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SOME ASPECTS OF ECONOMIC & COMMERCIAL
CONDITIONS AT BANYAN FISH FAIR

by

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Acknowledgement

I want to express my most sincere thanks to all persons, Nigerians and Europeans, who helped me to finish my research.

Ph. C. Ugy

Although no specific terms of reference were stated, it was made clear that the object of this mission was to inquire into the methods of marketing the fish produced at Panyam, and make recommendations for their improvement. It was also hoped that new outlets might be discovered.

Before proceeding any further, I wish to make one comment: it was found impossible to inquire into the marketing problems of the Fish Farm without also paying attention to production methods, costs and prospects, as well as to the economic environment. This report will therefore not be concerned with marketing only. I shall first offer several remarks about the contention that output should be increased in order to cover production costs; I shall then discuss the capacity of present and future markets to absorb any additional output, and the cost at which they could be expected to do so. It will be useful, at that stage, to consider some of the other ways in which the Fish Farm might be put to use.

I wish to add that this report is not the result of a scientific survey; it is based on reading the accounts and correspondence files, and on conversations held in Lagos, Kaduna, Jos and Panyam. Opinions submitted here should therefore be considered as tentative.

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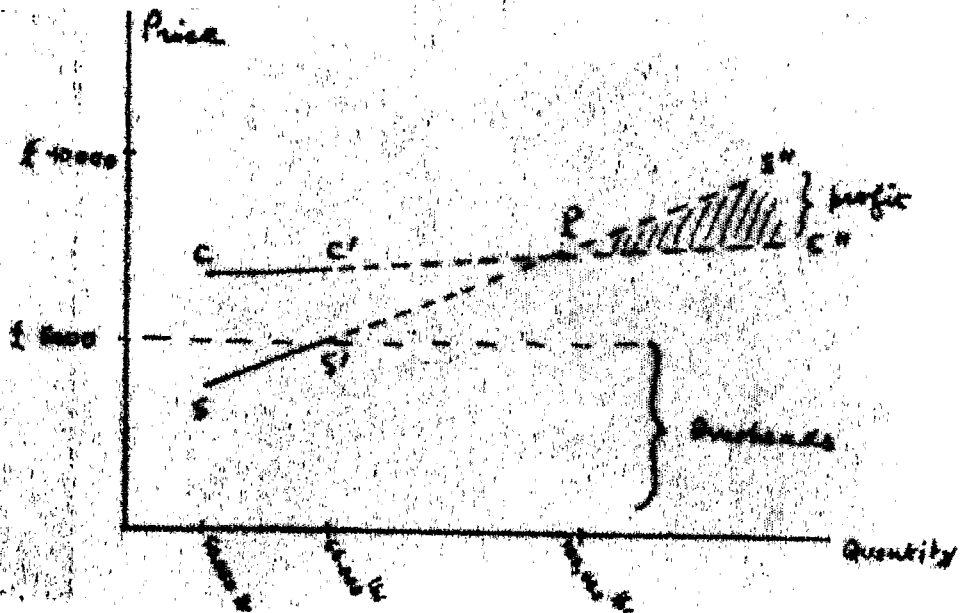
I

The case for an increase of output can be summarized as follows: according to audited accounts for the years 1958-1959 and 1959-1960 (1), total sales increased from £ 37776 to £ 4948 (31 %) while the fish kept being sold at the same price (2). In the meantime, production costs, including depreciation, increased by a much smaller percentage, from £ 6767 to £ 6925 (2 %).

An extrapolation has been attempted: everything else being equal, returns from sales would become equal to production costs if a quantity of 100,000 lbs could be produced and sold. Over and above 100,000 lbs, profit would theoretically appear (see diagram).

It has therefore been suggested that an output of 100,000 lbs ought to be set as a priority target for production and sales. It is claimed that this target might be reached without any increase of pond acreage; later on, of course, it would be of advantage to increase the surface under water (according to the primitive plan, which called for 450 acres) (3).

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- (1) Audited accounts for 1960-1961 were not available yet.
 - (2) 1/6 per lb. Quantities sold were 50,246 and 66,000 lbs.
 - (3) Present acreage is 132 acres. The natural yield of the Farm is supposed to lie between 500 and 700 lbs per acre/year. With slight feeding, a yield of 1000 lbs per acre/year might be expected.



- CC' actual costs of production from 1958 to 1960
- C'C'' expected costs of production with increased output.
- SS' actual sales from 1958 to 1960 .
- S'S'' expected sales with increased output.
- P point of equilibrium.

Before examining whether such an increase of output has any chance of being disposed of economically, it is necessary to inquire into the validity of these calculations. Is it safe to assume that, if output increases, the two curves on the diagram will conform to the expected pattern, -that is: follow the dotted lines?

a) To be quite fair, it must be stated that for one reason at least, the extrapolation described above is not optimistic enough. Production costs for 1958-1959 and 1959-1960 included high depreciation charges, but a Committee of Inquiry held at Paayan and Jan in August 1960 recommended that "depreciation charges .. should not include ponds and banks". From 1960 on, production costs will therefore be lowered to the extent of the depreciation charges which have been suppressed. Accordingly, the equilibrium should be arrived at before 100,000 lbs.

b) Unfortunately, there are three other reasons why one can doubt if production costs will keep increasing slowly when output increases:

- Present production is roughly 70,000 lbs per year, not including tilapia. While the additional 30,000 lbs required to reach the 100,000 lb target would require no added capital or labor, they would render feeding and fertilizing even more necessary than before. The fish-farmer states that, on the average, expenditure on fish-feed and/or fertilizer is self-liquidating; for instance, it may be assumed that 4.5 tons of

fish food, worth £ 126, will produce 1 ton of fish, worth £ 166 (4).

It must be remembered, however, that only 60 or 65 % of total output consists of saleable carps. The remaining tilapias have little or no economic value. Consequently, 4.5 tons of fish food will produce 0.65 ton of marketable fish, worth only £ 108 (and not 166). The result is a loss. It can be objected that tilapias are used as fish food, and are eventually turned into (partly) saleable fish ... Still, the maximum proportion of tilapias must be kept down as much as possible; although it is probably true that the Fish Farm is operating with increasing returns (5), there is a danger that this should be true in terms of physical output only, but not in terms of economic, saleable output.

- Real losses were in fact greater than those losses recorded on the Diagram. In 1958-1959, £ 1400 were added to the £ 3011 loss originating from the difference between production main costs and returns from sales. Total losses therefore was £ 4411. In the following year, £ 1907 were added; total loss was £ 3074. To these losses, ought to be added the salary of the Fish Farmer and his assistant.

(4) A cost of £ 36 per ton of fish food is assumed by the Fish Farmer, which is certainly a maximum. The cost of 1 ton of fish food, for example, (not including distribution costs) was only £ 12 at the time of the survey. Unfortunately, this cost of food was never available.

(5) See Diagram compared with Diagram. Returns are very high.

These additional losses seem to be related to general difficulties of operation (broken equipment etc.). It looks as if they were purely accidental, and there is no way of knowing if they would not upset the precarious balance resulting from increased output.

- Although I lack definite information on this point, I have to draw attention to the fact that, up to a certain extent, the increase of saleable output between 1958 and 1960 may have been due to a change in the proportions of carps (saleable) and tilapias (unsaleable), while total output and total production costs varied little. Should this fortunate change partly account for the slow increase in production costs after 1958, it must be realized that such a change cannot be repeated indefinitely.

In view of all this, and although there are good reasons to expect that it would be of advantage to the Farm to increase its output, it is necessary to recommend caution when surmising from extrapolations that production costs will continue to rise as slowly as they did for the last year. Moreover, it is not enough that the Farm should produce 100,000 lbs of fish each year; it must also sell them, and this cannot be done without immense difficulties.

II

In this section, I shall first describe present marketing methods and outlets, as opposed to those originally intended; I shall also inquire into the ways in which additional output could be disposed of.

a) It was hoped that the Farm would help to improve the diet of the Pitsburgh population, and in particular, the diet of tin mine workers. It was therefore expressly stated that selling entirely to contractors was to be avoided, lest they should smoke the fish and send it to the South.

It was soon found, however, before and after carps were introduced (1955), that:

- although the fish were sold below cost, they were still far too expensive for the average customer;
- it was a disadvantage to the public to offer a sales resistance as long as possible, since it was eventually necessary to get rid of the fish at any price.

It was also clear that the Farm had to market the fish itself, down to the last stage of distribution, since there were no reliable dealers able to buy wholesale, store and retail. It may be thought that the cost of marketing is the same, whether incurred by the farm or a dealer, but as a matter of fact, it is highly probable that a dealer marketing the produce of several fish farms could have done this at a lesser price than each farm taken separately. Due to economic isolation, the Farm was then bound to incur abnormally high marketing costs.

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The marketing system set up at Fanyan, though costly and inconvenient, seems the best one that could be thought of, given circumstances. Two tons of fish are taken weekly to Jos, and sold to institutions, government clerical staff, clerks of commercial firms, etc. who have agreed to buy regularly. Fish is delivered to a clerk who distributes it among his colleagues; his labours are rewarded with a slight overweight of fish.

The average quantity of fish delivered in this way is 20/30 lbs. and can be as low as 5 lbs. No deliveries reach 100 lbs. Much time is therefore spent in these door-to-door deliveries, and a certain amount of fish is lost due to repeated weighing of small quantities.

The most disturbing feature is the bad quality of this market. Even regular customers complain about the taste, the amount of bones, and most of all, the price (6). After buying without enthusiasm, they pay unwillingly that the firm finds itself obliged to finance credit to a dangerous extent. In fact, the percentage of irrecoverable debts is very high (7).

Even so it is, this market offers little scope for expansion. It was told at the Governor of mines in Jos that mine labour might be willing to buy fresh fish, if it could be delivered regularly. I am not sure about this, considering present minimum wage rates (3/9 per day). Besides, a great sales drive was launched

(6) Very few Europeans buy carp; they prefer "Jawa" (Lates Nile tilapia).

(7) Companies seem to be more than a government-owned concern will not purchase orders so ruthlessly from ordinary firms.

during the first half of 1961, and does not seem to have been very successful, as far as wide labour was concerned. The explanation lies maybe in the fact that customers with low purchasing power are offered other and cheaper food-stuffs. Much of the smoked fish coming down from the Chad area, via Maiduguri, to Lagos, Ibadan and Enugu, passes through Jos, where many wealthy traders (Ibo, Kanuri, Hausa) have their headquarters. I found great quantities of this "baida" on the markets of Jos, Kaduna, Sokoto, Monngu Ana. In spite of the late season, there was also a good amount of sun dried slices ("Saro", in Hausa) coming from the Fort-Lamy area. Four of these slices, weighing approximately 1 lb, were sold for 1/-. They represented at least 3 lbs of fresh fish, which means 1 lb sold for 4 pence, - whereas Pangas fish is sold at 1/6 per lb. Obviously, such a difference in price makes it very unlikely that dried or smoked fish consumption will eventually switch to fresh fish.

This is the more unlikely because African housewives consider dried or smoked fish as an irreplaceable means of flavouring otherwise tasteless food. The preference for these products is therefore linked with the whole pattern of consumption habits, and in my opinion, fresh fish will not take the place of dried or smoked fish (3). It could be sold only as a new, additional commodity, which can happen only in the event of an increase in aggregate buying power.

b) With due regard to the situation described above, what should be done with an increased output?

(c) This is particularly true of Northerners; most of the customers are, or were, Southerners.

- Given the price of dried fish in the area, it is obviously impossible to consider smoking or drying the carps since 3 lbs of carps, worth 4/6 at present market price (9), would produce only 1 lb of dried or smoked produce, worth 1/ per lb.

It has been suggested that tilapias (30,000 lbs are produced every year, unvolontarily), might be dried and sold. It seems that such a scheme would be unprofitable; it would mean additional labor expenses : in Cameroun, the alestes caught in the Logon or Chari rivers are split and sundried on the river banks, and the job is done by fishermen's wives, who receive for payment the oil taken from the fish. Such a thing would be impossible at Panyam, where no women are available, or where they would have to be paid in money. Moreover, most of the fishing at Panyam takes place during the rainy season, when sunny hours would not be numerous enough to permit quick and complete drying. Thirdly, as mentioned already, tilapias are ground to flour and fed to the carps; in view of the scarcity of cheap alternative fish food, this is undoubtedly the best way of using them.

- It seems quite clear then, that any additional output would have to be disposed of in the same way as the present output. Since the Jos market seems saturated, and even has lost importance in spite of repeated efforts, it would be necessary to sell the fish in Zaria or Kaduna, where it is claimed that a price of 2/ or 2/6 might be obtained. This higher price would cover the cost of transport, estimated at 9 pence per lb.

All this is based on the assumption that the standard of living in Kaduna is higher than in Jos. This assumption seems a dangerous one; while the price of 1/6 per lb is definitely judged too high

(9) But worth 6/, at production cost.

by Jos customers, it is difficult to expect that a such higher price would be accepted by exactly the same class of customers (clerical staff etc.) in Kaduna. Anyway, only a serious market survey could give the elements of an answer, and that would require several months. Until proof is given of the contrary, it is safer to assume that Kaduna consumers have no reason whatsoever to be more willing to buy cars than Jos customers.

In fact, selling in Kaduna would mean entering a new market, about the reactions of which nothing certain can be said. This uncertainty forbids us to suppose any longer, -which was already quite doubtful -, that the cost and sales curves would actually follow the dotted lines on the diagram. On the contrary: while there is no reason to expect that the sales curve would keep climbing, there is at least one cogent reason why one ought to expect higher costs, since these ~~firm~~ would have to include high depreciation charges on the necessary refrigerated lorry. Moreover, there would be the same necessity for credit sales, with probably increased difficulties in collecting the money, because of the distance. All this would inflict a great strain on the management, perhaps for no result.

To summarize: prospects of successfully extending sales outside the Jos area seem to me very dim. One will doubtlessly meet additional costs and difficulties, but it is impossible to say if the proceeds will balance the costs. I have already expressed doubts as to the possibility of producing 100,000 lbs with only the slight expected increase in cost. Even if this could be achieved, however, and judging from past performance, I do not

believe that these 100,000 lbs could be sold in such a way as to cover the costs (both cost of production, and cost of selling). In conclusion, treating the Farm as a commercial concern may lead to serious disappointment; let us examine now if other policies are possible.

III

I shall not suggest here that the Farm ought completely to stop operating on a commercial basis; I merely want to point out that, while carrying on with production for business purposes, it might be interesting, in the long run, to consider new, non-commercial activities. These activities might develop to such an extent as to change the nature of the Farm, and its relationship with the public.

a) Instead of filling up the old mining paddocks in the Jos area, and planting them with trees afterwards, it might be possible to stock them with fingerlings periodically supplied by the Farm. A yield of 300 lbs per annum (one-pounders) could be obtained without feeding nor fertilizing. It would benefit the original owners of the land, who would be expected to take care of the whole scheme, except for occasional control. The Farm would perform the same sort of ^{public} service as a forest nursery.

b) In a wider but similar perspective, the Farm could become the key-center of an extension network whereby fish culture would gradually spread among farmers. Instructors might be trained at Banyas; the Farm would also provide the necessary fry. However, comprehensive research is absolutely needed before ~~xxxxxxxx~~

embarking on such a scheme; could fish farming be made really interesting for the people concerned? It must be remembered, in this connection, that one of the chief incentives to fish farming is the possibility for the farmer not only to eat his fish, but to sell it. This cannot be done with a profit unless two conditions are fulfilled:

- Fish farming should take place in the neighbourhood of a town where the population shows evident signs of wanting fresh fish, besides, dried or smoked fish.

- The fish culturist should be able to run his farm without incurring high monetary costs, or better, with no monetary costs at all. However, the scale of operation must not be so small as to deprive the scheme of any economic significance. The availability of cheap food is of paramount importance.

c) In connection with this scheme, biological research should be carried out at Enayta, but it would be necessary to inquire very seriously into the general significance of experiments conducted on the farm, since several experts have claimed that conditions were atypical there. In any case, research ought not to be unnecessarily confined to the biological field only; it should also be concerned with the economic aspects of fish farming, to which more attention ought obviously have been devoted before.

The original idea behind Enayta Fish Farm was to improve the diet of the population by a regular supply of high-protein food. This will never be done if one persists in thinking of the relationship between Enayta and the public in terms of buying and selling. Generally speaking, fresh fish is an expensive commodity, particularly because of the amount of services included in the finished product. It may be that fishermen and customers are simply not willing to pay for all these services, and prefer to go without any fish at

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all, since fish and services have to be bought together. In my opinion, fresh fish trade can be a success only with a very low cost of production, and if there is a possibility of quickly despatching the fish without any additional costs. This can happen only in the case of an urban market situated absolutely close to the fisheries, otherwise transport is impossible, or too costly (necessity of refrigerated lorries, for which no return freight can be found). Garoue, in Cameroun, is a typical example; fishermen bring the fish every morning to the landings, where it is bought by Sara or Lake market-women. Everything is sold before midday. The market and the landings are not more than one mile apart. Fresh fish is not sold anywhere else in North-Cameroun, except in Fort-Ecouard and Yaounde, -in smaller quantities -, where markets are also very close to the landings.

Obviously, the situation at Panyan is quite different. An industrial fish farm of this size, isolated in a detrimental environment (no external economies, no distribution channels, no steady, solvent market) has no chance of achieving commercial success. If it is to propagate innovations, it will do so only by resorting to extra-market forces (training and imitation). Careful and extensive research, however, is still needed to demonstrate that fish-farming can be spread in this country with a reasonable chance of success. It must also be pointed out, that, should the Fish Farm be reconverted, no immediate results could be expected. Four or five years of work would be necessary to make the scheme effective.

Yaounde, 22 dec. 1961