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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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THE SUGAR INDUSTRY: GHANA'S EXPERIENCE

Background Paper

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THE SUGAR INDUSTRY:
GHANA'S EXPERIENCE

by

S. D. Kyei
UNIDO consultant

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The history of sugar industry in Ghana is such that it is difficult to blame its dismal performance on technology. At least that is not the feeling yet in government quarters, as is evidenced by the fact that, in spite of the sad story of Ghana Sugar Estates Ltd., (GHASEL) which forms the main subject of this paper, a new factory being planned by the State in collaboration with Tate & Lyle is nearly of the same size as GHASEL's.

And perhaps this is not illogical since the GHASEL story is a peculiar one, as will be seen in the following pages, and cannot therefore serve as a useful guide in the choice of appropriate technology. It is now generally believed that had GHASEL been properly planned and had been adequately provided with the basic infrastructure from the beginning, the performance would have been different.

This is not to say however that there is no merit, even at this stage, to consider the adoption of a new technology as a complement to what exists in the industry now. The only snag which might arise would probably be with the product which would be turned out. Ghanaians as a people, are very choosey, and if the semi-refined GHASEL granulated sugar does not seem to find much favour with them - cube sugar is what they have been used to over the years - it is doubtful if Khandsari sugar would be acceptable to them.

As for the comparative study conducted a few years back which tends to give small-scale sugar industries an edge over large ones in economic terms, it is the view of this writer that this may not necessarily be the case. The little farm which was used in building up the case had so many advantages to start with: better location, better-trained staff, adequate finance, and round-the-clock extension services. It also had a certain amount of flexibility in fixing the price for its product and in deciding on what to pay for the crop for its mills. But GHASEL had to operate in a strait-jacket, going strictly according to government-controlled prices.

The choice of an appropriate technology is certainly important, and will continue to be so, to most of the Third World countries. But in places where an industry is started off at a fairly sophisticated level and not from the grass-roots, like the sugar industry in Ghana, it probably makes more sense to try to make it work at that level than to down-grade it. This is particularly important in situations where the lower technology is equally new to the people and has never been part of their tradition.

HISTORICAL BACKGROUND

Sugarcane as a crop has long been cultivated in Ghana but not on a plantation scale. Individual farmers cultivated the local variety partly for direct consumption and partly for milling in small crushers and the juice processed into alcohol called 'akpeteshie'. The local variety was however found not to be suitable for economic production of sugar because of its low sucrose content.

The first scientific study of the crop was in 1948 when the then British Colonial Government requested one Professor Charter to conduct studies into the possibility of establishing a sugar industry and to submit proposals. His report indicated that a sugar industry in Ghana was an economically viable project. Following this, a research station was established at Kpong in the Eastern Region of Ghana in 1953 by the University of Ghana to study the growing habits of the crop, and to determine the varieties of cane most suitable for the economic production of sugar.

Further studies began at the same time to explore the suitability or otherwise of available areas for the industry. Asutsuare and Komenda were finally chosen as two of the areas suitable for large-scale sugar cane growing but, as has now been proved, Komenda was a wrong choice. Asutsuare is situated near Kpong where initial studies on the crop were started. Komenda, on the other hand, is a coastal town in the Central Region of the country.

The Asutsuare factory with a planned grinding capacity of 2,000 tons cane per day to produce 30,000 tons of refined sugar per annum was erected by the Polish State Organisation, CEKOP and was commissioned into production in 1965. The Komenda factory with a grinding capacity of 1,000 tons cane per day to produce 15,000 tons of plantation-white sugar per annum was erected by the Czechoslovak firm Techno-Export.

The two factories together therefore were designed to produce, at maximum capacity, 45,000 tons of sugar per annum which would have catered for about 50% of the national sugar demand in the late sixties and the early seventies.

The Asutsuare factory went into production during the 1966/67 season, whilst the Komenda one commenced operations the following year due to a delay in the completion of the water supply system.

THE ESTATES:

1. Climate and Soils:

The Asutsuare factory has a planned estate area of 6,500 acres (2600 ha). The area consists of heavy alluvial soils bordering on the Volta River and heavy black clay soils (vertisols). These soils have low infiltration rates and poor internal drainage, especially the black clay soils. The vertisols on drying crack into very hard blocky masses and on wetting become very plastic, due mainly to the constituent clay mineral. They therefore have a drainage difficulty. Both soil groups have a low nitrogen status. The black clays in addition have low phosphorus and potassium levels. The PH of the soils varies from 5.5 to 7.0 with the alluvial soils being more acid than the black clays. The lower horizons of the black clays tend to be alkaline because of the presence of free calcium carbonate.

Weather Conditions - Asutsuare:

The average daily temperatures, sunshine, pan evaporation and monthly rainfall of the Asutsuare area are presented in the table below:

	Jan	Feb	Mar	Apr	My	Jn	Jl	Aug	Sep	Oct	Nov	Dec	Total Ave.
Rainfall (mm)	22.0	45.5	99.5	126.5	158.3	191.5	68.0	39.0	98.0	131.8	102.0	38.3	1117.8
Max. T °C	33.9	35.1	34.8	34.1	33.0	30.9	29.7	30.0	31.3	32.1	32.9	33.3	32.6
Min. T°C	21.1	22.8	23.4	23.3	22.9	22.2	21.6	21.3	21.7	21.6	21.6	21.3	22.2
Sunshine hrs.	7.1	7.6	7.1	6.8	6.8	5.1	4.3	4.5	4.9	6.9	7.8	7.6	6.3
Pan Evap- (mm).	4.6	6.4	6.3	5.8	5.1	3.8	3.6	3.9	4.5	4.6	4.8	3.9	4.8

Although the minimum temperatures are rather on the high side and the rainfall somewhat deficient, well-controlled

experiments have shown that with proper irrigation good cane crops can be reaped.

The Komenda factory on the other hand, has a planned estate of 3,800 acres (1520 ha). The soils of the area belong to the coastal savannah ochrosal group and consist mostly of greyish-brown loamy sands underlain by clay at a depth of about 60 - 100 cms. This clay hard-pan makes the internal drainage of the soils rather poor. The soils are of low inherent fertility with low PH ranges of 4,5 to 6,5. The climate at Komenda is very similar to that of Asutsuare with total rainfall being in the range of 1000 to 1200 mm. Maximum temperatures, sunshine hours and pan-evaporation are however, slightly lower than those of Asutsuare.

2. Agricultural Practices:

Both the Asutsuare and Komenda estates follow similar agricultural practices. The sequence of field operations is as follows:

1. Land clearing (virgin soil) or stubble uprooting (replanting).
2. Ripping or sub-soiling.
3. Ploughing.
4. Disc harrowing.
5. Plant planning and Furrowing.
6. In-field canals and drains construction.
7. Planting.

Due to the heavy nature of the soils at Asu'suare heavy crawler tractors with accompanying implements are used.

At Komenda only light wheel tractors are used for land preparation activities. Sub-soiling to break-up the clay pan is, however, performed with crawler tractors.

Planting is mostly done manually with cane overlapping on rows 1.45 metres apart in the long dry period from December to March. Weed control in plant cane is achieved by using herbicides, usually involving a

combination of triazines and 2.4-D.amine. Weed control in ratoon cane is achieved by a combination of cultivations and manual weeding.

Fertilizers are applied manually at the time of planting in plant cane. In ratoon cane fertilizer application is mechanised in combination with ridge reshaping and interrow cultivation to open up for better aeration and water penetration. At Asutsuare the heavy black clay soils receive N,P, and K fertilizing in the form of urea, triple superphosphate and sulphate of potash, whilst the alluvial soils receive only nitrogen application. At Komenda only N and P fertilizers are applied.

Due to the heavy nature of the soils with the attendant very low infiltration rates, and the rather gentle slope of the land, furrow irrigation is practised at Asutsuare. But at Komenda where the soils are of a sandy nature and the topography uneven sprinkler irrigation is adopted.

The Barbados varieties B41227 (60%) and B46364 (20%) occupy the largest acreage at Asutsuare. At Komenda B41227 is the predominant variety and occupies about 85% of the total acreage. The acreage under new promising varieties like NCO376, C0997 and D14146 is also increasing rapidly.

3. a. Outgrowers:

Individual and co-operative sugarcane farmers (outgrowers) also supply cane to the two estates. The outgrowers' area is about 5,000 acres (2000 ha) at Asutsuare and about 3,000 acres (1200 ha) at Komenda. The climate and soils of the outgrowers' areas are very similar to the estate areas, except that rainfall in the former areas is slightly higher, being in the range of 1200 to 1500 mm. per annum.

The estates are responsible for extending technical services and know-how to the outgrowers. Their planting methods and cultural practices are therefore similar to those of the estate. Due to the absence of irrigation

facilities on the outgrowers' farms only the varieties B46364 and B41227 which are comparatively drought-resistant are recommended for planting. Planting is done mostly in April at the beginning of the main rainy season which lasts from April to the end of June.

An interesting feature of the outgrowers' farms at the two estates is that whereas at Komenda most of the owners are resident farmers, the majority of the owners at Asutsuare are absentee farmers who live in Accra, the capital. It is no wonder, therefore that acre for acre, the Komenda outgrower appears to be doing much better than his counterpart at Asutsuare.

	TCA	
	KOMENDA	ASUTSUARE
1973/74	16.2	7.2
1974/75	14.2	9.1
1975/76	14.2	12.1
1976/77	14.1	12.1
1977/78	13.2	6.2

4. Harvesting:

Cane harvesting on the estates is semi-mechanised. Burnt cane is cut manually and the stacked cane is loaded mechanically by grab-loaders into tractor-drawn trailers to the factory. Because of the scarcity of labour in the Asutsuare area, migrant labour from Northern Ghana is employed in cane harvesting. But at Komenda, the recruitment of local labour for harvesting does not seem to present much of a problem. On the outgrowers' farms cane is harvested green and loaded manually. Cane from the outgrowers is purchased by the estate on a flat weight basis.

PERFORMANCE TO DATE AND SOME OF THE REASONS RESPONSIBLE FOR DISAPPOINTING RESULTS OF THE TWO ESTATES

Although the Sugar Industry in Ghana has been in existence for some time now, it has not been able to achieve its planned targets. Cane productions have persistently been low and factory performance, especially at Asutsuare, has been most disappointing. The poor performance of the Industry may be attributed among other things to the following: inadequate financing, frequent changes in management, lack of trained man-power, inadequate irrigation, poor rainfall, and high pest incidence. In the short period of its existence, the sugar industry has passed through four different managements: Polish, Czechoslovak, Pakistani and Dutch. This is clear proof of things not going too well. One may be tempted to say that the whole industry had a false start with the original management team. As is very well-known sugar processing and running of sugarcane plantation is a very specialized job and requires a very experienced management team. Poland and Czechoslovakia, by not having been colonial powers, were not familiar with tropical sugar cane agriculture, and therefore did not tackle the plantation aspect of the project with the expertise that it deserved.

The two foreign teams however had to leave the country after the 1966 coup which had brought in its wake a significant ideological shift. Their jobs were taken over by a make-shift Ghanaian team which had had no previous experience in sugar manufacture or scientific sugar cane growing, apart from what they had been able to learn on the spot. At this stage therefore things started really to deteriorate, especially on the plantation. The estate which had then been taken over by the Ghana Industrial Holding Corporation was again given to an expatriate management team, the Associated Consultant Engineers of Pakistan. Under the Pakistanis also, not very much could be accomplished due mainly to severe financial constraints and things deteriorated still further, with irrigation more or less coming to a standstill.

The government at this point had to decide whether to let the industry die a natural death or to fully rehabilitate it.

It decided on the latter. It therefore approached the World Bank for the needed loan. The World Bank was agreeable to the request but there was a condition attached: the government was to enter into a 5-year management and technical contract with a Dutch firm (H.V.A. Internationaal of Amsterdam) to run the project.

The performance of the industry during this period when more reliable records were kept are presented in the table below:

Planned and Achieved targets - Asutsuare Estate and Outgrowers (OG)

Period	Planned Acreage to be harvested			Actual acreage harvested			Planned Cane Tonnage			Actual Cane Tonnage		
	Est.	OG.	Tot.	Est.	OG.	Tot.	Est.	OG.	Tot.	Est.	OG.	Tot.
1973/74	3060	6400	9460	1700	7000	8700	91700	108800	200500	24000	54000	78000
1974/75	3370	6400	9770	2480	5500	7980	111100	115200	226300	27400	50200	77600
1975/76	4000	6400	10400	2280	4568	6848	136300	121600	257900	45600	55200	100800
1976/77	5000	6400	11400	3850	4000	7850	173700	128000	301700	70000	50000	120000
1977/78	5900	6400	12300	3350	3500	6850	205800	128000	333800	37800	19500	57300

The above table clearly show the very disappointing results obtained during the period under review in both acreage available for planting and cane harvested. Although the Dutch team brought a lot of expertise and experience gained over 20 years in sugarcane agriculture from Ethiopia into the country, it did not succeed due to two main reasons: outmoded management style and lack of proper attention to the existing irrigation network.

The Dutch realised too late that management techniques that worked successfully in Ethiopia would not necessarily work in Ghana. The Ghanaian senior personnel were completely excluded from management decision-making and the many useful suggestions learnt by them over the years were not heeded to. The Ghanaian staff therefore had no alternative but to adopt a passive attitude to their work which did the Company no good. The other mistake of the Dutch team was that instead

of rehabilitating an existing 2000 acres (800 ha) irrigated farm, it started an ambitious expansion programme involving 3000 acres (1200 ha) of irrigated land in 1974. But the world recession of 1974 coupled with the accompanying inflation and steepfall in the value of the U.S. dollar, as against the European currencies, saw the doom of the estate expansion programme. Meanwhile, two years of continuous severe drought in the years 1976/77 and 1977/78 led to very low cane production in the poorly irrigated farms at Asutsuare and on the rain-fed estate at Komenda.

Rainfall and Cane Production - Komenda Estate

	Long Years Average	1975/76	1976/77	1977/78
Total rainfall (mm)	1200	870	670	624
Cane Production (Tons)		58,683	38,893	28,51

The results from Komenda best illustrate the effects of the drought since at that estate due to power supply (electricity) problems, irrigation is only available to newly planted fields to ensure good germination. The rainfall in 1976/77 was only 56% of the long (20) years' average and that of 1977/78 was even worse since it represented only 52% of the long years' average.

Cane production followed a similar pattern with production being far lower than expected. It had been hoped that as the rehabilitation programme progressed, and with the improved agricultural practices introduced, cane production per acre would also improve to the levels shown in the table below:

Tons Cane Per Acre - Expected and Actual

Period	Expected TC/A				Actual TC/A			
	Komenda		Asutsuare		Komenda		Asutsuare	
	Estate	Og.	Estate	Og.	Estate	Og.	Estate	Og.
1973/74	17	13	30	17	21.9	-	14.1	7.7
1974/75	18	14	33	18	21.6	-	11.0	9.1
1975/76	20	16	34	19	20.0	-	20.0	12.1
1976/77	21	17	35	20	12.7	-	18.2	12.5
1977/78	21	17	35	20	8.9	-	11.3	5.6

Pest incidence has also contributed tremendously to the low cane and sugar productions. Eldana saccharina is the most important of the three stem-borers attacking sugarcane in Ghana; the other two are Sesamia and Chilo spp. Eldana causes about 77% of the damage to cane, with Sesamia and Chilo causing respectively about 22% and 1% damage. Sesamia normally attacks young cane before internode formation, whereas Eldana attacks cane at all stage of development. Apart from the loss in weight of cane, and hence reduction in cane production, the very high borer infestation rate is also responsible to a very large extent for the very low rendement (5%) of the cane. Estimates in other countries e.g. West Indies, India etc., have shown that for every 1% of internodes bored, there is a loss in rendement of about 0,07%. Thus with the very high borer infestation rates a large part of the sugar in the cane is lost through borer attack.

Average Borer damage - Komenda Estate

	1974/75	1975/76	1976/77	1977/78
% Stalks Attacked	60	75	70	80
% Internodes Attacked	31	39	40	45

The over-all performance to date of the two estates is represented in the table below :

GENERAL PERFORMANCE TO DATE

Year	'73/74	'74/75	'75/76	'76/77	'77/78	'73/74	'74/75	'75/76	'76/77	'77/78
Acreage - Estate	1700	2480	2280	3846	3350+	1540	2360	2907	3051	3250
Acreage - O'growers	7000	5500	4568	4029	3150%	2800	2790	2975	3130	3794
T.C.A. - Estate	14.3	11	20	18.2	11.2	22.5	21.6	20.2	12.7	8.8
T.C.A.- O'growers	7.7	9.1	12.1	12.4	6.2	16.2	14.2	14.2	14.1	13.2
Cane Crushed - Estate (in tons)	24400	27400	45616	70163	37484	34700	51100	58374	38893	28518
Cane Crushed - O'growers (in tons)	54000	50200	55153	49972	19495 (.)	45300	39500	42330	44040	50148
No. of Season Days	188	114	167	145	91	161	138	173	153	168
Cane/Season Day (tons)	490	804	615	839	670	505	687	590	577	576
Cane/Milling Day (")	1320	1363	1187	1516	1438	874	1007	990	920	920
Down-time (%)	62	41	49	45	54	40	29	41	41	49
Total Molasses Produced	5590	4022	6382	8530	3715	5000	4991	3190	5022	4342
Total Sugar Produced	3600	5072	5472	5900	2400	4300	6275	3388	5900	4900

NOTES :

\+ The decline is caused by the partial flooding of one of the three farms of the estate for the construction of Ghana's second hydro-electric power.

% This is caused by the shift in emphasis by private farmers from sugar-cane growing to rice growing. Currently underway in the area is a Government-UNDP Project involving rice cultivation.

(.) Two factors are responsible for this :

(a) stand-over cane which could not be crushed by the estate and which was consequently sold to private mills ;

(b) the high incidence of mini-crushers in the area.

As a point of historical interest the sugar production figures at the estates before Ghasel take-over are quoted below :

(METRIC TONS)

Year	Asutsuare	Komenda	Total
1969/70	1200	4000	5200
1970/71	1500	4600	6100
1971/72	2000	3500	5500
1972/73	3200 %	3500	6700

% part of this was raw sugar imported from Brazil for local refining.

FINANCIAL POSITION OF THE COMPANY

(The unit of currency in Ghana is the Cedi(¢)
and its exchange rate against the Dollar is 2.75)

With its yearly output so low, it is not surprising that GHASEL should find itself almost permanently in the red. Currently, it has an accumulated long-term debt totalling ¢28 million as opposed to ordinary shareholding of ¢13.5 with accumulated loss at the end of September, 1977 standing at ¢17 m. The ordinary shareholding equity shows a net deficit of ¢3.7 m, a sign of negative return on investment. And all this, in spite of the fact that GHASEL obtains a good price for its sugar! It must be mentioned here that in Ghana, the prices of certain commodities, including sugar are controlled by the Government. GHASEL at the moment sells a 50 kg bag of sugar for ¢67 including a development levy of ¢12.15. But it is estimated that before the Company can break even, a new price of ¢150 for a 50 kg bag may have to be granted. This is not only to offset the effect of the low output, but is also meant to pay for the ever-rising price of cane.

Through effective lobbying by the outgrowers, some of whom are former politicians the producer price of cane has continued to rise whilst the price of sugar has remained static. When GHASEL took over operations in 1973 the producer price per ton of cane was ¢10; now it is ¢40, and there is every indication that this may go up again during the coming campaign to between ¢55 - ¢60. Should this happen, GHASEL may paradoxically, considering its precarious financial position support the move since it harbours a genuine fear that if it refused to accept the price increase, private crushers who may not feel bound by fixed government prices may outbid them. The low cane supply from the outgrowers to the mills at Asutsuare last season was partly attributable to the intervention of private crushers.

In sharp contrast to the performance of the sugar mills, the alcohol plant of the Company situated at Asutsuare has been performing quite well. With an installed plant capacity of

2.5 m litres it can at the moment handle all the molasses produced. Between the two estates, a total of 9,400 tons of molasses was produced during the 1977/78 campaign and from this nearly 1.7 m litres of ethyl alcohol was distilled. The present price of ethyl alcohol, which again is government-controlled, is ¢1.98; for the coming season GHASEL intends to propose a new selling price of ¢5.00.

BROAD LESSONS FROM GHASEL'S EXPERIENCE

1. The chances of success of an agro-based industry which is not conceived as part of a general agricultural programme are very slim. Because such an agricultural programme was non-existent at the time the sugar industry was being set up, the vital position which irrigation occupies in a sound agricultural policy was not appreciated and in the event the development of the sugar industry suffered. As has been emphasised several times in the foregoing, GHASEL's main bane has been inadequate supply of water and this is something which would not have been left out of its planning had there been a comprehensive agricultural scheme. Also, it was as a result of the absence of a general agricultural policy in the country at the time that Komenda was chosen as a site at all! True, a private Dutch company had earlier started a small sugar-cane plantation there but that was more to strengthen some historical links which Holland had with that part of the country (there is a Dutch Komenda there) than to satisfy some pressing economic needs. The poor soils at Komenda coupled with the severe corrosion effects of the sea-breeze should have been enough reason to discourage any serious investor from setting up a sugar-mill there.

2. Funds made available for rehabilitation were later found to be insufficient because of conservative cost estimates (probably to meet I.D.A. criteria for the loan), subsequent devaluations and inflation, and the long

period which elapsed between the publication of the World Bank feasibility report and the actual signing of the Agreement. Periodic re-appraisal and adjustment of cost estimates therefore becomes important in an inflationary economy for projects lasting from 2 to 3 years or more.

3. The policy whereby a foreign company charged with the management of a local enterprise is required by Government to own shares in it should not only be pursued but the quantum of the shares should also be significant. There is now a widespread belief in Ghana that had H.V.A. been forced to take up an equity share of more than the token 5% that was offered them, they would probably have performed better. This belief is built on H.V.A.'s solid achievements in Ethiopia where the factories were their own property.

4. Since Poland and Czechoslovakia, the countries which established Asutsuare and Komenda respectively, are non-members of the World Bank the I.D.A. loan granted GHASEL could not be used for the purchase of spare parts from the two places. This obviously constituted a serious impediment in the plant rehabilitation schedule. This problem of course would have been avoided if the World Bank had insisted on the Government setting aside sufficient foreign currency for the purpose of spare parts procurement at the time the Agreement was being signed.

5. With the benefit of hindsight, it is suggested that the sequence of abrupt changes in management and the neglect of traditional procedures and practices may have been detrimental to the orderly development of Ghana's sugar industry. In other words, it is not unlikely that a different story about the industry might have been told today if local expertise, especially at the time the H.V.A. came in, had been maximally utilised. This is particularly true for on-going projects which may already have

identified certain things which may hold good at almost all times for the enterprise irrespective of who is actually in charge of management.

6. For a venture of such a magnitude as GHASEL's, it is important that the control over certain services, considered as essential inputs in its operations, is not left in the hands of a third party. Whilst the canal which conveys water to the Komenda estate is controlled by the Irrigation Department of the Ministry of Agriculture, the head-pump itself is run by GHASEL. At Asutsuare exactly the reverse is the case. And until the end of the last campaign, the supply of power to the Komenda estate was the responsibility of the Electricity Corporation of Ghana. Both estates have, as is to be expected, suffered seriously from late deliveries of services or from actual default on the part of these third parties. Future ventures of the magnitude of GHASEL should not only be made self-sufficient but should also be absolutely responsible for the control of their services, utilities and input supplies.

7. There should be a clear departure by government from its traditional practice of appointing mainly civil end public servants to serve on Board of Companies with such a commercial bias as GHASEL. Of the seven members who constitute the Board of Directors of GHASEL, as many as six are ex-officio members with the Managing Director of the Company making up the number. Because these ex-officio members do have their own daily assignments to fulfil, most of which could be quite onerous, they cannot naturally be expected to devote much of their time to the affairs of GHASEL. It is possible that had the Board been composed of members who had the time to go to the estates to talk to people, it would probably have emerged that at least in one area, the H.V.A. team was not fulfilling its part of the contract and that is, training of local management staff.

8. In all such future Agreements as the one drawn up between Ghana, I.D.A. and H.V.A., clauses should be provided therein to make it possible for:

   a) the recipient country to examine the curriculum vitae of all prospective expatriate staff before their actual appointment. As a result of the absolutely free hand which the H.V.A. had in this respect, some unsuitable expatriates were sent in who later had to be bundled out through worker agitation;

   b) all parties to agree before any reallocation is made in the disbursement of funds. In the original Agreement an amount of $2.2 million dollars was to be spent on civil works, including irrigation, and nearly $4 million on expatriate management fees. At the end of the contract however, the actual amount spent on civil works was 0.8 m dollars whilst that on management fees had risen up to slightly over $5 million. There is nothing on record to show that this was agreed to by all parties involved;

   c) the I.D.A. as the donor financial organisation to play a more effective role in monitoring the activities of the project. After all the I.D.A. is not an ordinary bank whose interest should be limited to the usual lender/borrower relationship; the spirit behind all I.D.A. loans to Third World countries is to ensure that they achieve the targeted results and these can only be done through more direct involvement.

9. Some degree of financial autonomy should be granted to those industries whose products are import-substituting but whose operations require the importation of a certain amount of foreign items. GWASEL belongs to this category of industries, and even though it was given an import licence worth about ¢6million at the beginning of the year, as at the time of writing this paper, not a single

iter has been ordered due to lack of the necessary foreign exchange cover. This situation certainly does very little to help an ailing Company like GHASEL. At least, a certain percentage of what is saved in foreign currency to the nation as a result of GHASEL's operations should have been set aside for this purpose.

THE FUTURE

Although the overall performance of the estates up to now leaves much to be desired, it appears there is still a future for the industry. At least the government has not given up yet. It feels and rightly so, that after spending so much money on the project (total investment made as at 30th September, 1977 is nearly ¢40 million) it would not be sound financial policy to abandon it. The government is also aware of the big strides being made in the sugar industry by the two neighbouring countries, the Ivory Coast and Nigeria, which lie in nearly the same latitudes as Ghana and which therefore are not much different in terms of climatic and other geographical conditions.

For a start, the government has at long last recognised the crucial position which irrigation occupies in any meaningful agricultural programme and has accordingly set up an Irrigation Authority. What this means to GHASEL is that it may not now be talking to disinterested officials when it approaches them for funds to improve the estates' irrigation facilities.

The second important step which is likely to be taken soon by government concerns the composition of the Board of Directors. The ineffectiveness of the GHASEL Board, having been so amply demonstrated, it is now being suggested that the ex-official membership be drastically cut down and their places taken up by private people who will have the time for the Company. This idea incidentally happens to be one of the main recommendations made by a Committee appointed recently to look into the affairs of the sugar estates, and it seems to have gone down very well with the government. There is also talk about revamping the

sugar industry Board to make it more effective. The Sugar Industry Board was set up in 1973 to advise the government on all maters concerning sugar - this was a move to check GHASEL from assuming an obvious monopolistic position - but hitherto its main function area has been pricing.

Notable changes are also taking place within GHASEL itself. In the past inadequate attention was paid to the outgrowers. Experience however has proved that for a long time to come the outgrowers will continue to play a very important role in the sugar industry. Everything possible therefore is being done to improve and increase the output from these farms. This includes a closer liaison with the Agricultural Development Bank which, under a Tripartite Agreement with GHASEL, has been granting loans to private farmers, better organised extension services, and improvement of land preparation and cultivation practices.

Again, through extensive selection trials, new and higher-yielding cane varieties are being identified to replace the existing ones, especially B41227 which is very susceptible to borer infestation. With the help of the Sugar Industry Board and the University of Ghana, extensive research into the biology and phenomena of the stem borers is currently underway at the estates with a view to finding possible control measures.

Lastly, there are deliberate administrative moves within the organisation now to coordinate the activities of the two estates as much as possible. As of now, the only area within the Company where there has been some coordination is in accounting where there is a substantive head at the headquarter of the Company in Accra. Since there are no corresponding positions at the Head Office to oversee and harmonise the activities of the technical and agricultural departments of the Organisation as a whole, certain serious discrepancies sometimes occur in their operations. It is proposed to rectify this situation soon.

It is also realised that merely getting high-calibre advisers at the Head Office to direct affairs at the estates will not be enough to bring about the total coordination effort aimed at. The exercise should also involve the regular physical movement of personnel from one estate to the other to exchange ideas on common problems. A start has already been made in this direction and it has begun to pay off dividends. A problem on an Oliver Campbell filter which had dogged the Asutsuare estate for years and was losing huge quantities of sugar through the mud has just been solved as a result of this mobility between the estates. The OLiver Campbell filter heads had been turned so that the no-vacuum section was facing the mud-trough instead of the low-vacuum section. The right thing was being done all the time by the other estate and this was not known to Asutsuare.

All this is not to say that GHASEL is out of the woods yet. The Company is deeply aware of the problems confronting it - poor cane yield, poor cane quality, inadequate infrastructural facilities, near bankruptcy, and above all, a Board whose impact on its operations has so far not been very much felt. But it is clear from the new interest that is being shown in the sugar industry by all concerned that there is still a future for it. It must however be emphasized that no matter what the new changes are, GHASEL will continue marking time if these changes are not accompanied by ADEQUATE FUNDS WHEN THEY ARE MOST NEEDED.

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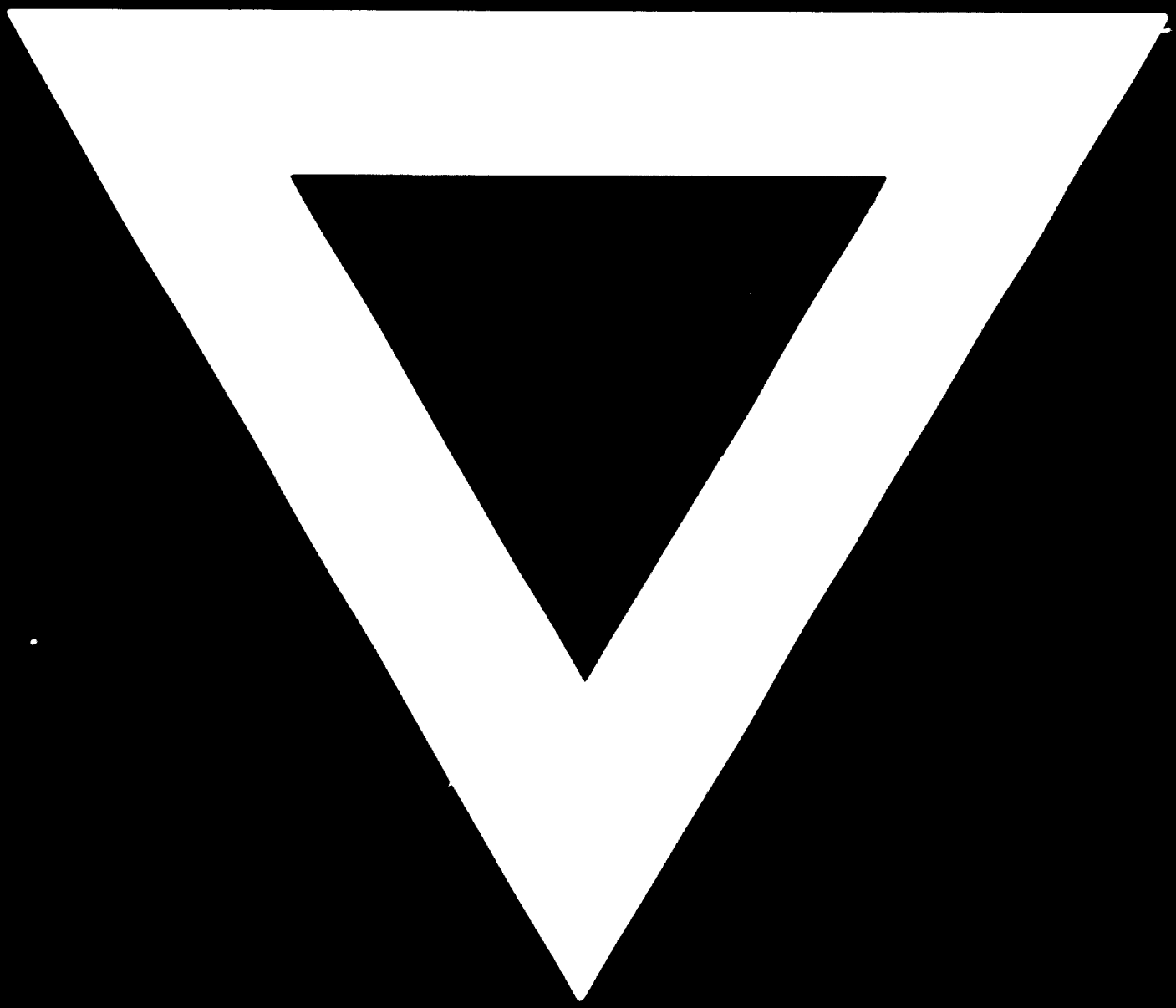

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