

資料 1 : 現地調査団の構成及び日程

1. 現地調査団の構成

石田 清 剛 (団 長)	農水省食糧庁管理部検査課
大江 徹 男 (計画管理)	国際協力事業団移住事業部
白井 和 成 (建築計画)	(株)日本総合建築事務所
白井 明 (建築設計)	(株)日本総合建築事務所
山崎 勇 (物流計画)	海外貨物検査株式会社

2. 現地調査日程

昭和63年 2月28日より 4月 2日までの35日間

- 2/28 (日) 成田出発, London 着 (BA 005便)
- 2/29 (月) London 発 (BA 054便)
- 3/ 1 (火) Nairobi 着, JICA 事務所及び日本大使館訪問
- 3/ 2 (水) Nairobi 発, Lilongwe 着 (KQ 420便)
- 3/ 3 (木) (国民の休日) 団内打合せ
- 3/ 4 (金) 農業省及び大蔵省表敬訪問, Lilongwe サイロ見学, Blantyre に移動
- 3/ 5 (土) (休日) 団内打合せ
- 3/ 6 (日) Bangula 建設要請地検分
- 3/ 7 (月) ADMARC と協議 (インセプションレポート説明, 調査日程等), Limbe デポ倉庫調査
- 3/ 8 (火) ADMARC と協議 (マラウイ側計画の聴取), Bangula デポにて現状調査 (入出庫管理)
- 3/ 9 (水) ADMARC と協議 (計画内容について討議), 統計局・政府刊行物出版局にて資料収集
- 3/10 (木) Lilongwe に移動, 農業省にてミニッツ内容協議
- 3/11 (金) Minutes of Discussions にサイン
- 3/12 (土) (休日) 石田・大江帰国のため Lilongwe 発
- 3/13 (日) Mzuzu へ移動
(途中 Benga マーケット及び Nkhata Bay マーケット調査)
- 3/14 (月) Mzuzu Katoto 倉庫建設現場訪問, Lilongwe に移動
(途中 Mzimba マーケット調査)

- 3/15 (火) 農業省打合せ, (白井和・山崎) Blantyre に移動
- 3/16 (水) (白井和・山崎) ADMARC にて資料収集
(白井明) 農業省 にて資料収集
- 3/17 (木) (白井和・山崎) ADMARC にて資料収集
(白井明) Ministry of Works & Supplies 訪問
- 3/18 (金) (白井和・山崎) ADMARC にて資料収集
(白井明) Ministry of Works & Supplies にて
打合せ, Blantyre に移動
- 3/19 (土) Bangula デボ現状調査及び敷地測量
- 3/20 (日) 資料整理, 施設素案作成
- 3/21 (月) Bangula デボにて資料収集, マラウイ鉄道本社訪問他
- 3/22 (火) ADMARC と協議 (施設計画), マラウイ鉄道にて資料収集
- 3/23 (水) ADMARC にて資料収集, 建設資材価格調査
- 3/24 (木) ADMARC と協議 (計画規模, 資機材計画)
- 3/25 (金) ADMARC と協議 (計画規模), 輸送事情調査
- 3/26 (土) 資料整理, 建設資材価格調査
- 3/27 (日) Bangula 要請地補足調査
- 3/28 (月) (白井和・山崎) ADMARC 及び JICA マラウイ事務所に挨拶他
(白井明) Lilongwe に移動, Ministry of Works & Supplies
にて資料収集
- 3/29 (火) Lilongwe に移動 (白井和・山崎), 農業省訪問
- 3/30 (水) Alimounde デボ倉庫調査,
Lilongwe 発, Nairobi 着 (KQ 421便)
- 3/31 (木) JICA 事務所及び日本大使館に調査結果概要報告
- 4/ 1 (金) Nairobi 発 (BA 054便)
- 4/ 2 (土) London 経由 成田帰着

11th March, 1988

MINUTES OF DISCUSSIONS
ON
THE PROJECT FOR THE MULTI-PURPOSE
AGRICULTURAL WAREHOUSE CONSTRUCTION
IN THE REPUBLIC OF MALAWI

In reponse to the request made by the Republic of Malawi for assistance in constructing the multi-purpose agricultural warehouse at Bangula (hereinafter referred to as "the Project"), The Government of Japan has sent through Japan International Cooperation Agency (JICA), a Study Team headed by Mr. Seigoh Ishida, Assistant Director of Inspection Division, the Food Agency, Ministry of Agriculture, Forestry and Fisheries, from February 28th to March 10th, 1988.

The team held a series of discussions and exchanged views with the relevant authorities of the Government of the Republic of Malawi. As the result of the survey and discussions, both parties agreed to recommend to their respective governments to examine the major points of understanding reached between them, herewith attached, toward the realization of the Project.

石田清剛
SEIGOH ISHIDA
Leader of the Japanese
Basic Design Study Team

R.R. Semu
R.R. SEMU
for: PRINCIPAL SECRETARY
MINISTRY OF AGRICULTURE

H.S. Monunga
H.S. MONUNGA
for: SECRETARY TO THE TREASURY

ATTACHMENT-1 : MAJOR POINTS OF UNDERSTANDING

1. The objective of the Project is to provide a multi-purpose agricultural warehouse with appropriate storage capacity at Bangula, for the Agricultural Development and Marketing Corporation (ADMARC).
2. The Government of Malawi has requested to construct multi-purpose warehouses with total capacity of 30,000 tonnes at Bangula initiating with the storage capacity of 10,000 tonnes as the first stage, although it previously proposed in their request letter, 48,000 tonnes as the total and 8,000 tonnes as the first stage.
3. The Japanese Study Team confirmed, through the site survey and several discussions, the necessity of construction of a multi-purpose agricultural warehouse at Bangula.
4. The optimum layout, scale and the storage capacity will be formulated in Japan after analysing collected data and information, and it will be proposed in the Basic Design Study Report.
5. Equipment necessary for the operation of the warehouse will be considered and taken up under the Grant Aid.
6. Under the control of the Ministry of Agriculture, ADMARC is the overall execution and implementing agency for the Project and assumes responsibility for the management, operation and maintenance of the warehouse.
7. The Japanese Study Team will convey the request of the Government of the Republic of Malawi to the Government of Japan, that the latter will extend Grant Aid for the construction of the multi-purpose agricultural warehouses at Bangula within the scope of the Japanese economic cooperation in Grant Form.
8. The Government of Malawi has confirmed to take the necessary measures as listed in ATTACHMENT-2 on condition that the Grant Aid for the execution of the Project is extended by the Government of Japan.
9. The Japanese Study Team explained the system of Japan's Grant Aid and it was fully understood by the Government of Malawi.

S.D

RS

6

ATTACHMENT-2 : REQUIRED ARRANGMENT TO BE UNDERTAKEN BY THE
GOVERNMENT OF THE REPUBLIC OF MALAWI

1. To secure the land necessary for construction of the facilities and to clear, fill and level the site as needed before commencement of construction.
2. To construct gates and fences in and around the site and to construct the access road to the site when needed.
3. To provide facilities for distribution of electricity, water supply and drainage to their connection points within the site.
4. To provide other incidental facilities such as telephone system, furniture, etc., if deemed necessary.
5. To bear the advising commission of Authorization to Pay (A/P) and the payment commission to the Japanese foreign exchange bank for the banking service based upon the Banking Arrangement (B/A).
6. To ensure prompt unloading, tax exemption and custom clearance of the products at the port of disembarkation in Malawi and to extend the convenience for internal transportation of construction materials and equipment purchased under the Grant.
7. To accord without delay to Japanese nationals whose services may be required in connection with the Project under the verified contracts such as facilities as may be necessary for their entry into Malawi and their stay therein for the performance of their work.
8. To exempt Japanese nationals engaged in the Project from custom duties, internal taxes and other fiscal levies which may be imposed in Malawi with respect to the supply of the products and services under the verified contracts.
9. To maintain and use properly and effectively the facilities constructed and equipment purchased under the verified contracts.
10. To bear all the expenses, other than those to be borne by the Grant, necessary for construction of the facilities as well as the transportation and installation of the equipment.
11. To provide space necessary for such construction as temporary offices, working areas, stock yards, etc.
12. To ensure that temporary electricity supply and water supply are made available for the construction and incidental activities relative to the Project.

S.D

RS.

✓

資料 Ⅲ： ドラフトファイナルレポート現地説明団の構成及び日程

1. 現地説明団の構成

石田 消 剛 (団 長)
白 井 和 成 (建築計画)
山 崎 勇 (物流計画)

2. 現地説明日程

昭和63年 7月10日より 同23日までの14日間

7/10 (日) 成田出発, Paris 着 (AF 269便)
7/11 (月) Paris 発 (UT 745便)
7/12 (火) Lilongwe 着
7/13 (水) 大蔵省及び農業省訪問, レポート提出説明,
Blantyre に移動
7/14 (木) ADMARC 南部地方事務所にレポート提出説明,
Chikwawa 綿繰り工場及び Bangula デポの現状調査
7/15 (金) JICA 事務所訪問の後,
ADMARC 本部にてレポート内容説明
7/16 (土) 個別調査及び資料整理
7/17 (日) (休日)
7/18 (月) Limbe デポ倉庫現状調査, JICA 事務所に報告打合せの後,
Lilongwe に移動
7/19 (火) 農業省
7/20 (水) 農業省にて協議, Minutes of Discussions にサインの後,
Lilongwe 発, Nairobi 着 (KQ 421便)
7/21 (木) JICA 事務所及び日本大使館に報告
7/22 (金) Nairobi 発 (BA054 便)
7/23 (土) London 経由 成田帰着 (BA 007便)

MINUTES OF DISCUSSIONS

THE DRAFT REPORT OF THE BASIC DESIGN STUDY
ON THE PROJECT FOR

THE MULTI-PURPOSE AGRICULTURAL WAREHOUSE CONSTRUCTION
IN THE REPUBLIC OF MALAWI

At the request of the Government of the Republic of Malawi for grant aid on the Project for the Multi-purpose Agricultural Warehouse Construction at Bangula (hereinafter referred to as "the Project"), the Government of Japan decided to conduct a Basic Design Study (hereinafter referred to as "the Study") on the Project and the Japan International Co-operation Agency (JICA) sent the study team headed by Mr. Seigoh Ishida, Assistant Director of Inspection Division the food agency, Ministry of Agriculture, Forestry and Fisheries from February 28th to April 2nd, 1988.

As a result of the study and discussions, JICA prepared a Draft Final Report on the Study and dispatched a Mission to explain and discuss the Report starting from July 10th to July 23rd, 1988.

Both parties held a series of discussions on the Report and agreed to recommend to their respective Governments that the major points of understanding reached between them, attached herewith, should be examined toward the realization of the Project.

July 20th, 1988


SEIGOH ISHIDA

Leader of the Japanese
Basic Design Study Team


B.M. NDISALE

Principal Secretary
Ministry of Agriculture

MAJOR POINTS OF UNDERSTANDING

1. The Malawi side has agreed in principle to the basic design proposed in the Draft Final Report.
2. The Malawi side believes the original proposal of a multi-purpose storage facility should still be subject to further study by the Japanese Government. This is in view of the expected expansion of agricultural output.
3. The Malawi side understood the system of Japan's Grant Aid Programme and confirmed the arrangement to be taken by the Malawi side for realization of the Project.
4. The Final Report (15 copies in English) on the Project will be submitted to the Malawi side by October, 1988.

S. J.



資料 V : 調査機関・面談者リスト

MINISTRY OF AGRICULTURE

B. M. Ndisale	Principal Secretary
R. R. Semu	Deputy Secretary
M. J. K. Mughogho	Principal Economist (Planning Division)
M. Y. Sawerengera	Senior Economist
Sichinga	Principal Statistician
T. Mubvundula	Statistician (Planning Division)
Z. T. Soko	Chief Planning Officer
R. Chingura	Secretary (Planning Division)
E. Ntokotha	Deputy Chief Agricultural Officer
Malowa	Principal Administrative Officer

MINISTRY OF FINANCE

Muononga	Senior Assistant Secretary
----------	----------------------------

AGRICULTURAL DEVELOPMENT & MARKETING CORPORATION (ADMARC)

E. B. Salifu	Assistant General Manager (Primary Marketing)
K. P. V. Gondwe	Assistant General Manager (Sales)
W. C. J. Horrea	Depot & Market Controller
D. M. Harawa	Chief Accountant
O. G. O. Ndovi	Senior Project Liaison Officer
Moyo	Transport & Storage Controller
Mdachi	Senior Training Officer
A. P. Kapusa	Senior Assistant Accountant
E. P. Msewo	Senior Building Supervisor
G. R. Mlia	Regional Manager (South)
C. A. Banda	Accountant, Regional Office (South)
B. V. J. Jedegwa	Accountant, Regional Office (South)
M. B. Corner	Statistics Supervisor, Regional Office (South)
Z. J. Z. Nyirenda	Divisional Supervisor (Ngabu)
Chikafa	Depot Supervisor (Limbe)
C. D. Jere	Depot Supervisor (Bangula)
Y. E. Barton	Depot Supervisor (Mzuzu)
Mzembe	Market Supervisor (Benga)
D. W. L. Gunde	Pest Controller (Limbe)
Chirwa	Assistant Pest Controller (Bangula)

MINISTRY OF WORKS & SUPPLIES

C. Clark	Personal Secretary
Mervvin M. Matenda	Chief Architect
Brickle	Chief Quantity Surveyer
B. W. Zingano	Regional Controller of Works (South)

DEPARTMENT OF PRINTING, STATIONERY AND OFFICE EQUIPMENT (Zomba)

M. E. Mukiwa	Government Printer
--------------	--------------------

MALAWI RAILWAYS LTD.

Frank. W. Ntonya	Assistant General Manager
E. R. Limbe	Chief Civil Engineer

その他

Alfred G. Scherer	Chief Technical Advisor for ADMARC UNDP/FAO Technical Assistant Project
B. D. Mwaungulu	Chief Accountant, National Oil Industries Ltd.
Tom T. Msowoya	Chartered Quantity Surveyor, Fitzsimons Northcrofts Associates
Andy Thompson	General Manager, Press Transport (1975) Ltd.
Thomas J. Keusters	General Manager, AMI Press (Malawi) Ltd.
Bruce Currie	Commercial Manager, AMI Press (Malawi) Ltd.
松村裕幸	国連・世界食糧計画マラウイ事務所 事務官

在ケニア日本国大使館

西谷嘉光	一等書記官
永目伊知郎	一等書記官

JICAケニヤ事務所

熊岸健治	所長
海保誠治	所長代理
十郎正義	所長代理

JICAMアラウイ事務所

奈良輪睦美	所長
小野修司	JOCV調整員

資料 VI : 収集資料リスト

1. Map of Malawi 1:1,000,000 1987
2. School Atlas for Malawi 1987
3. Tourist Road Map Malawi 1986
4. Malawi in Figures 1986
5. Malawi Yearbook 1982
6. Malawi Population Census, 1987 (Analytical Report volume I / volume II)
7. Report of Seminar on the Analysis of the 1977 Malawi Population Census and its Utilization in Development Planning
8. Malawi Statistical Yearbook 1985
9. Malawi Population Census 1977 (Nsanje District)
10. Monthly Statistical Bulletin November 1987
11. National Sample Survey of Agriculture 1980/81
12. Report of Seminar on National Sample Survey of Agriculture 1980/81
13. Transport Statistics 1985
14. Economic Report 1987
15. Annual Economic Survey 1980-1981
16. Financial Statement 1987/88
17. Financial Statement 1986/87
18. Budget Estimate and Performance Report on Treasury Funds 1987/88
19. National Accounts Handbook Sources and Methods 1985
20. Public Sector Financial Statistics 1984-85
21. Employment and Earnings Annual Report 1983-85
22. Fifteenth Annual Report of the Commissioner of Taxes 1982
23. Standard Specification for Road and Bridge Works 1978
24. Climatological Tables for Malawi 1982
25. Laws of Malawi : Architects & Quantity Surveyors
26. Laws of Malawi : Carriage by Air
27. Laws of Malawi : Cotton
28. Laws of Malawi : Customs & Excise
29. Laws of Malawi : Electricity
30. Laws of Malawi : Employment
31. Laws of Malawi : Engineers
32. Laws of Malawi : Farmers' Stop-order
33. Laws of Malawi : Fertilizers, Farm Feeds & Remedies
34. Laws of Malawi : Inland Waters Shipping
35. Laws of Malawi : Insurance
36. Laws of Malawi : Malawi Certificate Examination & Testing Board
37. Laws of Malawi : Regulation of Minimum Wages & Conditions of Employment
38. Laws of Malawi : Road Traffic
39. Laws of Malawi : Special Crops
40. Laws of Malawi : Taxation

資料 VII : 参考データ

1. 小農による作物別生産高

SMALL HOLDER CROP PRODUCTION (Metric Tonnes)

Year	Maize	Rice	Ground Nuts	Tabacco	Cotton	Guar Beans	Sorghum	Millet	S. Potatoes	Cassava	Pulses
1983/84	11,700 1,397,948	4,230 34,886	90 54,766	0 18,272	13,650 29,842	2,700 2,750	11,600 14,271	4,000 8,316	1,200 59,926	1,890 258,693	1,482 29,479
1984/85	20,170 1,355,205	3,833 34,302	188 62,240	0 20,515	20,640 46,106	3,600 3,600	17,128 22,041	5,460 10,580	2,800 81,047	1,060 209,321	2,293 28,132
1985/86	21,240 1,294,564	3,127 37,407	359 88,297	0 16,117	15,915 36,235	2,300 2,300	16,100 20,761	4,900 9,526	4,200 80,003	3,080 218,282	2,282 39,099
1986/87	15,666 1,201,757	2,948 28,432	232 88,073	0 13,650	11,940 20,957	1,680 1,680	11,234 14,542	2,830 8,666	4,000 121,195	11,000 169,603	3,666 56,603
1987/88	23,124 1,367,707	3,243 31,314	263 66,210	0 7,877	18,564 29,286	3,150 3,243	13,582 18,472	5,258 6,833	8,346 32,288	4,170 118,226	3,260 51,679
Average	18,380 1,323,436	3,480 33,268	226 71,917	0 15,286	16,142 32,485	2,686 2,715	13,929 18,017	4,490 8,784	4,109 74,892	4,240 194,785	2,597 41,038

Ngabu ADD (Chikwawa & Nsanje Districts)	1983/84	3rd Crop Estimates
Total (whole country)	1984/85	3rd "
	1985/86	3rd "
	1986/87	3rd "
	1987/88	1st "

Source: Data Base, Ministry of Agriculture

2. ADMARC ヌガブ地域事務所傘下のマーケット (集荷・販売所)

Parent Market	Nos. of Unit Market		
	total	permanent	temporary
1. NSANJE	14	6	8
2. MAKHANGA	9	8	1
3. MAKANDE	18	9	9
4. NBEWE	7	5	2
5. CHIKWAWA	7	5	2
6. KALANBO	8	5	3
total	63	38	25

Source: ADMARC Regional Office (South)

3. バングラデポの職員構成

Staffs and Labourers of Bangula Depot

Permanent	Nos.	Temporary	Nos.
Depot Supervisor	1	Clerks for seed cotton	18
Assistant Depot Supervisor	1	Clerks for cotton seed	—
Depot Control Supervisor(Assistant)	1	Staffs for dressing cotton seed	2
Transport Supervisor	1	Clerks for dressing cotton seed	2
Pest Control Operators	8	Sub-total	about 20
Weighbridge Operators	2		
Depot Clerk	1	General Workers	about 500
General Clerk	1		
Wages Clerk	1		
Records Clerk	1		
Typist Clerk	1		
Telephone Operator	1		
Depot Cashier	1		
Scale Clerks	2		
Tally Clerks	5		
Depot Foreman	1		
Assistant Depot Foreman	1		
Tractor Drivers	4		
Stack Machine Attendant	1		
Water Pump Attendants	2		
Watchmen	12		
Capitao(group leader)	1		
Messengers	3		
Garden Boys	3		
Cooks	3		
Sanitary Men	3		
General Workers	3		
Sub-total	65		

Source: ADMARC Bangla Depot, Mar. 1988

4. ADMARC による農産物の買上量・買上高

QUANTITY OF ADMARC PURCHASES BY COMMODITY

Period	ADMARC DOMESTIC PURCHASES (Tonnes)								(2) Other
	Total	Tobacco	Groundnut Shelled	Seed Cotton	Rice Paddy	Maize Shelled	Pulses		
1980	192,959	11,341	31,418	23,114	17,498	91,888	10,596	7,104	
1981	215,850	12,755	19,494	21,739	14,682	136,647	7,202	3,331	
1982	302,452	8,794	10,432	14,800	12,543	246,062	5,791	4,030	
1983	291,906	9,279	10,218	13,368	8,503	244,937	3,185	2,416	
1984	376,233	19,162	9,867	32,122	9,771	296,292	5,573	3,466	
1985	372,991	20,823	18,235	32,711	10,735	271,567	17,042	1,869	
1986	242,968	17,170	53,068	21,011	12,125	112,639	25,393	1,588	
1987	163,461	18,122	44,829	21,363	7,636	59,466	11,132	893	

VALUE OF ADMARC PURCHASES BY COMMODITY

Period	ADMARC DOMESTIC PURCHASES (K'000)								(2) Other
	Total	Tobacco	Groundnut Shelled	Seed Cotton	Rice Paddy	Maize Shelled	Pulses		
1980	29,254	4,792	9,689	5,036	1,769	6,083	1,280	605	
1981	27,732	5,418	5,976	4,647	1,470	9,053	877	311	
1982	41,698	4,433(1)	3,408	3,982	1,367	27,264	732	492	
1983	43,777	6,873	3,077	4,858	1,080	27,119	478	292	
1984	72,754	15,619	5,695	12,870	1,528	35,573	1,019	450	
1985	87,859	20,619	12,375	14,205	1,831	33,247	5,222	357	
1986	90,048	16,970	38,595	10,017	2,336	13,703	7,899	529	
1987	76,988	18,589	32,700	11,205	1,703	6,712	3,751	328	

(1) Includes bonuses paid to local farmers.

(2) Mainly Sunflower seed, Coffee, Cassava and other miscellaneous produce.

SOURCE: Agricultural Development and Marketing Corporation

5. ADMARC のデポと貯蔵能力

ADMARC Depot List and Storage Capacity in Ton

<u>No.</u>	<u>Depot</u>	<u>Storage Capacity</u>
<u>South Region</u>		
1	Limbe (1)	6,400
2	Midima Road	1,000
3	Banguia	10,000
4	Luchenza	18,230
5	Balaka (1) (2) (3)	24,800
6	Lambulira (MK5 & MK8)	3,500
7	Liwonde	3,230
8	Lirangwe (transit)	400
9	Chikwawa	897
10	Livilidzi	6,400
11	Nchalo	1,152
12	Charterland (1) (2)	20,400
13	Transit (3) Shed	14,040
14	Fert. Shed (4)	3,500
15	Sedi (5)	12,690
16	Kalinde	1,228.8
17	Namleuga	4,000
18	Nasawa	4,000
19	Luana	1,076
20	Zomba (MK8)	2,500
Sub-total		139,443.8
<u>Central Region</u>		
1	Lilongwe (1) (2) (3)	14,580
2	Salima	43,680
3	Nkhotakota	1,879
4	Alimaunde (1) (2) (3) (4)	63,307
5	Silo Complex Lilongwe	180,000
6	Malangalansa	19,874
Sub-total		323,320
<u>Nothern Region</u>		
1	Mzuzu (1) (2) (3)	2,158
2	Chilumba	348
3	Kazomba	-
4	Nkhotabay	1,224
5	Ipyana	Nil
6	Ngara	1,248
7	Kapolo	307
8	Karonga	648
9	Nbawa	648
10	Mzimba 1 & 2, MK8	2,884
11	Rumphi	1,300
12	Bugano	270
Sub-total		11,035
Grand Total		473,798.8

6. ADMARC によるヌガブ地区における作物別・月別集荷割合

Crop	%											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Seed Cotton	0.1	14.6	37.4	32.5	13.5	1.9	0	0	0	0	0	0
Rice Paddy	—	0.1	3.0	53.9	20.5	4.9	6.8	0	6.3	4.1	0.4	—
Maize Shelled	5.8	17.2	4.1	35.5	31.1	6.1	0.2	0	0	0	0	0
Sorghum	2.1	4.2	18.4	55.6	14.3	5.4	0	0	0	0	0	0
Guar Bean	0	3.4	9.2	45.5	38.7	3.1	0.1	0	0	0	0	0
Pulses	—	1.0	8.6	12.0	12.7	11.2	37.9	16.3	0.3	0	0	0
Castor-Oil	0	0	0.4	9.3	27.9	15.8	18.9	27.7	—	0	0	0
Sesame	0	0	18.6	32.2	31.6	17.5	0.1	0	0	0	0	0
Groundnut Shelled	0	0.3	15.2	39.5	27.3	14.7	0.4	2.6	0	0	0	0

Note: 1988/89 projected

Source: ADMARC Regional Office (South)

7. ADMARC によるヌガブ地区における農産物の作物別買付量

Crop	Quantitative Summary of ADMARC Purchases by Crops in Ngabu ADD (Chikwava and Nsanje Districts)							Unit: kg
	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	Average	
Seed Cotton	0	6,285,833	12,751,374	12,172,612	8,839,267	11,731,791	8,630,146	
Paddy Rice	681,474	354,599	1,311,577	1,234,865	1,064,955	478,706	854,363	
Maize	3,255,139	9,096	2,106,269	831,935	57,735	268,821	1,088,176	
Sorghum	279,477	0	195,521	49,564	636	0	87,533	
Millet	0	0	175	0	0	0	29	
Ground Nuts	2,357	2,016	6,214	9,973	54,086	4,544	13,232	
Beans	19,045	0	10,157	6,456	12,417	643	8,120	
Pean	261,838	202	312,232	834,115	2,331,141	54,200	632,288	
Grams	2,503	243	14,987	49,104	97,149	10,073	29,010	
Castor	18,400	0	33,506	9,062	5,093	483	11,091	
Sesame	337	80	913	761	9,367	20,130	5,265	
Guar Beans	3,761,718	1,927,217	2,817,906	1,223,541	2,056,443	1,267,554	2,175,730	
Chillies	0	3	8	0	50	0	10	
Cashew Nuts	1,193	0	0	0	0	0	199	
Sun Flower	0	0	0	0	381	1,037	236	
Total	8,283,683	8,579,289	19,560,839	16,422,048	14,528,720	13,837,984	13,535,428	

Source: ADMARC Regional Office (South)

8. バングラ綿繰り工場におけるリント生産高

<u>Year</u>	<u>Lint</u>	<u>Cotton Seed</u>	Unit: kg <u>Seed Cotton</u>
1981/82	6,978,960	14,169,403	21,148,363
1982/83	4,710,600	9,563,945	14,274,545
1983/84	4,008,240	8,137,942	12,146,182
1984/85	10,169,280	20,646,719	30,815,999
1985/86	9,207,720	18,694,461	27,902,181
1986/87	5,160,420	10,477,216	15,637,636
1987/88	5,829,840	11,836,341	17,666,181
Average	6,580,723	13,360,861	19,941,582

(36,560 bales)

N.B. Cotton seed and seed cotton were estimated from the lint production under the ratio as follows:

Seed cotton	100%
Lint	33%
Cotton seed	67%

Source: ADMARC Bangula Depot

9. ADMARC によるヌガブ地区におけるメイズ販売量

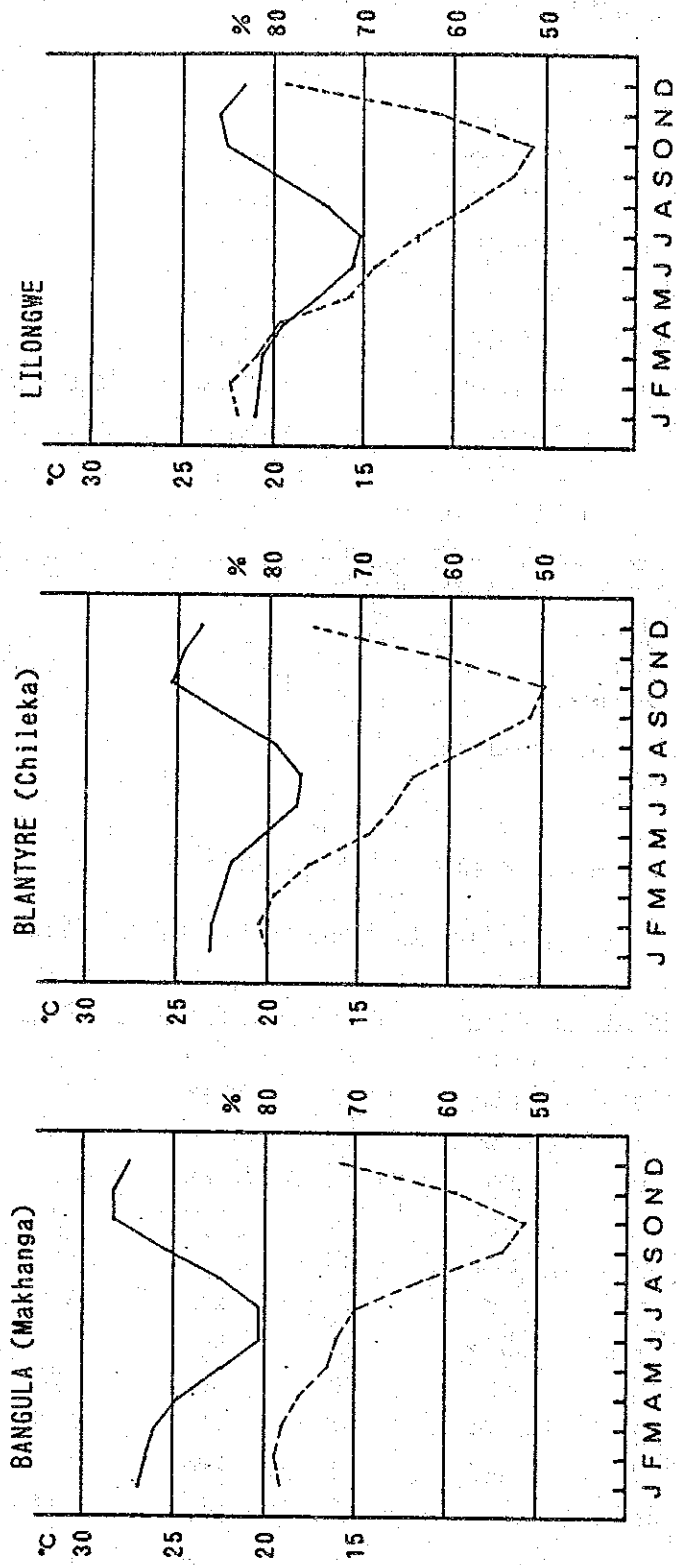
Maize Sales Under Ngabu Divisional Office ADMARC, 1982/83-1987/88

<u>Month</u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>	<u>1987/88</u>	<u>Average</u>
April	258	468	280	50	185	504	290
May	90	1,069	77	379	478	651	458
June	49	2,148	237	442	871	422	695
July	214	2,064	273	507	1,177	239	746
August	157	3,019	660	1,790	2,509	622	1,458
September	183	2,502	604	1,240	2,100	158	1,131
October	375	3,104	631	1,723	3,093	490	1,569
November	403	2,816	641	1,477	3,443	2,021	1,800
December	878	3,337	599	3,913	3,239	1,661	2,271
January	1,647	4,351	999	2,889	3,537	1,426	2,475
February	1,595	3,538	886	1,937	2,371	772	1,850
March	978	6,169	727	650	1,266	n.a.	1,958
Total	6,827	34,585	6,614	16,997	24,269	8,966	16,701

Source: ADMARC Regional Office (South)

10. 関係地の月平均気温と月平均湿度

MEAN TEMPERATURE AND RELATIVE HUMIDITY (Daily Means)



Source: Meteorological Services, Malawi

11. バングラデボの品目別入出庫モデル計算

[a] 実綿の月別予想入出庫表

(トン)

月	月初在庫	入庫	出庫	月末在庫
4	0	20	0	20
5	20	2,911	0	2,931
6	2,931	7,458	4,200	6,189
7	6,189	6,481	4,200	8,470
8	8,470	2,692	4,200	6,962
9	6,962	379	4,200	3,141
10	3,141	0	3,141	0
11	0	0	0	0
12	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
計	—	19,941	19,941	—

入庫量は年平均取扱量に対するADMARCの月別買上げ割合を採用して想定した。出庫量は綿繰りプラントのプリント生産能力が350ベ-ル/日(1ベ-ルの重量は約180kg)であり、プリントは重量比で実綿の約33%であることから実綿の月間加工量を逆算し、 $350 \times 180 \text{ kg} / 0.33 \times 22 \text{ 日} = 4,200 \text{ トン}$ とした。

[a-1] リント(原綿)の月別予想入出庫表

(トン)

月	月初在庫	入庫	出庫	月末在庫
4	1,081	0	550	531
5	531	0	531	0
6	0	1,386	550	836
7	836	1,386	550	1,672
8	1,672	1,386	550	2,508
9	2,508	1,386	550	3,344
10	3,344	1,037	550	3,831
11	3,831	0	550	3,281
12	3,281	0	550	2,731
1	2,731	0	550	2,181
2	2,181	0	550	1,631
3	1,631	0	550	1,081
計	—	6,581	6,581	—

入庫量は綿繰りプラントの能力と稼働期間に応じてきまる。出庫量は紡績工場の処理能力(35,000 ~ 37,000ベ-ル/年)に合わせて、年間を通じて平均的に送り出すようにした。

[a-2a] 次期作付用種子の月別予想入出庫表

(トン)

月	月初在庫	入庫	出庫	月末在庫
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	780	0	780
8	780	1,560	1,560	780
9	780	1,560	1,560	780
10	780	780	1,560	0
11	0	0	0	0
12	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
計	—	4,680	4,680	—

入庫量は次期作付用種子として加工するために、綿繰り工場からでた綿実の一部を取り分けたものである。出庫量は全国の綿生産地のMarketを通して、農民に配布する種子である。なお、加工の精選段階で品質の悪い種子は除去されるので、実際の配布量および在庫量は上表の数値より減少する。

[a-2b] 綿実の月別予想入出庫表

(ト)

月	月初在庫	入庫	出庫	月末在庫
4	0	0	0	0
5	0	0	0	0
6	0	2,814	1,900 (780)	914
7	914	2,814	1,900 (1,560)	1,048
8	1,048	2,814	1,656 (1,560)	402
9	402	2,814	1,324 (780)	0
10	0	2,104	0	0
11	0	0	0	0
12	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
計	—	13,360	8,680 (4,680)	—

綿実は綿繰りプラントの稼働に応じて、実綿の約67%の割合で産出し入庫する。出庫量は次期作付用種子の加工量と製油工場の搾油能力（綿実で 日産65ト、月産1,900ト）に対応する。（カッコ内は種子用、内数ではない）

[c] グア豆の月別予想入出庫表

(ト)

月	月初在庫	入庫	出庫	月末在庫
4	0	0	0	0
5	0	74	74	0
6	0	200	200	0
7	0	990	480	510
8	510	842	480	872
9	872	68	480	460
10	460	2	462	0
11	0	0	0	0
12	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
計	—	2,176	2,176	—

入庫量は年平均取扱量に対する月別買上げ割合をもって想定した。一方、出庫量はグア豆挽き剥りプラントの処理加工能力（1.5ト/時、10-20ト/日、480ト/月）である。残りの未加工品が在庫となる。

JICA