will seek out export markets. While the GOCI says that the nationality of buyers/partners is of no concern, the Ivory Coast's privatization track record indicates that their preference is for Ivoirian investors. Since seed farm operation is technical, risky, and management-intensive, it call for owner/management dedication and cannot be left to "absentee" owners. Reportedly, there are some Ivoirians of sufficient means to acquire a seed farm, however there are very few with the characteristics needed to nurture and run a risky business profitably over the long term.

4. There has been little serious private investor interest to date to acquire and operate OSP's seed farms. This is not surprising given their current seed yields, physical state of the farms, their locations, their vulnerability to uncertain rainfall, and most important, the GOCI's policy of giving seeds to farmers. Divestiture of OSP seed farms, provided the GOCI changes its current policy to one of eventual market determined prices for seed, will likely have the elements of a distress sale. Furthermore, some form of price guarantee or cost recovery mechanism, coupled with a government guarantee not to undercut seed prices with its Serebou farm's output, will have to be negotiated. The price guarantee or cost recovery mechanism will have to be in effect until the new enterprise reaches break-even or until improved seeds from all sources are selling at market prices.

5. The markets, domestic and external, for improved seeds must be assessed. Furthermore, the effect of the GOCI's 1988 25% reduction in the farm gate price paid for paddy (from 50 to 60 FCFA/50kg) on the domestic market for improved seeds must be determined.

6. The feasibility study should examine in depth the technical, operational and economic/financial requirements necessary to make the seed farms profitable. If one (Souaffle, for example) or more farms will not be profitable as seed farms, alternative uses should be explored. The level of priority the GOCI places on its divestiture of these farms should be ascertained, since the importance of divestiture to the GOCI will help determine the flexibility the investor has, as well as the level of commitment and cooperation the investor can expect from the government.

TECHNICAL AND OPERATIONAL ENVIRONMENTS

I. Availability of germplasm.

The large number of varieties of rice and maize at present being produced by OSP indicate that there is a diversity of germplasm available. The efficacy of the varieties was not investigated. Nor was the availability of new germplasm determined. Improved hybrids from commercial seed companies could be made available to future operators of the OSP farms.

- a) Determine if the improved varieties and hybrids of maize, rice and soybeans are adaptable to the Ivoirian environment and the requirements of the Ivoirian market.
- b) Evaluate efficacy of these varieties and hybrids in relation to the items now being grown by Ivoirian farmers.
- c) Estimate the continued introduction of new germplasm into the Ivoirian market and the probable sources of this germplasm.
- d) Evaluate national crop testing system.
- e) Propose in-house crop testing system.
- f) Evaluate availability of inbreds and/or singles for producing hybrids for Ivoirian and West African conditions.

II. Source of basic seeds.

The farms operated by OSP are increasing some seed at G2 level and other levels up to and including R1. The source of the G1 level seed and the cost of this seed was not identified.

- a) Determine the source of basic seeds of maize, rice and soybeans, the level of production and cost of acquisition.
- b) Suggest volume of seed needed and/or the number of increases needed to produce R2 seed
- c) Describe seed increase system for rice, maize and soybeans.

III. Seed production.

In general, the farms at Touba, Odiene and Dikodougou appeared capable of being made into efficient seed farms. The farm at Bouafle will probably not be an efficient producer of seed because of erratic rainfall. All farms need better management and better timing of agronomic practices to increase the level of production.

The parameters for description of all farms have been arranged by agronomic factors and physical equipment.

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A. Agronomic factors

1. Determine climatic and edaphic features of each farm as a limiting factor in crop production.
2. Estimate economic and maximum production level for maize, rice and soybeans.
3. Describe condition, size, and any limiting features of each field on each farm.
4. Estimate direct production costs of maize, rice and soybeans.
5. Calculate indirect costs of seed production at various dollar levels of equipment and land acquisition. Calculate indirect costs of seed production at various rates of depreciation.
6. Determine availability and price of crop production components.
7. Estimate personnel needed for projected levels of seed production.

B. Physical crop production factors.

1. Evaluate condition and utility of equipment on each farm.
2. Report condition of physical plant at each farm.
3. Report inventory of spare parts.
4. Report condition of repair and maintenance shop.
5. Suggest equipment needed to produce projected average of crops.
6. Estimate personnel needed for maintenance of projected equipment.

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IV. Seed conditioning.

The seed conditioning plants did not appear to have been designed to produce rice or maize seed. Conditioning of rice seed could be accomplished by the equipment on all four farms but some of the equipment was not used efficiently. Equipment for efficiently producing good quality maize seed was not available on any of the farms. These deficiencies must be corrected to have a commercial seed operation.

- a) Evaluate condition of seed processing equipment on each farm.
- b) Estimate direct cost of seed conditioning
- c) Determine availability of and price of seed conditioning components.
- d) Calculate indirect costs and seed conditioning at various dollar level of acquisition and rates of depreciation.
- e) Estimate additional equipment and price of equipment to condition rice, maize and soybeans.
- f) Estimate personnel needed to operate seed conditioning plant.

V. Marketing and distribution.

The seed of rice and maize is presently being given gratis by SODES to growers in their area of responsibility. The mechanism for changing this system of seed delivery has severe political and social implications. A transitional arrangement seems necessary to alleviate seriously adverse consequences to the grower yet guarantee a limited or complete freedom from government competition to a private seed producer.

- a) Describe present marketing system for rice and maize seed including volume and timing constraints by region and distributor.
- b) Estimate market for maize and rice seed by region, user category, and user size.
- c) Suggest distribution system by area and volume.
- d) Project distribution costs and availability of distributors to each class of grower.

- e) Suggest retail price of rice and maize to various classes of growers and distribution discount schedules.
- f) Suggest package size by volume, sales region, sales agent and crop.
- g) Propose system of advertising, promotion and demonstration for rice and maize.
- h) Evaluate national extension service as an adjunct to distributor system and advertising.

VI. Alternative use suggestions.

Preliminary calculations indicate that the farms now considered seed farms by OSP may not be totally necessary to supply seed to the Ivoirian farmers interested in buying seed. This lack of demand can affect entire farms or portions of farms used for seed production. While the present study may not be able to fully discuss all alternatives, it would be helpful to briefly describe alternatives to seed production that might be available.

- a) Suggest optimum use for each farm.
- b) Determine farm value for alternate use proposals.
- c) Propose export crop possibilities.

VII. Other crop seed production.

The CSP has considered the farms under consideration only as sites for the production of maize, rice and soybeans. There are numerous other crops grown in the Cote d'Ivoire or that might be introduced. The possibility of producing seed even in small quantities could be a significant addition to the net income of these operations.

- a) Investigate markets for sorghum, millet, sunflower, peanuts, chick pea, cow pea, vegetable, popcorn and melon.
- b) Discuss the possibilities of producing the above crops in Cote d'Ivoire.
- c) Propose industrial crop seed export possibilities.

VIII. Seed quality standards.

The delivery of a high quality seed to the farmer must be the corner stone of a good seed business. The control of quality has to be maintained at all times and can not be subverted or undermined as an expedience to short term profits. To assure the production and delivery of good seed a quality control program must be developed at the start of a seed enterprise.

- a) Propose standards for seed quality, purity and germination.
- b) Suggest system of quality control.
- c) Estimate cost of quality control.
- d) Propose responsibility, authority of, and authority over quality control department.

IX. Proposed terms for acquisition and operation of seed farms.

The terms for acquisition and operation of the seed farms will be crucial to generating a profit from the seed farms. The final terms will undoubtedly be determined in negotiation with the GOCI. However, the various options suggested should be analyzed prior to negotiation to

enable acquisition on the most favorable terms. The following are suggested alternatives which should be investigated:

- a) Outright purchase of land and/or production equipment and/or seed conditioning equipment.
- b) Lease of land and/or production equipment and/or seed conditioning equipment.
- c) Purchase of new production equipment and/or seed conditioning equipment.
- d) Debt swap for equity in production or conditioning equipment.
- e) Trade export license for exportable commodities (cocoa, coffee, petroleum) for seed produced in Cote d'Ivoire.

X. Description of seed industry in Cote d'Ivoire.

- 1. List crops, volume of crops, value of crops, volume of seed and value of seed in commercial distribution in Cote d'Ivoire.
- 2. Estimate volume of farm to farm and/or on farm seed conservation.

3. For maize and rice, describe present production and distribution systems, including:

- a) Production locations or areas.
- b) Conditioning locations or areas.
- c) Price considerations.
- d) Quality control functions and standards.
- e) Regulatory standards including registration of varieties, testing of varieties and description of varieties.
- f) List varieties and hybrids in commercial distribution and briefly describe them.
- g) Organize distribution system and list major distributors of seed.

4. Describe agricultural credit system and credit terms to:

- a) commercial growers
- b) village farmers
- c) corporate farms

5. Estimate volume of maize, soybean and rice seed used in West African countries.

FINANCIAL ENVIRONMENT

Under the current GOCI policy of giving improved seed to Ivoirian small holders, the OSP farms are essentially cost centers. At present, because of various inefficiencies in operation, high repair and maintenance expenditure on certain farm equipment (almost 100% depreciated), high depreciation charges, high costs of gasoline and diesel fuel, and high overheads, production costs per kilogram of seed are excessive. In 1986 (latest data available), costs ranged from 305 FCFA (maize at Dikidougou) to 490 FCFA (rice at Touba). By comparison, the 1985 spread of costs ranged from a low of 216 FCFA (maize at Dikidougou) to 338 FCFA (rice at Touba).

Production costs at Bouafle are "a special case" since erratic rainfall severely reduced production. 1985 and 1986 production costs for maize were 1010 FCFA/kilogram and 651 FCFA respectively. OSP feels that the Bouafle costs are not representative of the farm's potential under a reasonable distribution (less erratic in terms of time) of rainfall.

With respect to high depreciation charges, examination of the farms' equipment inventories shows "overequipping" in certain categories, e.g., combines and tractors.

INVENTORIES: 1988

		Area under cultivation
Touba	10 rice combines	776 ha - rice
	3 maize combines	357 ha - maize
	20 tractors, 16 of which are small horsepower	23 ha - soybeans
Odienne	8 rice combines	496 ha - rice (Farako farm)
	3 maize combines	146 ha - maize (Farako farm)
	24 tractors, 20 of which are small horsepower	N/A - rice (Doumba farm) N/A - maize (Doumba farm)
Dikodougou	7 rice combines	900 ha - rice *
	3 maize combines	400 ha - maize *
	23 tractors, 20 of which are small horsepower	
Bouafle	3 rice combines	313 ha - maize
	2 maize combines	
	11 tractors, 9 of which are small horsepower	

For comparison, in the United States, the area under rice at Touba would be harvested over a 40 day period with one combine the size of those presently on the farm.

* planned

For purposes of the feasibility study, the following should be carried out:

. Review last three years forecasted budgets and actual results. Large operating budget line items which bear examination are:

OPERATING BUDGET 1988

Large Line Items: % of Budget

	<u>Headquarters and farms</u>	<u>Headquarters only</u>
Permanent personnel	17 %	8 %
Purchase of seed from contract growers	18 %	18 %
Freight on goods sold	8 %	8 %
Purchase of inputs (fertilizer, insecticides, packaging, etc)	15 %	1 %
Temporary labor	5 %	1 %
Petroleum products (gasoline, diesel fuel, lubricants)	10 %	2 %

Note that in the 1986 budget, provision was made for depreciation of plant and equipment. This amounted to 31 % of farm expense and 10 % of overall OSP expense. In the 1988 budget, there is no mention of depreciation.

. Determine book value and actual (estimated) value of all plant and equipment. Much of OSP's farm machinery is effectively fully depreciated. Some is scrap.

. Determine costs and sources of new equipment needed, e.g.:

- . small tractors (55 - 100 HP)
- . electric generators
- . larger capacity drier(s)
- . maize picker(s)
- . maize sheller(s)

. According to type of equipment needed, determine equipment sources which can guarantee timely availability of spare parts for a period of at least 10 years.

. Determine the amount and terms of debt owing Brazil on Projet Soja. Determine whose contractual responsibility it is (reportedly, Projet Soja's debt service is assured by the GOCI). Determine other outstanding debt/liabilities - contractual and otherwise of OSP. Determine average length of time for OSP to pay its accounts payable with suppliers.

. Determine net worth of OSP's seed farms.

. Based on seed specialists' technical and economic determinations, prepare pro forma:

- . operating and investment budgets - 10 years
- . cash flow (sources and uses of funds) - 10 years
- . profit and loss projections - 10 years
- . return on investment projections - 10 years

. Use sensitivity analysis techniques to prepare low, medium and high projections of the above. Given constraints and uncertainties attendant to operations of these farms, use goal-seeking analysis to determine what variables (e.g., level of employment) can reasonably be changed to achieve desired rate return, profit, and market objectives.

. Consistent with the preferred form(s) of privatization found, determine amount, type(s) and source(s) of capitalization.

. Determine capital expenditures and working capital required, and how these requirements will be met. What mix of capital, debt and cash flow should be used to meet these requirements? Can (should) working capital be borrowed locally? Most commercial banks in West Africa are highly risk-averse and prefer to lend short term to traders.

. CDC's analysis of the Serebou seed farm (now financed by CDC/ODA) showed that the financial "health" of their proposed operation was highly vulnerable to changes in the prices and sales volumes of seeds. In any privatization effort of the OSP farms, some form of price guarantee or cost recovery mechanisms must be negotiated until the enterprise reaches break-even.

FORM OF PRIVATIZATION:

Government and Buyer Considerations.

Introduction.

The GOCI's approach to the privatization of OSP's seed production farms and facilities fits into its overall approach of privatization, i.e., one of relative passivity, waiting for investors to come forward. It appears to have no master plan for privatization, nor a list of enterprises to be sold.* On the other hand, OSP's enabling legislation provides for eventual privatization of its production activities. Thus, one cannot call the GOCI's actions an ad hoc initiative or part of a master plan.

GOCI Attitude on Privatization of the Seed Farms.

The GOCI states that it would be receptive to all legal forms of privatization except a management contract. The alternatives range from a public-private joint venture (societe mixte) to a complete sale (except land) to private interests. Reportedly, the nationality of buyers or partners poses no concern. In fact, however, Ivoirians as buyers/partners would probably be preferred given Ivory Coast's past privatization record.

* see Privatization in the Ivory Coast: Three Case Studies, Ernest Wilson, December 1987, for a thorough treatment of the GOCI's philosophy and modus operandi of privatization.

In the case of a joint venture (societe mixte), the land (leased for a nominal amount), plant and equipment would be the GOCI's contribution. The GOCI was clear that its financial participation in a joint venture would be minimal.

In the case of purchase, and formation of a corporation (societe anonyme), plant and equipment would be sold outright. The GOCI would retain ownership of the land, but would be willing to lease the land on a long term basis for a nominal (symbolic) amount.

Form(s) that privatization might take.

The GOCI has stated that it has no interest in the management contract form of privatization. Ivoirian officials also state that the only type of investor they will consider is one who will be truly committed to the objective of meeting farmer demand for improved seeds and who also will seek out export markets. Advice from businessmen indicates that a joint venture (societe mixte) would be subject to very constraining legislation and government control. Short of abandonment, this leaves the purchase and lease options. Choice of one of the options would depend on:

- . Purchase price of the plant and equipment - can the buyer/investor get enough of a discount on the production infrastructure that is partially/totally written off?
- . Cost of leasing
- . Taxes applicable under each option
- . How much depreciation can be written off and how rapidly?

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. Benefits the government would offer under each option: investment code privileges, tax and duty exemptions, agreement of government not to compete.

. The ease of "walking away" if the operation is a failure. In general, it is easier to walk away from a lease.

A recent leasing transaction which took place was that of six rice mills to private interests. While the details of the transaction are obscure, the "lease" is reported to be a management contract under which the current year's operating costs determine the following year's price to be paid the mills by the government for white rice.

Potential Buyers and an other alternative.

Initial discussions with GOCI officials and local businessmen indicated the following:

. A 1983 evaluation of OSP's seed farms suggested a joint venture made up of 1/3 GOCI, 1/3 IFC and 1/3 local investor participation.

Nothing resulted from this evaluation

. Occasional exploratory contacts by foreign investors with no follow up by the investors.

. Expression by government officials that they know of Ivoirian businessmen/investors who could be interested in possible participation in privately-run seed farms.

. CDC states that it has a proposal before the GOCI to acquire OSP's seed farms (see Critical Issues section).

In short, there has been little serious interest to date on the part of investors to acquire and operate OSP's seed farms, either as seed or

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An alternative is to start a new farm, independent of OSP's farms. The advantage to this approach is the ability to find land more conveniently located (to markets), with better soil, and near a river for irrigation possibilities. The one foreign seed company in the Ivory Coast, Pioneer, has little interest in the OSP seed farms - since the conditioning plants are not equipped to handle maize seed properly. Furthermore, for assured production of hybrid maize, irrigation is necessary. Finally, the commercial market for hybrid seed is at best 1000 tons, which could be supplied from a 250 ha farm. Pioneer's distributor reports that Pioneer has a pilot seed operation and that he has 1500 hectares starting in commercial maize production. Pioneer's interest is the commercial market, not the small farmer.

Prairie International, a US rice producer, visited the Yamoussoukro region in early 1988 to look at the possibility of paddy production on the Bandama river. Their Ivoirian contact, Mr D. Kante reports no follow-up from Prairie International to date.

Given the state of the seed farms' physical assets, their low production of quality seed and the general absence of serious investor interest, successful divestiture of OSP's farms will likely have the elements of a distress sale. Moreover, private seed companies, apart from Pioneer's interest in commercial customers, cannot view the Ivory Coast as a market to produce or to export to, as long as the GOCI's policy is to distribute free seed to farmers.

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CRITICAL ISSUES

1. Will GOCI permit the sale of seed to farmers? At what price? Can a five year schedule of increasing prices be established so that at the end of the period the farmer is paying market prices for seed?
2. How large is the demand for improved seed in the Ivory Coast - now, in the future, for free, at market prices? How many farmers are ready and able to pay for seeds? How large is export demand in neighboring countries; in the region (West and Central Africa)?
3. Given that GOCI has large, long outstanding arrears with CIDT and other SODES, there are serious financial (cash flow) implications for a company which deals with the GOCI and/or its agencies. Private suppliers reportedly have receivables owing from the government for as long as two years. Today, private suppliers will only furnish inputs on a COD basis. Can a seed company be guaranteed payment for seed on a relatively timely basis? How?
4. A rough estimate of Ivory Coast's short term demand for improved rice seed is 10,000 tons/yr (500,000 ha planted in rice x 60kg/ha ~~+~~ use of improved seed once every three years). Five years from now, the GOCI's Medium Demand Case estimates call for approximately 15,000 tons. The Ivory Coast's irrigated seed farm at Serebou will have the capacity to

produce 6600 net tons of rice seed when it is fully operational in 1992 (3000 ha x 2.2 tons/ha net), and more when 900 irrigated ha of young farmer seed production at Serebou becomes operational (1.7 tons/ha net or 1500 tons). By privatizing the current OSP seed farms, is the GOCI willing to compete with itself (Serebou) on a market basis, or will it undercut the new seed enterprise(s) by selling seed at subsidized prices in order to recoup its investment (CDC/ODA loans)?

5. Reportedly, extension services offered by the suppliers (various SODES) of food grain seed to the small farmer are at best marginal. CIDT is the exception, however, it reaches only 30% of all farmers in its area, the Savannah. Also, formal agricultural credit to the small farmer is minimal. How seriously do these two factors constrain the small farmer segment of the seed market?

6. Should there be GOCI participation (ownership) in the enterprise? Reportedly, the disadvantages of government participation of any size are that the enterprise can come under very constraining legislation and controls. Given that the government has indicated (verbally) that its financial position in a joint venture would be minimal, what strong advantages would there be in having the government as a partner?

7. Can the seed farms be made to produce 3 net tons per hectare of rice seed and 4 net tons per hectare of maize seed? The volume of seed produced per hectare is critical to producing seed economically.

8. Can an efficient seed distribution system be developed in Ivory Coast? This is a must for a private seed company which doesn't want to depend on the sometimes unreliable operation of a government distribution system.

9. Can an excellent quality seed be delivered to the Ivoirian farmer? The climate of Ivory Coast is not conducive to long seed viability and distribution will be a several step process. Thus, seed may deteriorate if the distribution system is not efficient and undermine the objective of making high quality seed widely available to the Ivoirian farmer.

10. The seed farms suffer from "overemployment". The problem of excess employees must be resolved by the GOCI as part of any privatization agreement reached.

11. The Commonwealth Development Corporation (UK) reports that it currently has a proposal to acquire the OSP seed farms and conditioning plants (Touba, Odiene, DikcJougou and Bouafle (?)), as well as three other conditioning plants (Korhogo, Man and Bouake) before the GOCI. In the interest of donor coordination and a possible future feasibility study, USAID should determine CDC's exact intentions and whether there is and/or will be opportunity for USAID privatization initiatives in the Ivoirian seed industry.

12. Devaluation of CFA. Devaluation of currency is a concern of investors in all developing countries. For the project being considered,

the following would be affected by a change in currency evaluation.

1. Initial investment of foreign monies would be favorably or adversely affected by currency devaluation depending on timing of the initial investment in relation to the change in currency valuation.

This change would be a direct one for one change in the value of investment.

2. Cost of farm operation would be increased by currency devaluation. The cost of all imported items, fertilizers, herbicides, insecticides, ex-patriate salaries, paper and spare parts would be increased, as would the interest denominated in foreign currencies. It is a complex calculation to evaluate the effect of devaluation in terms of CFA but a rough estimate is that the relationship would be an increase in cost equal to 0.5 times the rate of devaluation. This increase would not be vital if the market is only commercial growers as their costs other than seeds would increase and hopefully their price of goods produced would increase. If the market is village farmers who use little or no external inputs such as fertilizer, herbicides, etc. the increase in cost of seed would be substantial and probably cause a decrease in the amount of seed purchased. If the market for seed is on a contract with the GOCI predicated on the internal price of maize or rice in Cote d'Ivoire, the increase in cost would be a direct reduction in profit.

3. The possibility of seed export would be increased but not materially. Since the cost of production is dependent largely on foreign inputs the relative reduction in cost of seed produced would be limited and probably not affect the cost relative to other CFA countries.

COST AND BUSINESS ASSESSMENT OF OSP:

OSP Data made available to Team

Sufficient production and cost data appear to be available to make a fair estimate of OSP's production costs. Balance sheets, cash flow statements and an outside valuation of the plant and equipment are necessary to make a financial assessment of OSP. Data made available:

Cost of Production for rice and maize at all four farms for 1985 and 1986. Reportedly, 1987 costs are being prepared. Some individual cost line items are rather summary. Some modest analysis has been done.

Budgets (Operating and Investment) in detail for 1986 and 1988, and broken out by farm. 1987 budgets are rather summary. From 1987 on, budgetary information is contained in the report, Programme d'Action Annuel: Exercice 198x. 1988's Programme d'Action gives budgeted and actual figures for 1987.

. All major relevant costs are contained in the budgets and costs of production data subject to the above comments.

. Balance sheets were requested, but not received. Thus, the team has little idea of what OSP's principal liabilities are, its exact sources of funds and what the net worth of OSP is.

. Budget provisions do not show percentage of costs covered by foreign aid, however the 1986 and 1987 budgets show the state's contribution to the operating and investment budgets.

Copies of rainfall data charts were requested, but not received.

FEASIBILITY STUDY

Consultants, Other requirements

1. Seed Specialist. Experience in the seed industry, including research, production, quality control, conditioning and sales. Should be able to evaluate a seed business from the standpoint of economic and technical feasibility. Should also be able to design a seed distribution (marketing) system including the concomitant extension requirements. Should have developing country experience, preferably in West Africa. French - 3+. 6 weeks.

2. Business/Financial Specialist. Should have corporation finance and financial/managerial accounting experience. Should be well versed in various financing/payment sources and mechanisms, i.e., sources of and how to obtain international and local funding. This would include, for example, sources such as banks, donors and businessmen/investors, and mechanisms such as debt/equity swaps, possible barter arrangements. Should also be able to determine the political implications of a proposed privatization, e.g., where do the SODES fit into a partially or completely privatized seed industry? will contract growers have to be included in the production of seed? Working in concert with the legal advisor, he will be responsible for determining the GOCI's opinions and "requirements" of possible privatization formats, and therefrom will suggest how best to structure the privatization. The incumbent should have experience in dealing with both the public and private sectors in West Africa. French - 4. 6 weeks.

3. Farm Equipment Specialist. An agricultural engineer with experience in determining depreciated values and appropriateness of agricultural and conditioning/processing equipment for maize, rice and soybean production. Should be able to determine quantities and type of spare parts required. Should also be knowledgeable of sources of agricultural equipment. Developing country experience would be helpful. French - 3. 1 week.

4. Legal Advisor. Working with the Business/Financial Specialist, he will suggest the most appropriate forms the privatization should take. This will involve:

- a) establishing the appropriate GOCI and private sector contacts.
- b) helping with the initial determination of what's negotiable and what isn't.
- c) determining which benefits should be sought under the Investment Code, i.e., general guarantees or priority expertise privileges - tax holidays, import duty exemptions, etc.
- d) determining the tax structure under which the company would come and its likely tax liabilities.

The foregoing is necessary so that a potential buyer/partner can quantify all his options prior to entering into negotiations. This segment of work would probably be best carried out by a local law firm.

French - 4. 1 week.

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5. Agricultural Economist with market survey experience.

Both the Ivoirian and regional markets (commercial and individual farmers) for improved seeds should be examined and quantified for rice, maize and soybeans. Also required is documentation of the Ivory Coast's and other countries' seed laws, and registration/certification requirements. Administrative/legal obstacles to inter-country seed trade, and actual commercial practices with respect to trade in improved seeds should be determined. What benefits (lower customs duties) might accrue to member states of ECOWAS and CEDEAO? The market study should include other countries' capacities to produce improved seeds and their current/intended purchases of improved seeds. Prices of both improved seeds and market price of rice, maize and soybeans should be determined for all countries. Travel to the countries of the region may be necessary. Experience in West Africa required. French - 4. 5 weeks.

6. Contractor Home Office. The contractor should have in-house computer capability to execute a comprehensive financial analysis of a complex (many variables) agricultural enterprise. This would include the ability to do sensitivity analysis and goal seeking. The contractor should have commodity procurement experience and thus be able to respond rapidly to feasibility team's requests for equipment/spare parts' prices and availabilities.

GLOSSARY

- Basic seed** Seed which is supplied by plant breeder or breeding institution to seedsman for increase or crossing to produce seed sold to a farmer.
- Germplasm** A unique collection of genes used to produce an improved variety or hybrid.
- Hybrid** A plant produced by crossing two or more inbred lines, varieties or populations.
- Seed multiplication**
- G - 1** First generation seed produced by the breeding institution.
- G - 2, G - 3,** Succeeding generations of seed under the supervision
- G - 4** of the breeding institution.
- R - 1** Reproduction of seed under supervision of the seed selling agency.
- R - 2** Seed sold to farmer.
- Single** A plant produced by crossing two inbred lines and used to produce a double cross or 3-way hybrid.
- Variety** Germplasm that has been stabilized to emphasize distinct traits.

BIOGRAPHIES

David Harmon, team leader and private sector specialist, has had over 10 years experience in Africa and the Caribbean. Most recently, he has assessed the business and regulatory environments of Senegal, Togo and Guinea (Conakry). Previous private sector work has included private sector assessments in Cameroon, Madagascar, Tunisia and Burkina Faso. Earlier, Harmon was founder and director of a consulting firm which provided information and analysis for the US food industry on key public policy issues. He was also a staff member of the Hudson Institute for seven years and worked for Mobil Oil in Senegal and the US for six years. Harmon holds an MBA from New York University and a BA from Harvard University.

Dr Lowell Gleason has had 21 years experience in overseas work including assignments in Central America, Turkey, the Soviet Union, Saudi Arabia, Mexico, France and other EEC countries. He assisted on a World Bank feasibility study of a joint venture seed company in Nigeria and has consulted on USAID projects in Senegal, Peru and Cote d'Ivoire. Gleason has worked for Cargil Inc., Pacific Oilseed, Rockefeller Foundation and Monsanto Chemical Co. His responsibilities have included research management and design, personnel training, ranch management, seed production, seed company management, seed sales, product development and company appraisal and acquisition. Degrees earned include a PhD in plant physiology from Iowa State University, a MS in range management from Texas A and M University, and a BS in forestry from Iowa State University.

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TRIP CHRONOLOGY/PERSONS CONTACTED

July 20, 1988	Washington, DC	M. Colegrove	Former Pioneer Hybrid Int'l employee
August 22, 1988	Washington, DC	P. Boisson	Int'l Finance Corp.
August 24, 1988	Washington, DC	M. Cherif	World Bank
		E. Williams	World Bank
September 1, 1988	Abidjan	B. N'Dri Brou	Ministry of Agriculture
		G. Sika	Office des Semences et
		M. Cherif	Plants
		R. Dennis	Commonwealth Development Corporation (at OSP office)
September 2, 1988	Abidjan	O. Issa	International Finance
		T. Daniels	Corporation
		J. Hershey	US Rice Council
		R. Blabey	US Embassy - Agricultural Attache

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September 3, 1988	Abidjan	G. Theuss	Pioneer Hybrid Int'l
		D. Kante	Domaine d'Abadjin-Koute
September 5, 1988	Yamoussoukro	H. Dosso	Pioneer Hybrid Int'l
		G. Sika	Office des Semences et
		M. Ble	Plants
	Bouake	C. Amani	Compagnie Ivoirienne pour le Developpement des Textiles
September 6, 1988	Serebou	M. Kouda	Office des Semences et Plants, CDC/ODA funded seed farm
September 7, 1988	Bouafle	E. Kouame'	Office des Semences et Plants, seed farm
		M. Sangare	Societe de Riz - Cote d'Ivoire, rice milling company
September 8, 1988	Touba	M. Yeo	Office des Semences et Plants, seed farm
September 9, 1988	Odiene	M. Sika	Office des Semences et Plants, seed farm
		C. Amon	Societe Ivoirienne pour le Developpement d'Odiene - rice milling company

September 10, 1988	Abidjan	M. Yao	Ministry of Agriculture
September 12, 1988	Abidjan	S. Kouizia	Ministry of Agriculture
		F. Hesse	Int'l Finance Corporation
September 13, 1988	Abidjan	J. Chausse	World Bank
		H. Tamalge	Duncan, Allen and Mitchell (law firm), Residence Pelieu Av. Delafosse Prolongee Tel. 32.67.66, 32.67.85
		J. Goddard	Commonwealth Development Corp. Immeuble des Harmonies, Tel. 32.65.90, 32.93.39
		M. Abou	SATMACI
		Mr. Ado	SATMACI

USAID/REDSO

A. Fell
H. Handler
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F. Sarasorro

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