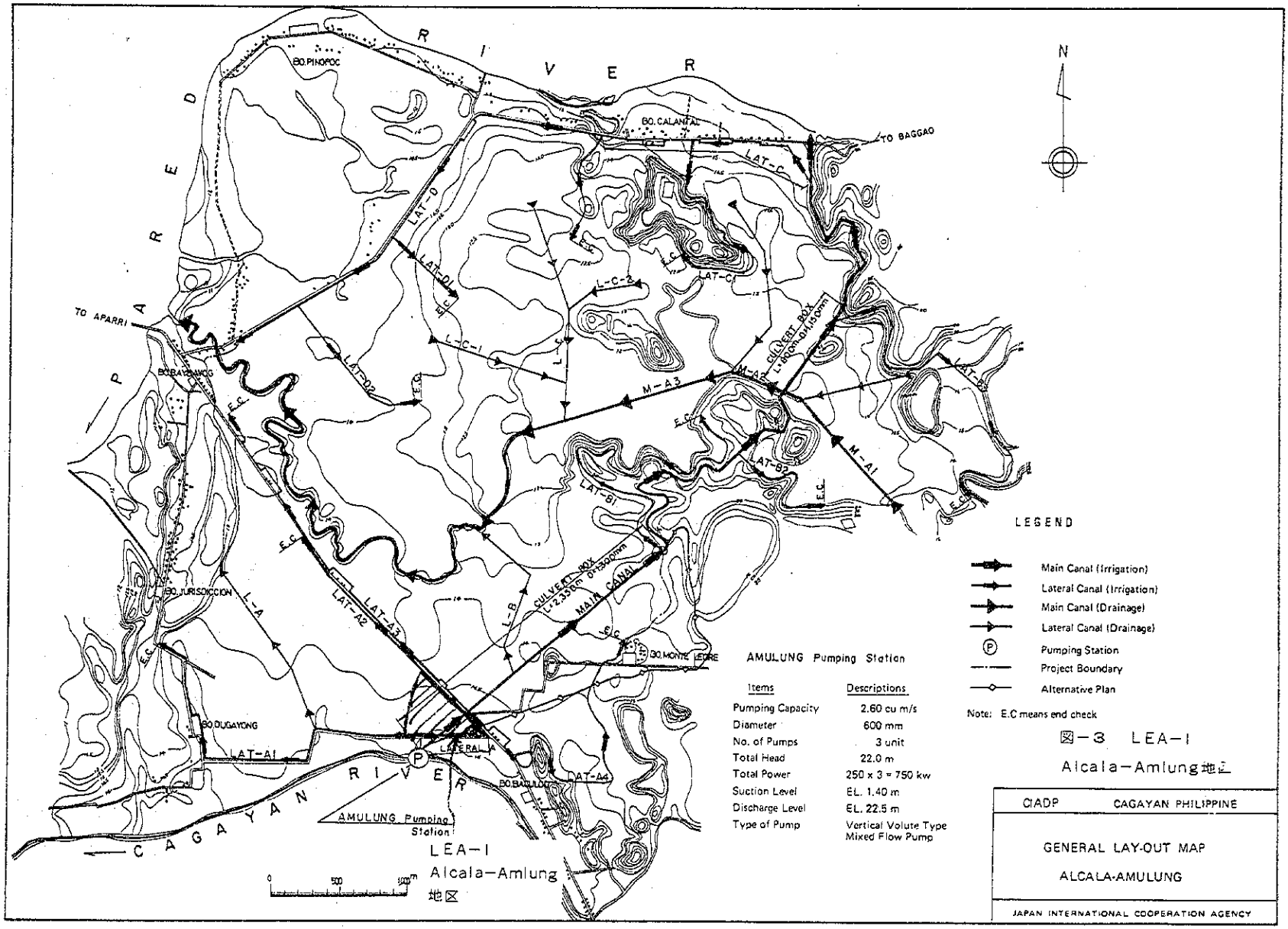
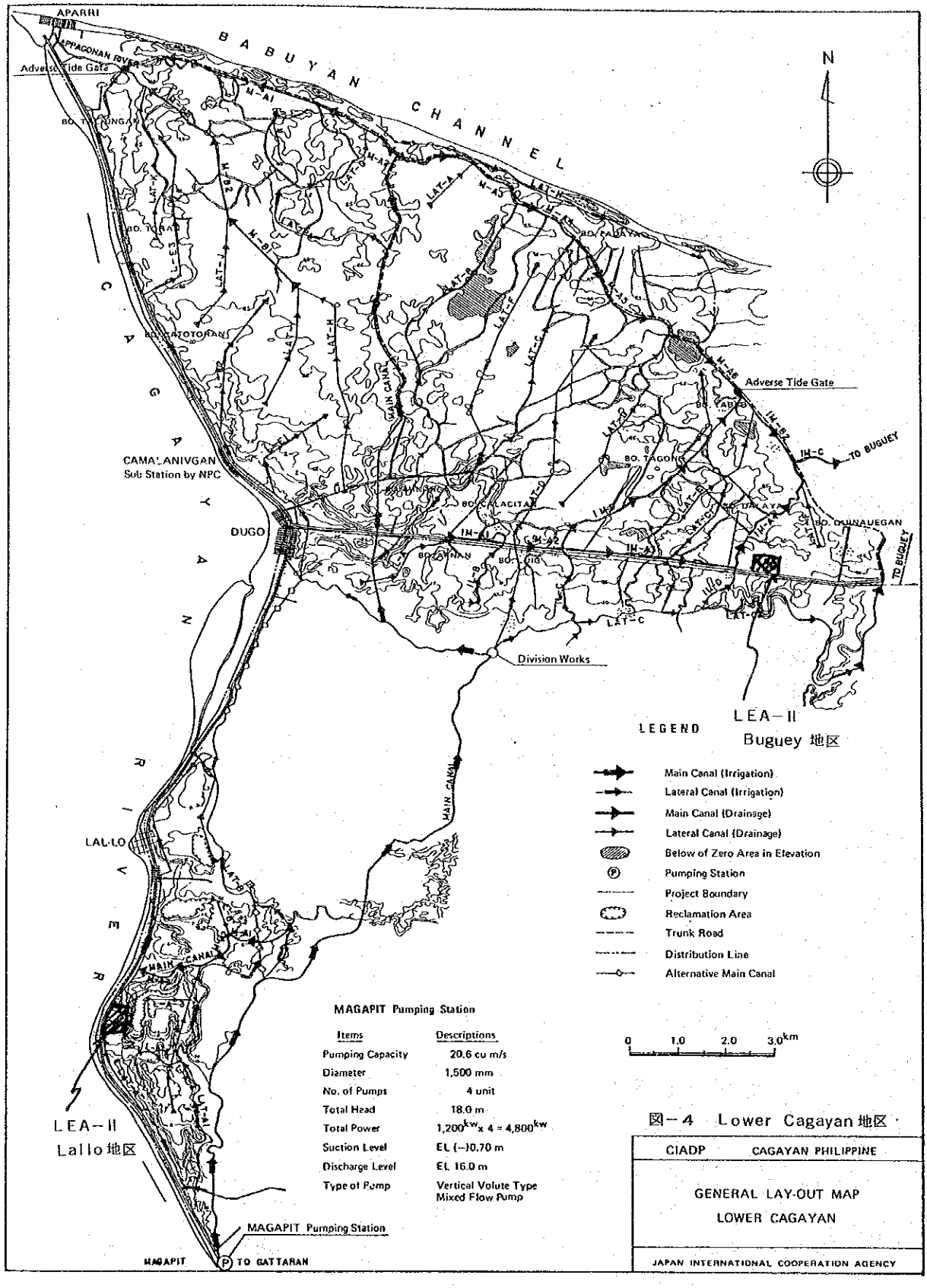


図－3 LEA－I
Alcala－Amlung地区



MAGAPIT Pumping Station

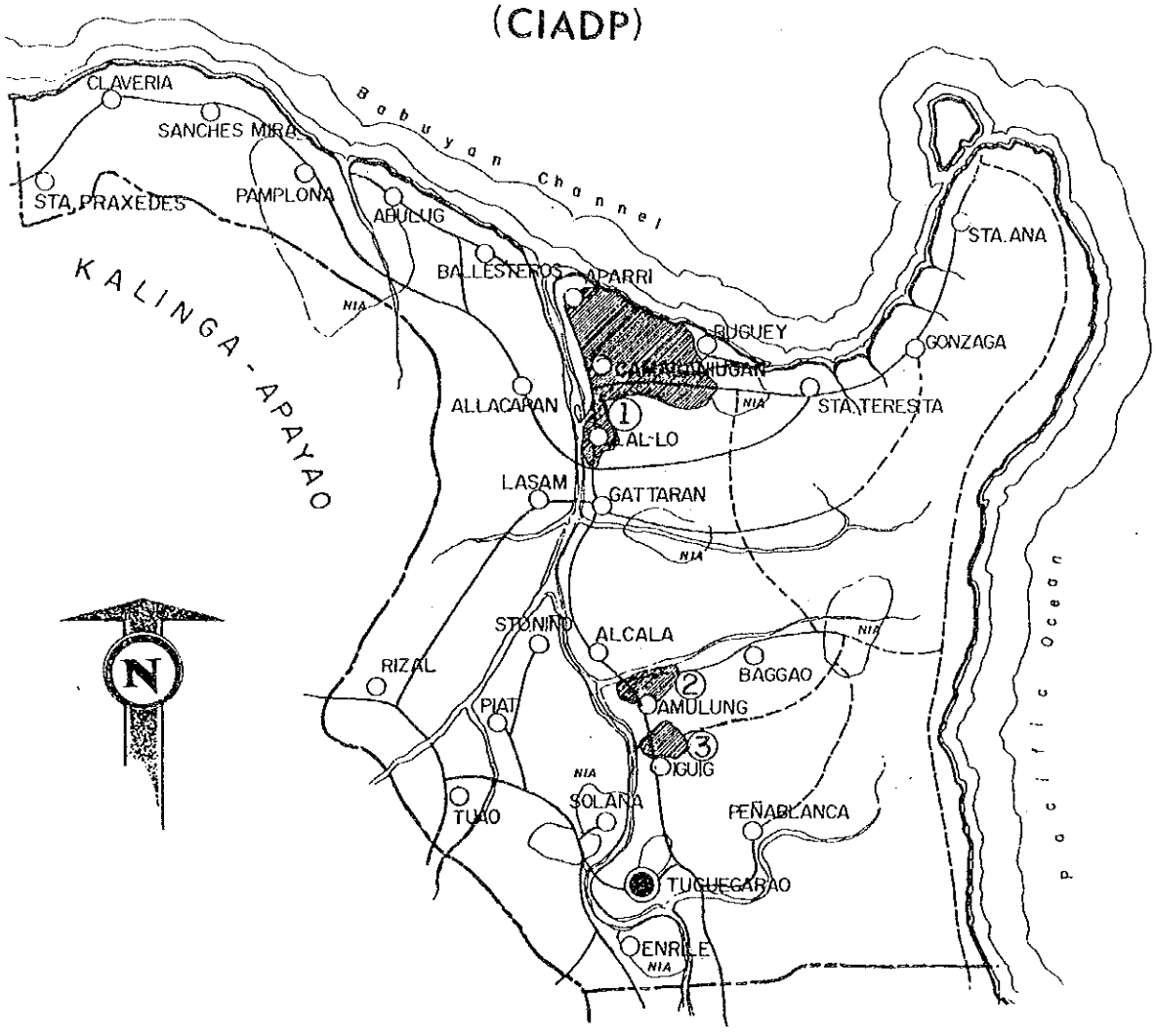
Items	Descriptions
Pumping Capacity	20.6 cu m/s
Diameter	1,500 mm
No. of Pumps	4 unit
Total Head	18.0 m
Total Power	1,200kw x 4 = 4,800kw
Suction Level	EL (−)0.70 m
Discharge Level	EL 16.0 m
Type of Pump	Vertical Volute Type Mixed Flow Pump

図－4 Lower Cagayan 地区

CIADP	CAGAYAN PHILIPPINE
GENERAL LAY-OUT MAP LOWER CAGAYAN	
JAPAN INTERNATIONAL COOPERATION AGENCY	

図－6　位　置　図

GENERAL MAP OF
CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT (CIADP)

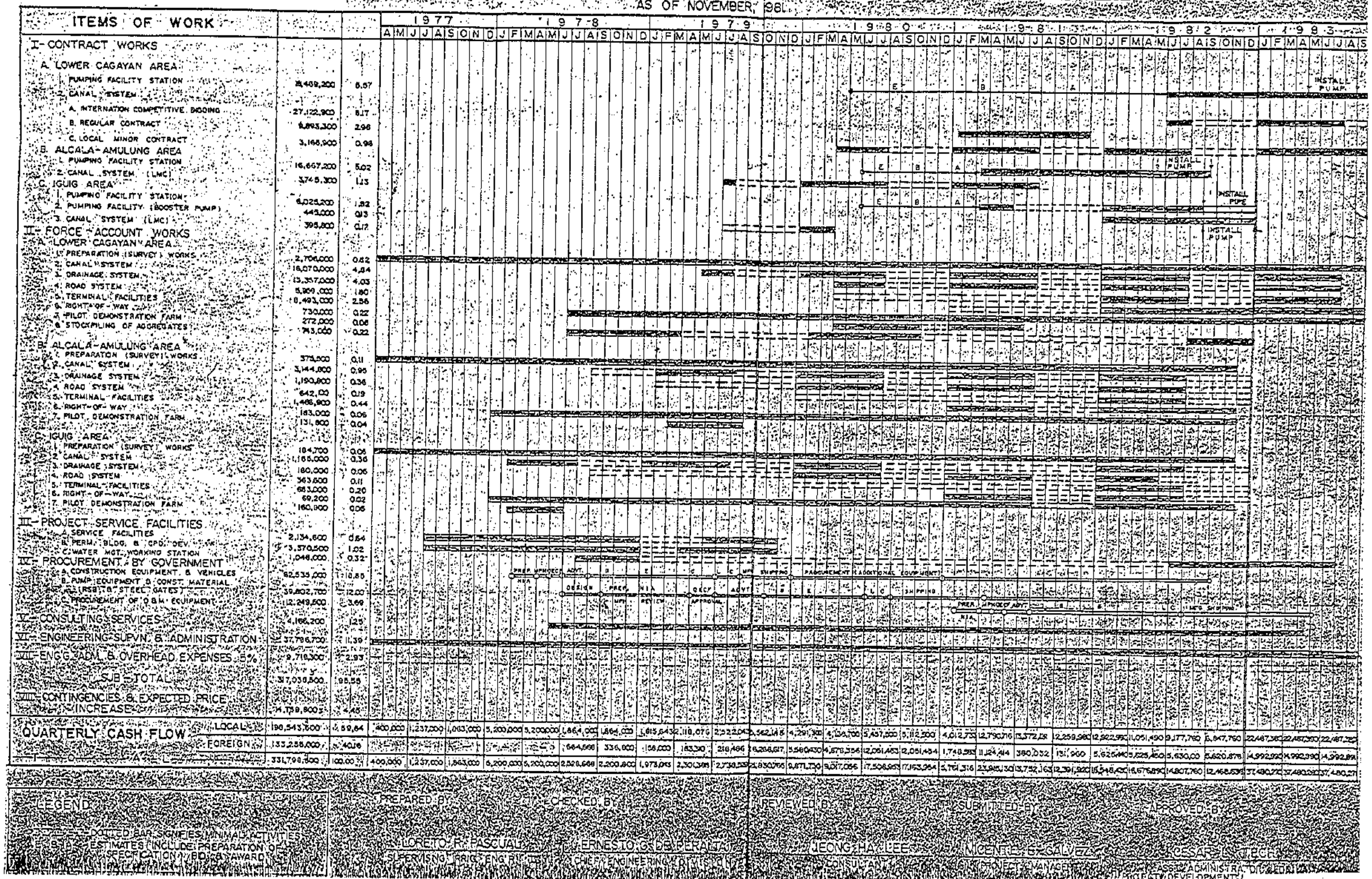


LEGEND:

- NATIONAL ROAD
- TRAIL / PROPOSED ROAD
- PROVINCIAL CAPITAL
- MUNICIPALITY
- RIVER
- PROJECT AREA
  - ① LOWER CAGAYAN (11,200 HAS.)
  - ② ALCALA - AMULUNG (1,400 HAS.)
  - ③ IGUIG (600 HAS.)
- ON-GOING / PROPOSED PROJECTS OF NIA

図−6　CIADP・IC
実施計画

NIA - CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT
REVISED CONSTRUCTION / IMPLEMENTATION SCHEDULE
AS OF NOVEMBER, 1981



図－７　実施計画－実施状況（事業費ベース）

LEGEND:
COMULATIVE PROJECTED % EXPENDITURES
COMULATIVE ACTUAL % EXPENDITURES

A-CMD Form Y-II
OVERALL PROJECT SCHEDULED EXPENDITURES

PROJECT TITLE: CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT — IRRIGATION COMPONENT

WORK ITEMS	CLASS	ESTIMATED COST (₱'000)	% WEIGHT	PARTI-CULARS	1977 2nd	1977 3rd	1977 4th	1978 1st	1978 2nd	1978 3rd	1978 4th	1979 1st	1979 2nd	1979 3rd	1979 4th
(2)	(3)	(4)	(5)	(6)	(7)	8	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
A. DIRECT															
CONSTRUCTION OF MAGAPIT PUMPING STATION	C	18,469	5.93	PROJECTED											
				ACTUAL											
CONSTRUCTION OF AMULUNG PUMPING STATION	C	13,669	4.39	PROJECTED											
				ACTUAL											
CONSTRUCTION OF IGUIG PUMPING STATIONS	C	6,025	1.94	PROJECTED											
				ACTUAL											
CONSTRUCTION OF LOWER CAGAYAN AREA	FA	49,152	15.79	PROJECTED	0.01	0.05	0.10	0.31	0.43	0.69	0.90	0.70	1.13	2.46	3.31
				ACTUAL		0.17	0.28	0.40	0.60	0.94	1.25	1.36	1.95	3.12	4.19
CONSTRUCTION OF LOWER CAGAYAN AREA	C	43,435	13.95	PROJECTED											
				ACTUAL											
CONSTRUCTION OF ALCALA-AMULUNG AREA	FA	7,226	2.32	PROJECTED	0.05	0.10	0.20	0.41	2.22	6.12	9.49	9.86	18.63	29.54	32.28
				ACTUAL		0.28	0.55	0.84	1.00	1.23	7.22	6.35	19.62	26.37	32.08
CONSTRUCTION OF ALCALA-AMULUNG AREA	C	3,860	1.24	PROJECTED										10.00	20.00
				ACTUAL										11.62	17.40
CONSTRUCTION OF IGUIG AREA	FA	2,982	0.96	PROJECTED	0.10	0.50	0.85	1.43	6.31	9.61	15.91	31.50	47.06	51.13	52.41
				ACTUAL		0.59	1.39	2.26	6.69	16.82	26.17	29.16	32.12	36.79	37.62
CONSTRUCTION OF IGUIG AREA	C	798	0.26	PROJECTED										18.00	30.00
				ACTUAL										28.48	36.53
CONSTRUCTION OF PROJECT SERVICE FACILITIES	FA	7,969	2.56	PROJECTED	3.00	8.30	18.00	30.00	35.00	69.91	75.16	77.23	79.79	78.73	82.59
				ACTUAL		2.03	13.41	22.89	35.89	46.60	70.11	74.06	77.53	81.10	81.31
PROC. OF PUMP EQUIPT. & CONST. MAT'LS. (RSB & Steel Gates)	FA	41,150	13.22	PROJECTED							19.43			0.50	0.90
				ACTUAL								1.39	1.39	1.39	1.08
TOTAL DIRECT COST		194,735													
B. INDIRECT															
PROCUREMENT OF CONSTRUCTION EQUIPMENT & VEHICLE		61,631	19.79	PROJECTED	0.15	1.06	2.33	2.33	8.00	20.00	44.00	8.26	6.23	3.86	19.11
				ACTUAL						1.16	1.21	2.07	2.07	2.44	26.96
PROCUREMENT OF O & M EQUIPT.		11,785	3.78	PROJECTED											
				ACTUAL											
ENG'G. SUPERVISION & ADMINISTRATION (Including EAOE)		35,343	11.35	PROJECTED	0.20	2.00	10.00	13.00	15.00	17.00	36.88	38.34	41.00	43.00	55.00
				ACTUAL		0.64	4.84	7.93	13.74	16.25	17.98	19.67	22.23	25.36	30.77
CONSULTING SERVICES		5,773	1.85	PROJECTED						10.00	23.00	22.00	25.00	31.00	40.00
				ACTUAL						9.54	19.42	22.59	26.65	30.98	30.76
CONTINGENCIES		1,000	0.32	PROJECTED											
				ACTUAL											
EXPECTED PRICE INCREASE		1,086	0.35	PROJECTED											
				ACTUAL											
TOTAL PROJECT COST		₱311,353	100.00												
OVERALL FINANCIAL STATUS		PERCENT EXPENDITURES		PROJECTED	0.25	0.40	1.17	2.21	8.56	15.62	22.48	37.00	49.06	59.40	66.85
				ACTUAL		0.18	0.94	1.55	2.8[illegible]	3.71	4.92	5.80	6.58	7.77	14.17
		EXPENDITURES IN MILLION PESOS		PROJECTED	0.51	0.82	6.646	3.670	21.960	40.070	67.677	96.830	130.32	155.179	174.407
				ACTUAL		0.560	2.293	[illegible]	6.157	11.501	16.474	18.056	20.816	24.192	44.119
PROJECT DURATION		⟶			2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
					1977			1978				1979			

WORK ITEMS	PARTI-CULARS	1980 1st	1980 2nd	1980 3rd	1980 4th	1981 1st	1981 2nd	1981 3rd	1981 4th	1982 1st	1982 2nd	1982 3rd	1982 4th	1983 1st	1983 2nd	1983 3rd	AMT. IN MILLION PESOS
(2)	(6)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	311.383 (100%)
A. DIRECT																	
CONSTRUCTION OF MAGAPIT PUMPING STATION	PROJECTED									10.00	30.67	45.67	66.67	79.80	90.00	100.00	
	ACTUAL																
CONSTRUCTION OF AMULUNG PUMPING STATION	PROJECTED					3.66	34.80	57.30	63.78	75.27	95.56	100.00					
	ACTUAL				3.66	3.66	22.88	70.93									
CONSTRUCTION OF IGUIG PUMPING STATIONS	PROJECTED					2.00	20.85	34.37	41.06	62.16	86.51	100.00					
	ACTUAL					0.08	0.08	11.17									
CONSTRUCTION OF LOWER CAGAYAN AREA (FA)	PROJECTED	4.22	6.87	7.72	11.97	12.82	17.06	23.90	26.22	36.83	52.53	62.96	68.63	74.05	94.78	100.00	
	ACTUAL	5.49	7.90	9.41	10.97	12.24	16.76	20.67									249.082
CONSTRUCTION OF LOWER CAGAYAN AREA (C)	PROJECTED		0.15	1.97	3.30	6.00	15.66	26.35	35.20	44.90	61.13	72.75	77.06	87.82	100.00		(80%)
	ACTUAL			0.85	2.29	2.47	16.16	16.98									
CONSTRUCTION OF ALCALA-AMULUNG AREA (FA)	PROJECTED	37.91	26.53	31.63	47.00	51.18	55.57	67.41	71.35	76.76	90.72	96.47	100.00				
	ACTUAL	34.72	37.02	39.63	47.30	48.75	52.29	66.90									
CONSTRUCTION OF ALCALA-AMULUNG AREA (C)	PROJECTED	25.80	30.00	42.00	48.72	50.34	57.16	76.06	94.95	96.83	99.1[illegible]	100.00					
	ACTUAL	19.66	26.12	27.28	36.74	36.74	41.41	57.20									
CONSTRUCTION OF IGUIG AREA (FA)	PROJECTED	62.94	23.77	30.21	49.66	48.66	50.78	62.64	74.50	80.07	90.45	96.80	100.00				
	ACTUAL	38.16	39.68	41.14	43.29	47.33	50.44	56.64									
CONSTRUCTION OF IGUIG AREA (C)	PROJECTED	50.13	50.13	50.13	50.13	50.13	49.70	49.60	49.60	67.20	81.11	93.70	100.00				
	ACTUAL	36.53	49.60	49.60	49.60	49.60	49.60	49.60									186.812
CONSTRUCTION OF PROJECT SERVICE FACILITIES	PROJECTED	83.35	84.44	85.08	85.52	85.14	85.10	86.04	86.96	88.6[illegible]	91.63	93.49	94.45	96.30	99.07	100.00	(60%)
	ACTUAL	81.52	82.05	85.21	85.67	85.35	86.91	86.22									
PROC. OF PUMP EQUIPT. & CONST. MAT'LS. (RSB & Steel Gates)	PROJECTED	7.00	21.32	37.13	37.24	50.63	78.14	78.14	78.40	83.06	88.12	92.80	97.00	100.00			
	ACTUAL	2.87	14.84	31.43	45.62	50.61	78.14	78.14									
TOTAL DIRECT COST																	
B. INDIRECT																	124.541
PROCUREMENT OF CONSTRUCTION EQUIPMENT & VEHICLE	PROJECTED	46.57	56.00	61.17	61.71	69.74	79.12	79.12	79.12	89.60	100.00						(40%)
	ACTUAL	39.83	55.77	63.08	68.27	68.27	68.27	68.27									
PROCUREMENT OF O & M EQUIPT.	PROJECTED									10.00	40.00	70.00	100.00				
	ACTUAL																
ENG'G. SUPERVISION & ADMINISTRATION (Including EAOE)	PROJECTED	62.00	36.00	41.62	44.45	19.50	63.94	66.39	72.84	76.80	80.66	84.60	88.50	92.38	94.26	100.00	
	ACTUAL	36.23	41.63	42.38	50.86	56.66	62.48	68.32									
CONSULTING SERVICES	PROJECTED	44.99	36.00	43.00	44.62	49.50	54.55	69.80	64.21	69.32	74.50	78.80	84.65	92.32	100.00		
	ACTUAL	38.04	40.43	43.87	44.86	46.37	49.07	61.82									62.271
CONTINGENCIES	PROJECTED									12.28	28.57	40.80	58.10	72.45	84.91	100.00	(20%)
	ACTUAL																
EXPECTED PRICE INCREASE	PROJECTED									16.12	32.41	48.03	56.37	70.63	86.83	100.00	
	ACTUAL																
TOTAL PROJECT COST																	
OVERALL FINANCIAL STATUS — PERCENT EXPENDITURES	PROJECTED	73.00	24.20	26.17	30.12	33.46	45.66	50.70	64.03	62.61	74.97	82.13	87.58	92.45	98.34	100.00	
	ACTUAL	17.46	24.67	26.05	32.45	34.30	41.98	46.32									
EXPENDITURES IN MILLION PESOS	PROJECTED	190.462	75.347	67.728	93.779	104.241	142.780	157.847	168.227	194.930	233.407	258.705	272.883	287.046	309.190	311.353	
	ACTUAL	54.562	70.810	87.321	101.038	106.797	130.712	144.214									0
PROJECT DURATION		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	(0%)
		1980				1981				1982				1983			

Ⓐ　Ⓒ　ACTUAL EXPENDITURES　REPORTING PERIOD

LEGEND: A—ORIGINAL SCHEDULE
1. Effective — April 1977
2. Target Date — September 1982
3. Total Estimate — ₱256,072 million

C— AS PER DISCUSSED ON PROJECT MANAGERS' MEETING ON APRIL 29 & 30, 1981

SUBMITTED:

VICENTE E. GALVEZ
PROJECT MANAGER

4. 普及部門

ＡＰＣでは下記２部の普及関係業務を担当している。

1. Rural Education Div,（１３名）：教育・広報・宣伝
2. Farm Services Div,（２１名）：パイロットファーム（ＬＥＡ）の運営その他調査等

1. Rural Education

1）リーフレットの刊行、配布：'78から１８種を発行

① プロジェクトの紹介

② 栽培技術のガイドブック（技術者、農民向け、英語、イロカノ）

2）放送・通信教育：　毎朝３０分間のUniversity on-the-Air（ＵＯＡ）

ラジオ普及率８３％、農業省とタイアップし、農業技術の教育（イロカノ）とフィードバック。

１９７８年以降、3,８３０名が卒業した。

3）講義・訓練　（１９７８～）　　―― 今後の重点課題 ――

① ＬＥＡ各地区農民に対する稲作技術の講義、実習（各４日＋１日、ムニシパルホール）

② 生産省組合に関するセミナー（ＡＰＣ）

③ ＵＯＡ卒業者の見学旅行（Educational Tour, 中北部ルソン１０～１２州）

4）Interpersonal

夜又は土、日曜日に巡回、Film（スライド）Showing, Intormation Campaign（ＣＩＡＤＰ, ＡＰＣ, パイロットファーム, ＵＯＡ）を実施している。

1）のリーフレットがこれを補う、ＬＥＡＩ地区のみ

＜評　価＞

1）限られた人員、資機材で、しかし、Systematic に実施している。

2）農業省との協力関係を深め、ＡＰＣとしては、重点を絞る必要あり。

3）普及効果の確認も重要である。

4）人員、資機材の充実の必要性あり。

2. Farm Services

1）ＬＥＡ（パイロットファーム）の設立・運営　（次表参照）

１９７８イギグ（６０ha）、１９７９アルカラアムルン（７５ha）、１９８０ブゲイ（４２ha）

2）８つのIrrigators Group Association の組織化（ＭＡ, ＮＩＡとの協力）

3）その他農家経済調査（ＬＥＡＩ）、土地台帳作り、種子、土壌テスト等。

＜評　価＞

1）パイロットファームの着実な設立とＡＰＣの役割増大は著しい成果であろう。

2）しかし、仮設ポンプ場に依存しているため、しばしばサービスエリアが縮少。活動の基礎が不安定。

3）運営管理に十分な措置を講じること、及び基本的にはＣＩＡＤＰ－ＩＣ事業の早期完成が必要である。

PRODUCTION REPORT
IGUIG, ALCALA-AMULUNG & LAL-LO
PILOT FARMS

IGUIG PILOT FARM: (60 ha)

1978-September-January
No. of Farmers - 74 farmers
Total Area Irrigated - 60 hectares
Average Production - 105 cavans

1979-May-September
No Production Report

1979-1980-October-February
No. of Farmers - 50 farmers
Total Area Irrigated - 35 hectares
Average Production - 85 cavans/ha.

1980-May-September
No. of Farmers - 17 farmers
Total Area Irrigated - 15 hectares
Average Production - 87 cavans/ha.

1980-1981-October-February
No. of Farmers - 71 farmers
Total Area Irrigated - 46.2550 has.
Average Production - 56.54 cavans

1981-May-September
No. of Farmers - 35 farmers
Total Area Irrigated - 24.7204 has.
Average Production - 87.39 cavans

ALCALA-AMULUNG PILOT FARM: (75 ha)

1979-1980-November-March
No. of Farmers - 108 farmers
Total Area Irrigated - 59.8489 has.
Average Production - 70.45 cavans

1980-May-October
No. of Farmers - 115 farmers
Total Area Irrigated - 62.4102 has.
Average Production - 74.74 cavans

1980-1981 October-February
No. of Farmers - 118 farmers
Total Area Irrigated - 61.1555 has.
Average Production - 75 cavans

1981-June-October
No. of Farmers - 72 farmers
Total Area Irrigated - 42.2148 has.
Average Production - 30.58 cavans

LAL-LO PILOT FARM: (32 ha)

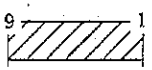
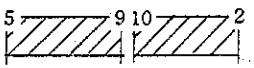
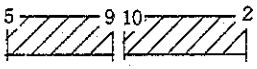
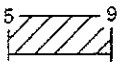
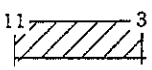
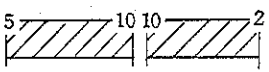
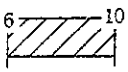
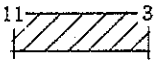
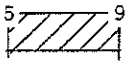
1980-1981-November-March
No. of Farmers - 21 farmers
Total Area Irrigated - 28 hectares
Average Production - 78.32 cavans

1981-May-September
No. of Farmers - 21 farmers
Total Area Irrigated - 28 hectares
Average Production - 89.03 cavans

（参考） GENERAL CROPPING PATTERN of CAGAYAN

4	5	6	7	8	9	10	11	12	1	2	3	4
First Crop				Fallow			Second Crop			Fallow		
Wet Season							Dry Season					

LEA（パイロットファーム）の運営実績

	1978	1979	1980	1981	
Iguig（LEA−IA）					
農家戸数（A）	74戸	50戸	17	71	35
かんがい面積（B）	60 ha	35 ha	15	46	25
平均収量／ha（C）	105 Cav	85 Cav	87Cav	57c	87c
Alcala −Amulung（LEA−IB）					
農家戸数（A）			108戸	115戸	118戸	72戸
かんがい面積（B）			60 ha	62	61	42
平均収量／ha（C）			70 Cav	75c	75c	31c
Lallo（LEA Ⅱ−A）					
農家戸数（A）				21戸	21
かんがい面積（B）				28 ha	28
平均収量／ha（C）				78Cav	89c
Buguey（LEA−Ⅱ B）				（81. 11月 設立）	（82. 5〜予定 42ha）

（注） 平均収量は カバン／ha

5. 農業機械部門

この部門では次のような活動が行われた。

1. 農業機械適用試験

   1）田植機のパフォーマンステスト（４回）育苗技術、均平等関連作業に問題あり。

   2）機械乾燥の試行実施（ＡＰＣ）　　本格試験は今後の課題

   3）バインダー→脱穀機とコンバインの効率（経済性、機能性）の比較試験（４回）

   4）実用ドライヤーの研究、試験的開発

2. デモ・訓練（農業省とのタイ・アップ）

   対　象　：　農民、農業関係技師、ＣＳＵの学生

   機　種　：　トラクター、ハーベスター、バインダー、脱穀機、乾燥機等の操作

   今後、下と関連し、農民の中にオペレーターを養成する方向で検討中。

3. Custom Services：ＬＥＡＩ地区の耕転、収穫（次表参照）

   トラクター、脱穀機等の貸し出し（ガソリン、オペ付）―　料金徴収。

   (例)１９８０年、耕転：１０２ha（￥17,891）、脱穀：７０ｔ（６％）

   二期作の普及に伴い、Dryer の必要性が増大して行く傾向にある。

4. 農機具保有状況等調査

   1）R/Dの時期に、概略調査を行っている。

   2）８２年にはＣＳＵの学生を動員して広範囲の調査を行う予定

＜評　価＞

1. 農機の維持、管理は一部を除き概ね良好である。但し、今後、パーツの十分な確保が重要である。

2. Cusfom Services はＬＥＡ農民に大きな便益を与えているが、今後の需要増に備えて、オペレターの養成、運営管理体制の強化が必要であろう。

3. 一方、燃費や調達能力、耕作規模の点で（一部大農を除き）動力式の大型機械が一般に普及する可能性は少い状況にある。

4. 従って、８２年に予定されている調査では、ＬＥＡ農家の畜力、農機具の保有状況や作業技術（体系）の現状を十分に把握し、地域農業の実状に適した農業機械の研究、開発、普及に努力する必要がある。

   とくに２年後以降の比側自身での運営を考慮すると、既供与機材のパーツのストックを作ることと併せ農機の現地調達を進めておくことが重要であろう。

HIGHLIGHTS OF AGRICULTURAL ENGINEERING DIVISION ACTIVITIES

I. FARM MACHINERY SECTION	1976-1978	1979 M/A	1980	1981	1982
A. Demonstration/Training		Conducted five (5) demonstrations of different agricultural machineries like tractors, power tillers, reaper binders, power threshers, etc. to pilot farm cultivators of Iguig and Alcala-Amulung	Demonstrated the operation of harvesting machineries to 70 farmer leaders of Luna, Kalinga-Apayao and about 60 participants from the Ministry of Agriculture.	Demonstrated harvesting machineries to students from Cagayan State University of Piat, Cagayan	Farm Machinery Operation Training for Agricultural Officers under Ministry of Agriculture and farmer leaders of LEA's.
B. Machinery Tests:	Formulation of study proposals.				
1. Rice transplanter		Rice Variety	Kinds of seedling preparation	Economics compared to manual transplanting.	
2. Tillage Equipment		Adaptability	Continuous Activity to different Leading Extens' Areas		
3. Harvesting Equipment					
a. Rice Combine		Adaptabil...	Early maturing variety	Traditional variety	
b. Reaper Binder					
c. Power Thresher					
C. Post Harvest Equipment					
1. Drying & Milling			Preliminary test for Circulation type & batch type dryer.		Custom Servicing
D. Custom Servicing					
1. Tractors	Break-in, planning and programming	Started servicing LEA I	Continuous Activity		
2. Power Tillers					
3. Threshers					
E. Repair and Maintenance	Preventive repair & maintenance	Continuous Activity			
F. Survey of Existing Agricultural Machineries/Traditional Equipment within Cagayan Province.				Formulate study strategy sampling for LEA II	Conduct Survey

ACTIVITIES	M/A 1979				M/A 1980				M/A 1981			
	FIRST CROP		SECOND CROP		FIRST CROP		SECOND CROP		FIRST CROP		SECOND CROP	
I. CUSTOM SERVICING	NO. OF FARMER AREA9(has)	RENTAL FEE (₱)	NO. OF FARMER AREA(ha)	RENTAL FEE (₱)	NO. OF FARMER AREA(ha)	RENTAL FEE (₱)	NO. OF FARMER AREA(ha)	RENTAL FEE (₱)	NO. OF FARMER AREA(ha)	RENTAL FEE (₱)	NO. OF FARMER AREA(ha)	RENTAL FEE (₱)
A) LAND PREPARATION												
1. PLOWING	5		4		14		11		2			
	5.5505	888.10	13.2018	2,112.30	13.4710	2,281.50	17.1968	3,439.35	0.9000	180.00	-	-
2. HARROWING	5		2		19		3		2			
	6.9352	277.40	1.2776	51.10	24.8627	1,000.50	11.8793	594.00	0.9000	45.00	-	-
3. ROTAVATION	5		27		9		48		2		24	
	5.0164	752.45	29.4758	4,756.65	7.2069	1,081.00	47.0346	9,494.45	1.3400	274.70	36.8151	7,547.20
TOTAL	15		33		42		54		6		24	
	17.5021	1,917.95	43.9552	6,920.05	45.5406	4,363.00	56.1107	13,527.80	3.1400	499.70	36.8151	7,547.20

	1979		1980		1981	
B) THRESHING/HARVESTING	NO. OF FARMER GROSS WT (kg)	SHARE at 6% (kg)	NO. OF FARMER GROSS WT (kg)	SHARE at 6% (kg)	NO. OF FARMER GROSS WT (kg)	SHARE at 7% (kg)
			38		22	
	NO RECORD	AVAILABLE	65,616	4,049.68	48,169	3,371.83

NOTE: RENTAL RATES (Based on survey of existing rental rates within the service area)

	1979	1980	1981
A) LAND PREPARATION			
1. PLOWING	₱160.00/ha	1st QUARTER =₱160.00/ha 2nd-4th QUARTER=₱200.00/ha	₱200.00/ha
2. HARROWING	40.00/ha	1st QUARTER =₱ 40.00/ha 2nd-4th QUARTER =₱ 50.00/ha	₱ 50.00/ha
3. ROTAVATION	150.00/ha	1st QUARTER =₱150.00/ha 22nd QUARTER =₱205.00/ha	₱ 205.00/ha
B) THRESHING	6%	6%	7%

V　今後の進め方と問題点

1. ＡＰＣの将来の位置づけについて

比国政府の実施する一連の地域総合開発計画はＮＡＣＩＡＤ（国家地域総合開発審議会）が担当している。正確には計画策定の段階まではＮＡＣＩＤがそれぞれの開発計画に係るプロジェクトオフイスを設置し、関連機関間の調整を行うが、具体的な実施の段階では担当機関が実施機関となり、ＮＡＣＩＡＤはオーバオールな調整機関としての任を担うこととされている。

ＣＩＡＤＰも同種の性格を持ったカガヤンに関する総合開発計画事務局として、ＭＡ（農業省）、ＮＩＡ（国家かんがい庁）、ＮＥＡ（国家電力庁）、ＭＰＷＨ（公共事業省）、等の機関の調整を行っている。このうち、我が国が関与している、かんがい事業はＮＩＡが、農村電化事業はＮＥＡがそれぞれ実施機関として事業を進めている。ＣＩＡＤＰはこの分野においては、すでに調整機関（現場事務にはほとんどタッチしない）としての立場に事実上退いている。

したがって、ＡＰＣプロジェクトにおいても、本来ならすでにしかるべき担当機関が実施機関として事業を担っているべきところ、本件協力の開始に当って協力の取極めをＣＩＡＤＰと直接結んだこともあり、本プロジェクトについては現在もＣＩＡＤＰが形式上実施機関としてその任を担っている。しかし、ＣＩＡＤＰは法的には暫定オフィスであり、その意味で不安定な地位に置かれている。すなわち、ＡＰＣ職員の雇用形態は臨時雇用で、身分はＣＩＡＤＰにありながら、彼等の給与はＡＰＣプロジェクトのリーディング機関である農業省が確保しているといった形がとられている。

我が国の行う協力の大きなねらいが、協力を通じた〝適正な技術の移転〟及び〝人造り〟にあることは周知であるが、この意味において、相手国の受入れ機関がしっかりしていることは最も重要な条件である。その点でＡＰＣプロジェクトは、ＣＩＡＤＰ－ＡＰＣの上記のような面からみると、我が国の協力を定着させ、技術移転の成果を継承し、育てていく体制にあるとは言い難い状況にある。従って、本プロジェクトが延長されたのち、比側の大きな課題として、早い時期に我が国の協力終了後のＡＰＣの担当実施機関を明確にさせて行くことが必要となってこよう。この実施機関としては、過去の経緯からも、農業省が妥当と考えられる。この場合、少なくとも地方局（Region 2）レベル以上が関与することが望ましい。

我が国としては、この問題は比側の政策的な事項でもあり直接的な関与はできないが、比側にこの点についての問題意識を確認させる努力を続けて行く必要がある。

2. ＡＰＣの組織・機構の強化

1）職員の雇用条件

ＡＰＣ職員の雇用条件はＣＩＡＤＰ設置令（大統領令１１８９）によって、臨時雇用ベースと定められている。（巻末資料　4参照）

このため、ＡＰＣ職員は全員臨時雇用で一般の政府関係機関等に比し、身分的に不安定である。たとえば、有給休暇の制度がない、ボーナス制度がない等々の、こうした雇用制度はＡＰＣ職員の業務に対する熱意欠如の原因となり、他職種への転出を容易にする原因ともなっている。我が国からみれば、技術移転の対象者が一定せず、日本で研修を受けた職員が簡単に転職する等の問題もひき起している。

こうした雇用形態は比国の実情から当面はやむを得ないとしても、将来実施機関にプロジェクトが移管された場合に、これまでの技術移転の成果がどのように引継がれて行くのか、将来ＡＰＣを担っていくべき人造りを進める立場から注目して行く必要がある。

2）職員の質の向上

ＡＰＣの職員の資質は雇用形態の特殊性もあって必ずしも良いとは言い難い。

各部課長クラスには熱意をもって業務に専念しているものが多いが、それ以下のスタッフの資質は必ずしも十分でなく、基礎的知識の習得、技術力の向上が望まれる。

特に、土壌化学分野、地域教育（Rural Education）分野のスタッフの質、量の充実実強化が望まれる。

また、現在、州レベルの農業省の職員が出向して業務を担っているが、質量とも不十分であろう。今後、中央農業省の職員をも含めて必要な業務についてはＡＰＣの業務の独自性を失うことなく交流を深めて行くことも重要かと考えられる。

3. ＡＰＣの役割

現在、ＡＰＣの業務内容は我が国の協力を主体に改良農業技術の実証、普及を中心に諸活動が実施されている。

この意味においては、ＡＰＣは独自の機能と業務内容をもち、カガヤン州に適応する拠点農業開発センターとしての役割を担っており、将来ともこの役割を原則的には継承していくべきであろう。

将来、我が国の協力が終了する段階では、先にも述べた通り、農業省が実施機関として優力視される。この場合、農業省は全国的に独自の試験場を有しており、ＡＰＣがこれら農業省傘下の地方出先試験場と同一扱いにされ、中央からの命令のみによる、独自性を失なった機関となることも懸念される。先に述べたＡＰＣの役割を確保するうえからも将来の実施機関の設定、及びそこにおけるＡＰＣの役割、位置づけ等について的確な情報をつかむとともに適切な指導、助言を行っていく必要がある。

4. ＬＥＡⅡ（ローアカガヤン）における活動

1）本格的活動の開始

従来から比側の要望の強かったローアカガヤンのＬＥＡⅡの諸活動については、ＮＩＡのかんがい事業（ＯＥＣＦ　ローン関連）の進捗の遅れもあつて、現在まで一部の活動を除いては具体的な活動を実施していない段階にあった。

今回のエバリュエーションにおいて、協力延長の一つの理由としてローアーカガヤンのＬＥＡⅡの活動の未着手があった。

チームは、プロジェクトサイドですでに昨年以降ローアーカガヤンのＬＥＡⅡの候補地として設定したブゲイ（Buguey）地区を調査し、その妥当性を確認し、すみやかに必要な活動を開始すべく勧告した。ただし、当地区が、実施中のかんがい事業の受益地区となるまでにはまだ数年かかる（協力期間中の完成は事実上見込めない）ことから、ここでの諸活動は将来のかんがい事業の完成後を想定した内容とする必要がある。ブゲイ地区の規模は４２ヘクタールで、臨時的なかんがい施設がＮＩＡによって整備されており、展示圃としての条件は整えられつつある。

また、かんがい事業の進捗が遅れている現在、面積規模もＡＰＣが独自に維持管理できる４０～６０ヘクタール程度が妥当で、将来かんがい事業の進捗に合せ、必要があれば、普及および、展示の規模を漸次拡大していくことが望ましいと考えられた。

2）専門家のかかわり方

ローアカガヤンのＬＥＡⅡに関わる日本人専門家の協力の範囲については、従来から本地域が生活環境が劣悪で常駐して協力を進めることができないこと、治安上の問題もあること等の理由から、派回指導程度の協力にとどめるべきであるとの議論がなされてきた。

今回のエバリュエーションにおいては、この点については、特に言及することは避けたが、今後とも、上記の「巡回指導程度」を協力の範囲とすることが妥当と考えられる。

5. 建物及び施設の建設状況

比側負担で建設予定の建物施設の建設状況については１９７９年のＡＰＣメインコンプレックスの完成以降、具体的に予算措置がなされなかったが、協力終了を控えた１９８１年になって必要な予算化がなされ、訓練棟、ラボラリー、教室、ゲストハウス、機械格納庫、およびガソリンスタンドを建設中で、１９８２年には完成の予定である。

これら施設が完成すれば、所定の施設はすべて建設されたことになる。今後はこれらの維持管理についての予算の確保や、そのための体制作りが、必要とされることとなる。

一方、我が方の協力の立場からすると１９８１年度の供与機材の中で、もみ処理ユニットを

購送手続中であるが、現在のところ現地にこれを受ける倉庫が建設されておらず、今後残された施設として早急に建設を行う必要がある。

6. 運営管理費の問題

1) 訓練開始に伴う諸経費

現在、訓練棟を建設中で１９８１年２月の完成が見込まれている。訓練棟完成後早々に各種の研修訓練が開始される予定であるが、研修訓練の開始に伴って、当然研修生に対する諸経費（例えば、教材、宿泊費、参加費等）が必要となる。比側の予算確保が重要な課題となる。

2) 運営経費

１９８１年までのＡＰＣの運営経費は年々増加してきているが、１９８２年予算は建設事業が一巡したことから若干縮少気味とみられた。

運営経費は当然増もあることから今後比側の一層の努力が期待されるところである。

7. 延長の方法について

今回の日比合同エバリュエーションの結果、協力の内容は、延長後の協力の内容に濃淡はあっても、現行Ｍ／Ａのマスタープランを単純に延長して実施することが望ましいと判断された。

また、専門家の分野も現行分野をもって協力を進めることが必要と判断された。

このため、延長の方法としては現行Ｍ／Ａを単純に延長することとなろう。

この場合、延長方法を国内において検討し、現地でＪＩＣＡマニラ事務所長とＣＩＡＤＰ所長がサインすることとなろう。

（追記、巻末資料１の通り、Ｒ／Ｄの署名を交わし、追って口上書の交換を行うことにより、１９８４年３月３１日までの協力期間の延長が決定された。）

8. 専門家の任期

現在派遣中の６名の専門家の任期については１名（４月まで）を除いては、全員協力期間の２月２８日までとなっており、今後、専門家の意向も含めて早急に延長及び、交代等の手続きを進める必要がある。

チームがマニラＪＩＣＡ等関係者と打合せた結果、妥当と考えられる手続きとしては以下の通りである。

1）比側からの要請書は分野について、延長か、または後任として要請し、個別具体的な専門家の任期（延長か後代かは）については日本側で決定する。

2）この際、短期専門家についても、〃必要に応じて派遣する〃の一項を入れ、個々のＡＩフォームのとりつけはやめる方向で検討する。

3）専門家のＴ／Ｒ

エバリュエーションの結果は現行Ｍ／Ａを単純延長して協力を進めることとしたが協力の内容は当然協力の進捗に応じ濃淡をつけて進める必要がある。

従って専門家のＴ／Ｒもこれまでの成果をレヴューし、今後２ケ年間において実施すべき具体的なワーキングスケジュールを早期作成する必要がある。

エバリュエーションの勧告をもとにプロジェクトサイドでは、比側をまじえて上記スケジュールを作成し両者合意のうえ、延長期間における業務の推進を図ることが望ましい。

4）機材供与

延長後の機材供与については協力終了後のことも考慮して、スペアーパーツの補給に重点を置くとともに、農業機械類の現地調達を進めることが重要であろう。

このため、既供与資機材を点検、整備し、要整備リストを作成し、これにもとずき供与することが望ましい。また供与資機材の取り扱い、整備等については、十分な諸知識をもつ職員を育成する必要がある。

5）プロジェクト引渡し体制の確立

延長期間内においては、遅れている分野の推進はもちろんのこと、比側に対するプロジェクトの円滑な引き渡しを行うための体制作りを行う必要がある。

このためには、比側の実施機関をはじめとする関係機関の将来のプロジェクト運営に対する展望が必要とされるが、日本人専門家としても助言、指導を通じて、比側スタッフのみによる運営が可能となるよう比側関係者の責任と認識の高揚を図るべく努力する必要があると考える。

第２部　　資　　料　　篇

資 料 解 説

資料１：今回のエバリュエーション調査の結果を受けて、５７年２月５日付で、５９年３月３１日まで約２年１カ月間の協力期間延長を署名したＲ／Ｄである。また、追ってＭ／Ａ署名時と同様に、口上書の交換も行った。

資料２：５４年２月に署名されたＭ／Ａで本件プロジェクトの枠組みを定めたもの。口上書によって、両国政府の確認が行われた。

資料３：A_1 フォームに係る比側の諸手続に、従来かなりの時間を要し、とくに短期専門家をタイムリーに派遣することに支障があったことから、延長期間については、比側と協議した上で、包括的なA_1 フォームを提出せしめ、これによって専門家の機動的な派遣ができるようにした。

資料４：ＣＩＡＤＰの設立、組織、スタッフの身分等を定めた基本法令。

資料５：５７年７月に比側から公式に提出されたＡＰＣプロジェクトの拡大・延長要請に対し、日本側の見解を示したものである。今回のエバ・チームは、この口上書によって予め比側の要請をクリアーし、派遣された。

資料６：エバ・チームの比側との第１回の会議の際、ＣＩＡＤＰから提出されたＡＰＣプロジェクト（Ｍ/Ａ）の拡大案で、前回（５７年７月）までの拡大・延長要請に比べ、水産、畜産関係が除外される等、かなり課題が限定されている。チームとしては受け取るにとどめて特段の説明も求めなかったが、ＣＩＡＤＰ－ＡＰＣの長期構想が極めて明瞭に整序されて示されている。比側の考え方を知る上で、最も良い資料である。

資料７：エバ・チームの求めに応じ、ＡＰＣから提出されたローカルコスト関係資料

資料８：合同エバ・チームに対し、ＡＰＣ各部から提出された活動報告。ヒアリング作業はこれをベースに行われた。

資料９：本プロジェクトに関するこれまでの調査報告書（抜粋）。

資料1　協力期間延長に係るR/D及び口上書

THE RECORD OF DISCUSSIONS ON EXTENSION OF THE MEMORANDUM OF AGREEMENT ON THE TECHNICAL COOPERATION FOR THE CAGAYAN AGRICULTURAL PILOT CENTER PROJECT

The Japan International Cooperation Agency (hereinafter referred to as "the JICA"), in view of the recommendations made by the Japanese-Philippine Joint Evaluation Team which conducted the evaluation survey from 23 November to 10 December 1981, had a series of discussions through its Manila Office represented by Mr. Toshikazu Miura, with the Cagayan Integrated Agricultural Development Office (hereinafter referred to as "the CIADPO"), with regard to the extension of the period of the technical cooperation for the Cagayan Agricultural Pilot Center Project (hereinafter referred to as "the Project") being implemented on the basis of the Memorandum of Agreement which was signed at Manila on 22 February 1979, and will be terminated on 21 February 1982.

As a result of the said discussions, the JICA and the CIADPO agreed to recommend to their respective governments that the term of aforementioned technical cooperation on the basis of the Memorandum of Agreement will be extended until 31 March 1984, in order to fulfill the anticipated targets of the Project.

5 February 1982

TOSHIKAZU MIURA
Resident Representative
JICA Manila Office

ALFONSO R. REYNO, JR.
Project Director
C I A D P

EMBASSY OF JAPAN

MANILA

No. 86 - 82

The Embassy of Japan presents its compliments to the Ministry of Foreign Affairs and, with reference to the Record of Discussions, dated 5 February 1982 between the representatives of the Japan International Cooperation Agency and of the Cagayan Integrated Agricultural Development Project Office of the Government of the Republic of the Philippines on the extension of the term of the Japanese Technical Cooperation for the Cagayan Agricultural Pilot Center Project being implemented on the basis of the Memorandum of Agreement signed on February 22, 1979, has the honor to inform the Ministry that the Government of Japan has duly taken note of the contents of the Record of Discussions, and that it is the position of the Government of Japan to take the necessary measures to successfully implement the Cagayan Agricultural Pilot Center Project for the extended period.

The Embassy of Japan has further the honor to request the Ministry to inform the Embassy, in reply to this Note Verbale, of the position of the Government of the Republic of the Philippines with regard to the aforementioned Record of Discussions.

The Embassy of Japan avails itself of this opportunity to renew to the Ministry of Foreign Affairs the assurances of its highest consideration.

Manila, 17 February 1982

No. 82-740

The Ministry of Foreign Affairs presents its compliments to the Embassy of Japan and has the honor to inform the latter that the Government of the Republic of the Philippines has duly taken note of the Record of Discussions between the Japan International Cooperation Agency and the Cagayan Integrated Agricultural Development Project Office dated 5 February 1982.

The Ministry also wishes to inform the Embassy that the Government of the Philippines shall take appropriate measures to implement the recommendations contained therein.

The Ministry of Foreign Affairs avails itself of this opportunity to renew to the Embassy of Japan the assurances of its highest consideration.

Manila, 19 February 1982

資料2　M／A（Memorandum of Agreement）及び口上書

THE MEMORANDUM OF AGREEMENT BETWEEN THE JAPAN INTERNATIONAL COOPERATION AGENCY AND THE CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT OFFICE OF THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES ON THE JAPANESE TECHNICAL COOPERATION FOR THE CAGAYAN AGRICULTURAL PILOT CENTER PROJECT

The Japan International Cooperation Agency (hereinafter referred to as "the JICA") held series of discussions through its Manila Office, represented by Mr. Tadakazu Tsunakawa, with the Cagayan Integrated Agricultural Development Project Office (hereinafter referred to as "the CIADPO") of the Republic of the Philippines, represented by ILT. Manuel A. Briones, in respect of the desirable measures to be taken by the Government of Japan and the Government of the Republic of the Philippines for the successful implementation of the Cagayan Agricultural Pilot Center Project to be executed in order to support the Cagayan Integrated Agricultural Development Project.

As a result of said discussions, the JICA and the CIADPO have agreed to recommend to their respective Governments the adoption of the measures referred to in the attached Implementing Arrangements which is made an integral part of this Memorandum of Agreement and which is to be executed by the said two implementing agencies.

Done in the Municipality of Iguing in the Province of Cagayan this 22nd day of February 1979.

TADAKAZU TSUNAKAWA
Resident Representative
JICA Manila Office

T. Tsunakawa
TADAKAZU TSUNAKAWA
Resident Representative
JICA Manila Office

ILT. MANUEL A. BRIONES
Officer-in-Charge
C I A D P O

Manuel A Briones
ILT. MANUEL A. BRIONES
Officer-in-Charge
C I A D P O

IMPLEMENTING ARRANGEMENTS

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Republic of the Philippines will cooperate in implementing the Cagayan Agricultural Pilot Center Project (hereinafter referred to as "the Project"), in support of the efforts being made under the Cagayan Integrated Agricultural Development Project (hereinafter referred to as "the CIADP") for the purpose of promoting and accelerating the modernization and expansion of agriculture in the Province of Cagayan through the infrastructure and social development efforts of the CIADP.

2. The Project will be implemented in accordance with the Master Plan, as specified in Annex A, in coordination with other development projects included in the CIADP as well as other projects under economic and technical cooperation between the two Governments in the Province of Cagayan. An Annual Plan for the Project will be formulated on the basis of the Master Plan by the Joint Committee, as referred to in paragraph VI-2.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex B, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Japanese experts referred to in paragraph 1 above and their families will be granted in the Republic of the Philippines the privileges, exemptions and benefits under the Colombo Plan Technical Cooperation Scheme, as enumerated below:

(1) Exemption from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad;

(2) Exemption from customs duties, taxes, fees and other charges imposed in respect of personal and household effects of reasonable quantity which maybe brought from abroad into the Republic of the Philippines, including one motor vehicle for each expert to be re-exported within six months upon the termination of their official duty;

(3) Entitlement of same medical and health facilities enjoyed by the Philippine Government Officials; and

(4) Suitably furnished accommodations for the Japanese experts and their families at the Project Site.

III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex C through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The articles referred to in paragraph 1 above will become the property of the Government of the Republic of the Philippines upon being delivered c.i.f. to the CIADPO at the ports and/or airports of disembarkation, and will be utilized exclusively for the implementation of the Project in accordance with the Master Plan or the Annual Plan with due consideration of the recommendation of the Joint Committee.

IV. TRAINING OF PHILIPPINE PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through the JICA to receive at its own expense Philippine personnel connected with the Project for technical training or observation tour in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Government of the Republic of the Philippines will take necessary measures to ensure that the knowledge and experience acquired by the Philippine personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

1. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures through the CIADPO to provide at its own expense:

(1) Services of Philippine counterpart experts, technical and administrative personnel as listed in Annex D;

(2) Land and buildings as listed in Annex E as well as incidental facilities thereto;

(3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided by the Government of Japan through JICA under paragraph III;

(4) Transportation facilities and travel allowance for Japanese experts for their official travel within the Republic of the Philippines in accordance with the Colombo Plan Technical Cooperation Scheme.

2. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures through the CIADPO to meet:

(1) Expenses necessary for the construction or improvement of roads, irrigation facilities, and other facilities necessary for the implementation of the Project in and around the Agricultural Pilot Center (hereinafter referred to as "the APC") and the Leading Extension Areas (hereinafter referred to as "the LEA") as referred to in Annex A;

(2) Expenses necessary for the transportation within the Republic of the Philippines of the articles referred to in paragraph III as well as for the installation, operation and maintenance thereof; and

(3) All maintenance and other operating expenses necessary for the implementation of the Project.

3. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures through the CIADPO to exempt the articles referred to in paragraph III-1 from customs duties, taxes, fees and other charges.

VI. ADMINISTRATION OF THE PROJECT

1. The Government of the Republic of the Philippines through the CIADPO as represented by the Project Director will have the authority and responsibility for the efficient and effective management and administration of the Project, and the Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.

2. A Joint-Committee will be established for the successful implementation of the Project. The composition of the Joint-Committee is specified in Annex F. The Joint-Committee will meet regularly or upon the request of the Chairman of the Project Coordination Committee of the CIADPO and/or the Team Leader. The Joint-Committee may create subcommittees to deal with specific problems. The Joint-Committee will have the functions as listed in Annex G.

3. In accordance with laws and regulations in force in the Republic of the Philippines, part of the materials as referred to in paragraph III-2 may be rented out by CIADPO at reasonable rates, and part of consumable items such as fertilizers, pesticides may be transferred to farmers cooperatives or organizations in and around the Leading Extension Areas as referred to in Annex A.

4. The proceeds from such rentals or transfers will constitute as a special account for the Project, which will be used exclusively for its implementation in accordance with laws and regulations in force in the Republic of the Philippines. The annual plan for the effective utilization of the account will be formulated by the Joint-Committee as referred to in paragraph VI-2.

VII. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of the Philippines shall be responsible for dealing with claims which may be brought by third parties against the Japanese experts, and shall hold them harmless in respect of claims or liabilities arising in the course of or otherwise connected with the discharge of their duties in the implementation of the Project, except when such claims or liabilities arise from the gross negligence or willful misconduct of the above-mentioned individuals. Should any question arise in connection with the foregoing both Governments shall immediately consult with each other.

VIII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments for the effective implementation of these Implementing Arrangements.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under these Implementing Arrangements will be three (3) years from the date of signature. The JICA and the CIADPO may, by mutual agreement recommend to their respective Governments the extension of that duration.

Annex A

The Master Plan of the Project

The objective of the Project is to contribute toward the agricultural development in the Province of Cagayan in general, and the introduction of intensive rice culture in particular, through the facilities of the Agricul-

tural Pilot Center. The following activities shall be undertaken to support the efforts being made under the CIADP for infrastructure and social development with the loan from the Overseas Economic Cooperation Fund of Japan.

1. Agricultural Development

In order to support the CIADP Office in Tuguegarao, Cagayan which will function as the core for the integration, coordination and monitoring of progress of the related on-going and future development projects in Cagayan, the following activities shall be undertaken.

(a) Coordination of field operations and necessary studies and continuous collections and analysis of data and information on the progress of related countryside development projects in Cagayan; and

(b) Supportive operations to technical and/or economic cooperation and other projects such as assistance in designing of terminal irrigation and drainage facilities, soil and water management scheme and field surveys.

2. Agricultural Pilot Center (APC)

In order to supplement the package of improved agricultural technology, support farm resource requirements and increase the technical capability of of personnel and farmers engaged in the Project, the Center shall undertake the following:

(a) Trials, field studies and demonstrations centering on improved agricultural techniques at the farm level;

(b) Enhance production of high quality seeds through research, training, and demonstration on seed production techniques;

(c) Guidance and advice on post-harvest techniques on rice processing and demonstration thereof;

(d) Guidance and advice for the purpose of strengthening the existing agricultural extension network;

(e) Training of technical personnel and farmer leaders particularly within the Project areas;

(f) Planning the transfer of farm inputs such as fertilizers/pesticides and agricultural chemicals and scheduling the operation, usage and maintenance of farm machineries to be rented out to farmer cooperatives and/or associations in and around the Leading Extension Areas; and

(g) Conduct other educational, promotional, and informational services related to the transfer of packaged technology.

3. Leading Extension Areas (LEA)

The main objective of the LEA is to demonstrate improved agricultural

techniques to farmers under the guidance and support from the APC. A package of improved technology will be extended to the farmers within the designated LEA where field conditions are similar to other CIADP area. Any potential problem identified in the LEA during the course of operations will be fed back to the APC for in-depth analysis and appropriate actions.

NOTE: Site and size of the Project

1. The APC will be located at Barrio Minanga Norte, Iguig, Cagayan with the following facilities:
   a. Buildings (office, incidental facilities and residence): about (4) hectares
   b. Experimental plots: about six (6) hectares
2. The LEA will be located in Iguig (Barrios Sta. Rosa, San Lorenzo, Minanga Norte and San Esteban) with an area of about 60 hectares, and in Alcala (Barrios Baybayog and Jurisdiccion) and Amulung (Barrios Dugayong, Jurisdiccion and Baculud) with an area of about 240 hectares in total.
   These areas of about 300 hectares will constitute the LEA I.
3. The site and size of the LEA II is to be established in Lower Cagayan.

Annex B

List of Japanese Experts

Category	Field
(1) Team Leader	
(2) Experts (long-term assignment)	
	Agronomy
	Irrigation engineering
	Extension
	Agricultural machinery
(3) Liaison-Officer	

Note:

Additional experts on short term assignment in the fields mentioned above as well as in other fields may also be dispatched, as necessity arises.

Annex C

List of Materials to be Provided by the Government of Japan

(1) Laboratory equipment, machinery, instruments, tools, their spare parts and other materials for Research

(2) Agricultural machinery and implements including post-harvest equipment and their spare parts

(3) Fertilizers, pesticides and other agricultural chemicals

(4) Vehicles except sedan motor cars

(5) Tools and implements for land survey

(6) Teaching materials including audio-visual aide and mass media equipment

(7) Technical books, pamphlets and other reference materials

(8) Other necessary equipment and materials to be mutually agreed upon between the authorities concerned of the two Governments

Annex D

List of Philippine Experts and Other Personnel

Category	Field
(1) Project Director, CIADP	
(2) Technical Director, APC	
(3) Experts/Specialist	
	Agronomy
	Crop Protection
	Irrigation and Drainage
	Extension
	Farm Mechanization
	Soil Management
(4) Technical and Research Assistants and Aides	
(5) Clerical and Service Employees	
(6) Operators and Laborers	

Annex E

List of Land and Buildings

(1) Land

(a) Land for APC — ten (10) hectares

(b) Pump site and right of way for pipe line in Iguig

(c) Land for LEA I and LEA II (to be selected from farmer's owned land)

(2) Buildings for the APC

(a) Office

(b) Laboratory and class rooms

(c) Store-house for farming materials

(d) Shed for agricultural machinery

(e) Workshop and garage

(f) Management house of experimental fields and of fundamental seeds

(g) Milling house and drying floor

(h) Generator house

(i) Pump house

(j) Dormitory

(k) Living quarters

(l) Other necessary buildings and facilities

Annex F

List on Members of the Joint Committee

Japanese Side	Philippine Side
(1) Team Leader	(1) Project Director, CIADP (Officer-in-Charge)
(2) Experts Agronomy Irrigation Engineer Extension Agricultural Machinery	(2) Technical Director, APC
(3) Liaison Officer	(3) Experts Agronomy Crop Protection Irrigation and Drainage Extension Farm Mechanization Soil Management
(4) Representative of JICA	(4) Representative of the Office of the Governor of Cagayan Province
	(5) Representative of BPI in Region II

(6) Representative of BAEx in Region II

(7) Representative of BS in Region II

(8) Representative of NIA-CIADP

Notes:

1. As necessity arises, representative of Japanese Embassy in Manila, OECF Manila Office and other Philippine authorities involved in the implementation of the Project may join in this Joint Committee as observers.

2. BPI : Bureau of Plant Industry
   BAExt : Bureau of Agricultural Extension
   BS : Bureau of Soils
   OECF : Overseas Economic Cooperation Fund
   NIA-CIADP : National Irrigation Administration (Irrigation Component of CIADP)

Annex G

Functions of the Joint Committee

a. Formulate the Annual Plan of the Project;
b. Provide the forum for maintaining technical cooperation through technical assistance or advice;
c. Thresh out technical problems that may arise in the course of the implementation of the Project;
d. Conduct semi-annual review of the Project with the view of recommending measures to enhance and accelerate the implementation of the Project;
e. Prepare periodic reports to respective Governments on the progress of the Project.

EMBASSY OF JAPAN
MANILA

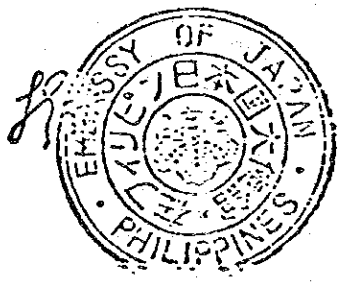
No. 58 - 79

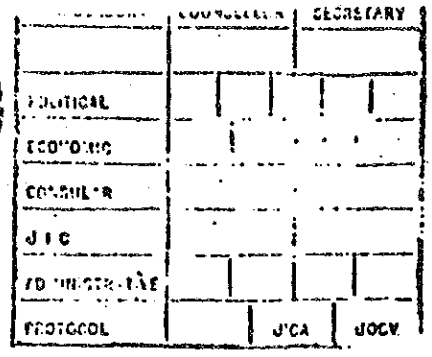
The Embassy of Japan presents its compliments to the Ministry of Foreign Affairs and, with reference to the Memorandum of Agreement signed on February 22, 1979 between the representatives of the Japan International Cooperation Agency and the Cagayan Integrated Agricultural Development Project Office of the Government of the Republic of the Philippines on the Japanese Technical Cooperation for the Cagayan Agricultural Pilot Center Project attached hereto, has the honor to inform the latter that the Government of Japan has duly taken note of the contents of the Memorandum of Agreement, and that it is the position of the Government of Japan that it will take the measures provided for in the said Memorandum of Agreement to successfully implement the Cagayan Agricultural Pilot Center Project.

The Embassy of Japan has further the honor to request the Ministry to inform it, in reply to this Note, the position of the Government of the Republic of the Philippines with regard to the measures provided for in the aforementioned Memorandum of Agreement.

The Embassy of Japan avails itself of this opportunity to renew to the Ministry of Foreign Affairs the assurances of its highest consideration.

Manila, 22 February 1979





No. 79-743

The Ministry of Foreign Affairs presents its compliments to the Embassy of Japan and has the honor to refer to the latter's Note No. 58-79 dated 22 February 1979, informing the Ministry that the Government of Japan has duly taken note of the contents of the attached Memorandum of Agreement between the Japan International Cooperation Agency (JICA) and the Cagayan Integrated Agricultural Development Project of the Philippine Government on the Japanese technical cooperation for the Cagayan Agricultural Pilot Center Project, and that it is the position the Government of Japan that it will take the measures set forth in the aforementioned Memorandum of Agreement to successfully implement the project.

The Ministry wishes to inform the Embassy that the Philippine Government has also taken note of the Memorandum of Agreement, and it is also its position that it will take the measures contained therein.

The Ministry of Foreign Affairs avails itself of this opportunity to renew to the Embassy of Japan the assurances of its highest consideration.

Manila, 15 March 1979

資料3　延長期間に関するA1フォーム

TECHNICAL COOPERATION
BY THE GOVERNMENT OF JAPAN

PROPOSAL

By the Government of The Republic of the Philippines

for an expert, i. e., Agriculture

to the Government of Japan.

Notes.– This form has been devised for the general guidance of the Government agencies concerned (JAPAN) in order to facilitate the supply of relevant information and data necessary to afford an adequate appreciation of the nature of the technical co-operation required. The careful completion of this proposal form will avoid much reference back and lead to speedier action.

1. Back ground Information This section should show as precisely as possible the general nature of the project for which the expert is required, stating whether it comes within the Government's development programme. It is important to indicate whether the project is a new enterprise or whether it was started previously. In the latter case, any assistance received under other technical co-operation programmes (e.g. under United Nations auspices) should be stated. With regard to industrial enterprises, some impression of the size is important and the output and number of workers to be employed are useful indications. The type of process, make and age of industrial or scientific equipment with which the expert will be concerned should be specified. In the case of academic establishments, it is an advantage to know the number of annual intake of students, their level of attainment, numbers and status of existing staff and details of any research facilities and the level of research being undertaken (Copies of brochures, annual reports, financial statements, calendars, syllabus of instruction etc. should be attached where applicable).	The Cagayan Agricultural Pilot Center Project is a joint undertaking of the Governments of the Philippines and Japan through the Cagayan Integrated Agricultural Development Project (CIADP) and the Japan International Cooperation Agency (JICA), respectively. It is implemented through a Memorandum of Agreement between the two agencies, signed in 22 February 1979, for a period of three years. The said agreement was scheduled to terminate in 21 February 1982. After a series of discussions, the two agencies agreed to recommend to their respective governments the extension of the technical cooperation on the basis of the same Memorandum of Agreement up to 31 March 1984. In accordance with the Memorandum of Agreement, the Cagayan Agricultural Pilot Center Project aims to accelerate and sustain agricultural development in Cagayan through the improvement or generation and extension of technologies. Primarily, the project is concerned with intensive rice-based technologies for the CIADP irrigation project areas.
2. Specification for the post.* (*a*) post title	Experts in Agriculture and Related Fields
(*b*) duties for which the expert will be responsible. These should preferably be listed, and it is important to give as much detail as possible.	See Attached Sheets
(*c*) authority to whom expert will be responsible.	Project Director, CIADP-APC

* It is essential that full particulars should be given. If the space provided is inadequate, they should be given on a separate sheet.

2. Specification for the post (*Cont'd.*) (*d*) Qualification and experience required and approximate age limits.	See Attached Sheets
(*e*) number of personnel required.	At least six (6) long term experts and other short term experts on the same field as required except for the post of the team leader and coordinator.
3. In the case of continuous projects, give name and particulars of understudy or counterpart who is to work with the expert.	Not Applicable
4. Terms and conditions of appointment: (*a*) duration	See Attached Sheets
(*b*) actual place of employment, nearest town and post office	Agricultural Pilot Center Minanga Norte, Iguig, Cagayan, Philippines
(*c*) if living accommodation to be provided, state whether furnished or unfornished, and whether suitable for married man with family	
(i) daily allowance for food if accommodation only provided	None
(ii) daily rate for accommodation and food if neither are provided in kind	None
(*d*) daily and nightly rates of subsistence payable when away from base on duty	As per rules and regulations of the Government of the Republic of the Philippines
(*e*) are costs of internal travel paid or car provided?	Cost of internal travel or car can be provided by the project as per rules and regulations of the R.P.
(*f*) what leave arrangements are suggested?	One (1) month home leave for every two years of service
(*g*) extent to which free hospital and medical treatment is to be provided for the expert and his accompanying dependents, if any	As per the Memorandum of Agreement between CIADP & JICA on the Agricultural Pilot Center Project signed in 22 February 1979 which is recommended for extension up to 31 March 1984.
(*h*) shall the expert be exempted from the payment of income tax and charges of any kind imposed on or in connection with any allowances to be remitted from overseas?	As per the Memorandum of Agreement between CIADP & JICA on the Agricultural Pilot Center Project signed in 22 February 1979 which is recommended for extension up to 31 March 1984.
(*i*) (i) shall the expert be exempted from the payment of customs duties and charges of any kind imposed on or in connection with the importation of equipment, machinery, materials and medical supplies as well as personal and household effects belonging to the expert and his family, including one refrigerator, one sewing machine, one radio and other electrical appliances?	As per the Memorandum of Agreement between CIADP & JICA on the Agricultural Pilot Center Project signed in 22 February 1979 which is recommended for extension up to 31 March 1984.
(ii) In case a car is not provided to the expert by the host government, shall the expert be exempted from the payment of customes duties and charges of any kind imposed on or in connection with the importation of a car?	As per the Memorandum of Agreement between CIADP and JICA on the Agricultural Pilot Center Project signed in 22 February 1979 which is recommended for extension up to 31 March 1984.

4. Terms and conditions of appointment (*Cont'd.*) (*j*) does host government undertake to indemnify expert inrespect of damages awarded against him for actions performed in the course of his official duties?	As per the Memorandum of Agreement between CIADP & JICA on the Agricultural Pilot Center Project signed in 22 February 1979 which is recommended for extension up to 31 March 1984.
(*k*) approximate date on which the expert is required to arrive in receiving country	See Attached Sheets
(*l*) any other information	None
5. Previous steps, if any, to fill the post: If any previous attempt has been made to fill the post from any external source (UN Specialised Agency or other) please indicate:	Not Applicable
(*a*) to whom proposal was addressed, with date	Not Applicable
(*b*) result or present stage of negotiations	
(*c*) are other experts working in this area in associated projects or have there been experts working in this field previously? If so, are any reports by these experts available?	Not Applicable
6. Correspondence: Name, postal and telegraphic address of official to whom correspondence regarding this proposal should be forwarded	Atty. ALFONSO R. REYNO, JR. Project Director, CIADP-APC Minanga Norte, Iguig, Cagayan R.P.

Signed .....
ALFONSO R. REYNO, JR.
Project Director, CIADP-APC

on behalf of the Government of Philippines

Date: .....

ATTACHMENT

2. Specifications for the Post

a/e. Post Title and Number of Personnel Required

a.1. Long Term Expert

One (1) Team Leader

One (1) Coordinator

One (1) Agronomist

One (1) Mechanical Engineer (Expert on Farm Machinery)

One (1) Agricultural Extension Expert

One (1) Irrigation Engineer

a.2. Short Term Experts

If necessary short-term experts on the same or related fields as the long term experts, except for the positions of the Team Leader and Coordinator will be dispatched.

b. Duties for which the expert will be responsible. These should preferably listed and it is important to give as much detail as possible.

b.1. Team Leader (1)

1. Provide over-all technical guidance to local staff and the experts on the implementation of the project.

2. Represent the JICA at the project site.

3. Maintain close liaison and consultation with local staff and officials for the effective implementation of the project.

b.2. Coordinator (1)

1. To act as liaison between the project, the JICA Manila Office and Tokyo Office.

2. To maintain close consultation and coordination between local officials and the Japanese experts.

3. To give relevant advises to the experts and local staff for the effective implementation of the project.

4. To provide the time frame to serve as basis of determining progress of specific projects of both experts.

5. To study the veracity of the raports of experts for final evaluation of the Project Director and Team Leader.

6. To prepare consolidated reports on the activities of the experts.

b.3. Agronomist (1)

1. To prepare and conduct basic and applied agronomic researches/studies in consultation and collaboration with local counterparts.
2. To serve as resource person in the training program.
3. To perform other duties as may be prescribed by the Project Director.

b.4. Mechanical Engineer (1)

1. To provide proper machinery management as part of the whole farm management plan of the project.
2. To coordinate with local experts in conducting various studies on the different areas of farm mechanization.
3. To provide guidance of the selection of specific type of machinery to be used for heavy and light operations.
4. To provide advice for the proper repair, maintenance and operation of equipment, machinery and attachments.
5. To serve as resource person in the training program.

6. To perform other duties as may be prescribed by the Project Director.

b.5. Agricultural Extension Expert (1)

1. To coordinate with local experts on the agricultural extension services and socio-economic activities in relation to farm management and technology dissemination.
2. To serve as resource person in training programs of the project.
3. To perform other duties as may be prescribed or requested by the Project Director of CIADP.

b.6. Irrigation Engineer (1)

1. To coordinate with local experts for the detailed planning design and construction of irrigation and drainage facilities.
2. To conduct studies on water management.
3. To serve as resource person in the training programs of the project.
4. To perform other duties as may be prescribed or requested by the Project Director of CIADP.

4. CIADP設置規定（大統領令No 1189）

MALACANANG
MANILA

PRESIDENTIAL DECREE NO. 1189

IMPLEMENTING THE CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT, PROVIDING FUNDS THEREFORE AND FOR OTHER PURPOSES

WHEREAS, it is the policy of the Government to promote and accelerate the integrated development of agriculture, natural resources, infrastructure and social services in underdeveloped areas in order to improve the existing physical, economic and social structure of Philippine society;

WHEREAS, a Cabinet Coordinating Committee on Integrated Rural Development Projects of the National Economic and Development Authority was organized under Letter of Instructions No. 99 later reconstituted under Presidential Decree No. 805 to act as the policy making and governing body of all integrated rural development projects;

WHEREAS, an integrated rural development project has been adopted for the Cagayan Province as the third integrated rural development Project of the Philippines under the direct supervision of the Cabinet Coordinating Committee on Integrated Rural Development Projects;

WHEREAS, there is a need to create the machinery that will implement the Cagayan Integrated Agricultural Development Project;

NOW, THEREFORE, I, FERDINAND E. MARCOS, President of the Philippines by virtue of the powers vested in me by the Constitution, in order to ensure the success of this project, do hereby order and decree the following:

SECTION 1. Declaration of Policy. The Cagayan Integrated Agricultural Development Project identified as the third integrated rural development project of the Philippines, hereinafter referred to as the Project, is hereby declared as a project of the national government under the direct supervision of the Cabinet Coordinating Committee on Integrated Rural Development Projects of the National Economic and Development Authority. The following policies are adopted for the effective implementation thereof: (a) to integrate national and local government agencies into a working team for the planning and implementation of rural development projects; (b) to decentralize the planning and implementation of rural development projects at the local level.

SECTION 2. Cabinet Coordinator for the Project. The Cabinet Committee shall designate a member of the Cabinet to act as Cabinet Coordinator for the

Project. He shall act for the Cabinet Committee in all administrative matters, in accordance with the broad policies and guidelines established by the Cabinet Committee. As Cabinet Coordinator, he shall have the following powers and functions:

a. Oversee the coordination of the planning and implementation of the project;

b. Review the Project's consolidated plans, budget and work programs and recommend approval by the Cabinet Committee;

c. Recommend to the Budget Commission through the Chairman of the Cabinet Committee approval of the requests of implementing departments and agencies for budget releases for projects in accordance with the consolidated plans, budget and work programs approved by the Cabinet Committee;

d. Arrange and negotiate with local and foreign financing institutions, subject to the approval by the Cabinet Committee, for the funding of rural development projects in Cagayan province, in addition to the loan granted by the Government of Japan through the Overseas Economic Cooperation Fund;

e. Call upon any department, bureau, office, instrumentality or any political subdivision of the government for such assistance that may be needed in achieving the objectives of the Project;

f. Bring to the attention of the Cabinet Committee matters requiring urgent consideration; and

g. Exercise such other related powers as may be delegated by the Cabinet Committee.

SECTION 3. Creation and Domicile of the Cagayan Integrated Agricultural Development Project Office. There is hereby created a Cagayan Integrated Agricultural Development Project Office, hereinafter referred to as the Project Office, which shall be under the supervision of the Cabinet Committee, through the Cabinet Coordinator, for the purpose of coordinating the planning and implementation of the projects by the implementing departments and agencies at the national and provincial levels. The Project Office shall have its principal office in Cagayan Province. It shall also have a Manila Liaison Office for the purpose of facilitating supportive actions at the national level and for coordinating activities with the Secretariat of the Cabinet Committee, and such sub-office as may be necessary in any municipality within the Project area. The Project Office shall be headed by a Project Director.

SECTION 4. Powers and Functions of the Project Office. The Project Office shall have the following powers, duties and functions:

a. Serve as a coordinating center for inter-agency planning and implementation of the Project;

b. Identify rural development projects/sub-projects in Cagayan Valley for inclusion in the adopted integrated rural development program;

c. Prepare feasibility studies for identified projects for the Cagayan province as authorized by the Cabinet Committee;

d. Coordinate requests for budget releases and monitor the accounts and disbursements of loan proceeds received by the different implementing agencies;

e. Monitor and evaluate the progress and effects of project implementation in the Project area;

f. Maintain a feedback system with national agencies involved in integrated rural development projects in Cagayan;

g. Call on the appropriate department, bureau, office, agency, or other government instrumentality for assistance in the discharge of its duties;

h. Establish a quarterly reporting system to the Cabinet Committee for monitoring and evaluation purposes; and

i. Perform such other related functions as may be necessary to attain the objectives of this Decree.

SECTION 5. Powers and Functions of the Project Director. The Project Director shall exercise the following powers and duties:

a. Execute and administer the policies, guidelines and decisions of the Cabinet Committee;

b. Organize and manage the Project Office and adopt administrative rules and procedures for its internal operation and management;

c. Directly coordinate the activities of all implementing departments and agencies in the planning and implementation of the Project;

d. Call upon any department, agency, bureau, office, instrumentality or any political subdivision of the Government to assist in the planning and implementation of the Project;

e. Consolidate requests for budget releases of projects of the implementing departments and agencies in accordance with the consolidated plans, budgets and programs of work approved by the Cabinet Committee;

f. Collect and consolidate all project accounts under the Project maintained by the implementing departments and agencies;

g. Ensure that all conditions contained in the loan agreement executed between the Philippine Government and the Government of Japan through the Overseas Economic Cooperation Fund (OECF) are faithfully complied with by all concerned in the implementation of the Project;

h. Submit periodic financial and work accomplishment reports relating to project implementation to the Cabinet Committee, the Budget Commission, National Economic and Development Authority and other agencies concerned through the Cabinet Coordinator;

i. Submit audited project accounts containing the auditor's opinion to the Overseas Economic Cooperation Fund (OECF) within four (4) months at the close of each fiscal year;

j. Apply for, receive and accept grants and donation of funds, equipment, materials and services needed by the Project from sources within and outside the Philippines through the Cabinet Committee;

k. Enter into contract with private or public entities in connection with the functions of the Project Office subject to the approval of the Cabinet Coordinator and the Cabinet Committee.

l. Perform such other functions as may be prescribed by the Cabinet Coordinator.

SECTION 6. Appointment, Qualifications and Compensation of the Project Director. The Project Director shall be appointed by the Chairman of the Cabinet Committee upon the recommendation of the Cabinet Coordinator and may be removed for cause.

The appointee to the position of the Project Director shall possess the following qualifications:

a. A natural born citizen of the Philippines;

b. At least thirty (30) years of age; and

c. A proven record of executive competence in the field of public administration and/or infrastructure projects or in the management of agricultural or rural projects.

The Project Director shall receive an annual compensation to be fixed by the Cabinet Committee.

SECTION 7. Creation, Composition and Functions of the Project Coordination Committee. A Project Coordination Committee is hereby created to serve as a forum in providing and ensuring technical coordination among the agencies and offices concerned in the Project area.

It shall be composed of the Project Director as Chairman, with the following as members: Governor of Cagayan, Region II Regional Directors of the National Economic and Development Authority, National Irrigation Administration, National Electrification Administration, Department of Public Highways, Bureau of Public Works, Department of Agrarian Reform, Department of Local

Governments and Community Development, Bureau of Agricultural Extension, Bureau of Plant Industry, Bureau of Soils and a representative of the Cagayan Valley Agricultural Research Complex of the Philippine Council for Agriculture and Resources Research.

SECTION 8. Powers and Functions of the Project Coordination Committee. The Project Coordination Committee shall have the following powers and functions:

a. Formulate the annual work plan of the Project based on defined policies, instructions and guidelines for implementation;

b. Review plans and programs prior to submission to the Cabinet Coordinator;

c. Maintain continuous coordination among agencies concerned for the effective implementation of the Project;

d. Serve as a forum in solving technical and inter-agency management problems at the provincial level and propose or institute immediate remedial measures;

e. Ensure that plans of the Project conform with the overall development plan of the region;

f. Exercise such other powers and functions as may be assigned by the Cabinet Coordinator.

SECTION 9. Roles, Functions and Responsibilities of the Implementing Departments and Agencies. The major implementing departments and agencies shall perform the following:

a. The Department of Agriculture - act as the coordinating lead agency of the whole Project and support major services related to agricultural development, and to provide the establishment of the Agricultural Pilot Center.

b. The National Irrigation Administration - act as the executing agency in the construction, operation and maintenance of irrigation, drainage facilities and service roads and support major aspects of infrastructure development.

c. The Naitonal Electrification Administration -act as the executing agency in the installation, operation and maintenance of rural electrification facilities and support major aspects related to the power supply of the Province.

d. The Department of Public Works, Transportation and Communications - finalize the design and supervise the construction of the Agricultural Pilot Center and support projects related to waterwork systems and other infrastructure projects.

e. The Department of Public Highways - implement projects pertaining to the improvement, construction and maintenance of barangay roads and support projects related to road systems.

f. The Deparmtent of Agrarian Reform - implement projects involving operation land transfer, negotiate building sites, other land operations and support major projects related to social development.

g. The Department of Local Governments and Community Development - act on projects pertaining to the organization of farmers, management of farmer's cooperatives and support services for rural development.

h. The Provincial Government of Cagayan - provide local leader-ship and political support at the municipal and barangay levels.

Each implementing department and agency shall submit within the first three months of the current year to the Project Office for consolidation and submission to the Cabinet Committee through the Cabinet Coordinator their respective annual project plans, budget, and the corresponding work program for the ensuing calendar year. They shall also submit to the Project Office financial and work plans specifying the local and foreign fund components for every request for budget releases and periodic reports containing results of operations.

SECTION 10. Local Participation. The local governments, both provincial and municpal, in the areas affected by the project may participate in the implementation thereof by providing commodity and services, as well as real property and additional financing.

SECTION 11. Observance of Terms and Conditions of the Loan Agreement. All departments and agencies including the provincial government offices concerned with the planning and implementation of the Project are hereby enjoined to observe strictly all the terms and conditions embodied in the Loan Agreement executed between the Philippine Government and the Government of Japan through the Overseas Economic Cooperation Fund (OECF), and other loan agreements which may be entered into by the Government of the Philippines.

SECTION 12. Staff Appointment. In accordance with the staffing pattern to be recommened by the Cabinet Coordinator and to be approved by the Budget Commission, the Project Director shall appoint in accordance with the approved personnel policies of the Cabinet Committee the other personnel of the Project and define their duties and responsibilities: PROVIDED, that the Project may employ personnel on part-time basis, any provision of law to the contrary notwithstanding.

SECTION 13. Loan Authorization and Appropriations. The loan in the amount of TWENTY TWO MILLION U.S. DOLLARS (U.S.$22,000,000) obtained through the Overseas Economic Cooperation Fund shall finance partially the implementation of the Cagayan Integrated Agricultural Development Project.

The appropriate Philippine Government counterpart funds for each of the Project's components shall be made available through the usual government budgetary systems and procedures. For this purpose, each implementing department and agency shall keep a separate account for the implementation of the project/projects under their concern.

The sum of FIVE MILLION PESOS (P5,000,000) is hereby released immediately to the Cabinet Committee for the initial operations of the Cagayan Integrated Agricultural Development Project Office and the Agricultural Pilot Center in Cagayan and the additional sum of TWO MILLION PESOS (P2,000,000) for the expansion phase of the Project within the region or for such other projects as may be determined by the Cabinet Committee, the said funds to be allocated from the Special Activities Fund under the National Priorities Support Fund, P.D. 1050.

SECTION 14. Auditing System. The Commission on Audit shall assign an auditor/auditors to the Project in accordance with existing laws, rules and regulations. The auditor/auditors shall submit to the Project Director a consolidated project financial report within 3 months after the close of each fiscal year for transmittal to the Overseas Economic Cooperation Fund.

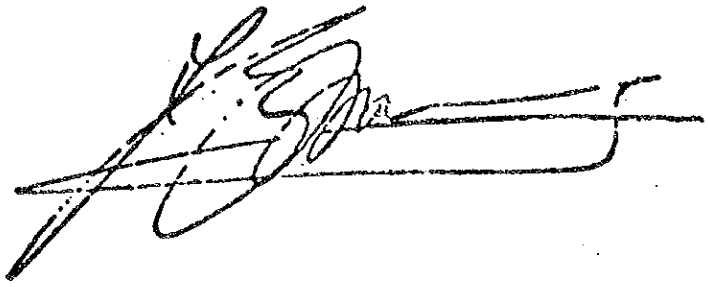
SECTION 15. Accountability of Implementing Units for Project Commodity Requirements. All vehicles, equipment and machineries procedured with the Project fund shall be under the accountability of the implementing departments and agencies including the provincial government. These shall be used solely for the implementation of the Project and shall be disposed afterwards in accordance with the terms and conditions set forth under the Loan Agreements executed between the Philippine Government and the Government of Japan through the Overseas Economic Cooperation Fund (OECF) and other lending institutions.

SECTION 16. Separability Clause. If any provision of this Decree shall be invalid, the remainder shall continue to be operative.

SECTION 17. Repealing Clause. All laws, decrees, executive orders, administrative orders, rules and regulations, or parts thereof, which are inconsistent with any provision of this Decree are hereby repealed or modified accordingly.

SECTION 18. Effectivity. This Decree shall take effect immediately.

Done in the City of Manila, this 30th day of August in the year of our Lord, Nineteen hundred and seventy seven.



資料6　口上書（比側の拡大要請に対する回答）

No. 599 - 81

The Embassy of Japan presents its compliments to the Ministry of Foreign Affairs and, with reference to the latter's Note Verbale No. 81-2495 dated July 30, 1981 requesting for the extension of the Cagayan Agricultural Pilot Center Project (hereinafter referred to as "the APC Project") for another three years with an expanded coverage to include the whole province of Cagayan, has the honor to convey to the Ministry the following basic position of the Japanese Government:

1. The Philippines' proposal indicates that the new comprehensive project should be set up by introducing new fields of upland crop, livestock, inland fisheries and others into the APC Project as well as expanding the project area to the whole province of Cagayan.

However, the original objective of the technical cooperation on the APC Project is mainly aimed at developing intensive rice cultivation through irrigation development in order to support the Cagayan Integrated Agricultural Development Project.

Furthermore, aside from the field of rice cultivation in which Japan has relatively plenty of experts, it is quite difficult for her to secure experts in upland crop and other fields for the province at this moment.

2. As for the APC Project itself, which is deemed to have been accomplishing certain effects and benefits from the

cooperation

cooperation up to the present, although Japan cannot make the final decision at this stage without knowing the results of the evaluation of the APC Project, Japan intends to continue the technical cooperation of the APC Project in order to assure the smooth turn-over to the Philippines upon the successful accomplishment of the objectives of the APC Project.

3. Therefore, Japan intends to consider the Philippines' proposal of expanding the fields and areas of the APC Project as a new project, which is quite different from the APC Project.

At present, Japan has no basic data on the new project to judge on the possibility for implementing new cooperation, its expenditure and benefits. Therefore, it is difficult to establish a clear policy at this stage on the possibility of the further extension of Japanese cooperation.

4. Since Japan judges that the effective implementation of existing cooperation of the APC Project should come first, Japan shall discern the results of the cooperation of the APC Project for the time being, and shall explore the possibility of further extension of cooperation on the new project by taking into account Japan's own measures to meet the new request afterwards.

The Embassy of Japan avails itself of this opportunity to renew to the Ministry of Foreign Affairs the assurances of its highest consideration.

Manila, 21 October 1981

資料6　比側のプロジェクト拡大構想

IMPLEMENTING ARRANGEMENTS

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Republic of the Philippines will continue to cooperate in implementing the Cagayan Agricultural Pilot Center Project (hereinafter referred to as "the Project") to sustain support to the rural development efforts being made under the Cagayan Integrated Area Development Program (hereinafter referred to as "the CIADP")for the purpose of promoting and accelerating the modernization and expansion of agriculture in the province of Cagayan.

2. The extension of the technical cooperation on the Project will be implemented in accordance with the Master Plan, as specified in Annex A. An Annual Work Plan for the Project shall be formulated on the basis of the Master Plan by the Joint Committee, as referred to in paragraph VII-3.

3. The Ministry of Agriculture - Office of the Minister (hereinafter referred to as "the MA-OMIN") will be the lead implementing office. When necessary, implementation will be jointly undertaken with pertinent line agencies and in coordination with other development projects included in the CIADP as well as other projects

under economic and technical cooperation between the two Governments within the province of Cagayan.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through the Japan International Cooperation Agency (hereinafter referred to as "the JICA") to provide at its own expense services of Japanese experts as listed in Annex B, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Japanese experts referred to in paragraph 1 above and their families will be granted in the Republic of the Philippines the privileges, exemptions and benefits under the Colombo Plan Technical Cooperation Scheme, as enumerated below:

   (1) Exemption from Income Tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad;

   (2) Exemption from custom duties, taxes, fees and other charges imposed in respect of personal and household effects of reasonable quantity which may be brought from abroad into the Republic of the Philippines, including one (1)

motor vehicle for each expert to be re-exported within six (6) months upon termination of their official duty;

(3) Entitlement of same medical and health facilities enjoyed by the Philippine Government officials; and

(4) Suitably furnished accommodation for the Japanese experts and their families at the project site.

III. PROVISION OF MACHINERY, IMPLEMENT, EQUIPMENT AND OTHER MATERIALS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through the JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex C through normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. Machinery, equipment and other materials as mentioned in paragraph 1 above, will be purchased in the Philippines by JICA from the grant's allotment for the fiscal year whenever it is indicated in the official request that the need for such is very urgent and/or where there is a need for the supplier to install and regularly service

these and/or the supplier has to train the operators; and

3. The articles referred to in paragraph 1 above, will become property of the Government of the Philippines upon being delivered C.I.F. to the APC and will be utilized mainly for the implementation of the Project in accordance with the recommendation of the Joint Committee.

IV. BUILDINGS AND STRUCTURES

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take measures through the JICA to construct at its expense buildings and structures indicated in Annex D.

2. The buildings and/or structures referred to in paragraph 1 above will become the property of the Government of the Philippines upon formal turn-over of same by the JICA and will be utilized mainly for the project.

V. TRAINING OF PHILIPPINE PERSONNEL

1. In accordance with laws and regulations in force in Japan, the Government of Japan will take necessary measures through the JICA to receive at its own expense Philippine personnel connected with the Project

for technical training and/or observation tour in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme

2. In accordance with laws and regulations in force in Japan, the Government of Japan through the JICA will take necessary measures to sponsor at its own expense Philippine personnel connected with the Project for degree and non-degree technical trainings at local and international institutions located in the Philippines.

3. The Government of the Republic of the Philippines will take necessary measures that the knowledge, expertise and experience acquired by Philippine personnel from the above mentioned trainings will be utilized effectively for the implementation of the Project.

VI. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

1. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures to provide at its own expense the following:

(1) Full-time services of permanent management, technical, administrative and other support

personnel as listed in Annex E aside from the services of temporary and/or contractual personnel which may be hired as the need arises;

(2) Services of Philippine counterpart experts as listed in Annex F and which may come from among the Project regular personnel or from the cooperating line agencies;

(3) Land, buildings and structures as listed in Annex G and other incidental facilities aside from those to be set-up by the JICA as mentioned in paragraph 2 IV-1, and including such buildings and structures not completed under the earlier phases of the technical cooperation on the Cagayan Agricultural Pilot Center Project;

(4) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and other materials necessary for the implementation of the Project other than those provided by the Government of Japan through the JICA as specified in paragraph III-1;

(5) Expenses necessary for the transportation within the Republic of the Philippines of the articles

referred to in paragraph III-1 as well as the cost for the installation, operation and maintenance thereof;

(6) Transportation facilities and travel allowances of the Japanese experts assigned to the APC for their official travel within the Republic of the Philippines in accordance with the Colombo Plan Technical Cooperation Scheme; and

(7) Other operating and maintenance requirements for buildings, structures and facilities and other current operating expenditures and capital outlays necessary for the implementation of the Project.

2. In accordance with the laws and regulations in force in the Philippines, the Government of the Republic of the Philippines will take necessary measures to exempt articles referred to in paragraph III-1 from custom duties, taxes, fees and other charges.

VII. MANAGEMENT AND ADMINISTRATION

1. The Government of the Republic of the Philippines through the CIADP as represented by the Project Director will have the authority and responsibility for the efficient and effective management and

administration of the Project. The Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.

2. A Joint Committee will be constituted for the successful implementation of the Project. The composition and functions of the Committee is specified in Annex H. The Committee will meet regularly or upon request of the Chairman and/or the Team Leader of the Japanese experts. The Joint Committee may create sub-committees to deal with specific problems.

3. In accordance with laws and regulations in force in the Republic of the Philippines, the Project may rent out machinery, equipment, facilities and other materials, collect fees for soil testing, seed testing and machinery custom servicing and sell the produce from experimental farms and seed production areas.

4. The proceeds from such rentals, service fees and sale of produce as mentioned in paragraph 3 above will constitute as a special account for the Project, which will be used exclusively for its implementation in accordance with laws and regulations in force in the Republic of the Philippines. The Annual Plan for the effective utilization of the account will be formulated by the Joint Committee as referred to in

paragraph VII-2.

VIII. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of the Philippines will be responsible for dealing with claims which may be brought by third parties against the Japanese experts and will hold them harmless in respect to claims or liabilities arising in the course of or otherwise connected with the discharge of their duties in the implementation of the Project except when such claims or liabilities arise from gross negligence or willful misconduct of the above-mentioned individuals. Should any question arise in connection with the foregoing, both Governments will immediately consult with each other.

IX. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments for effective implementation of these Implementing Arrangements.

X. TERM OF COOPERATION

The duration of the extension of the technical cooperation for the Project under these Implementing Arrangements will be three (3) years from the date of signature.

ANNEX A

THE MASTER PLAN OF THE PROJECT

In general, the objective of the extension of the technical cooperation on the Project is to sustain and intensify the implementation of the activities initiated under the previous APC master plans to contribute towards agricultural development in the province of Cagayan, particularly the introduction of intensive rice-based cropping system. Through the facilities and other resources of the Agricultural Pilot Center (APC) the activities enumerated and described hereon shall be undertaken during the extension period of the technical cooperation to develop and disseminate improved and appropriate rice-based cropping systems technology, to provide supportive services for the adoption of the improved technology and to institutionalize the implementation of these activities.

I. ACTIVITIES

The following activities have been started under the earlier phases of the technical cooperation to support the efforts being made under the CIADP for infrastructure and social development with the loans from the Overseas Economic Cooperation Fund of Japan. These activities were implemented as per provisions of the earlier Master Plans and are hereon reorganized and presented in a manner to make planning, monitoring, management and evaluation of these undertakings more systematic and efficient. The

specifics on the LEA II are also presented in this Master Plan.

1. General Agricultural Development Activities

In order to support the CIADP Office in Tuguegarao, Cagayan which functions as the core for the integration, coordination and monitoring of progress of related on-going and future development projects in Cagayan, the following are deemed necessary to be undertaken to attain the purpose of the Agricultural Development aspect of the previous Master Plan.

Activity 1.1 : Agricultural Data Center (APC)

Necessary studies and surveys shall be conducted by the APC-based agricultural data center. An agricultural library shall be established to analyze, process and store for easy retrieval data and other information collected for planners, policy makers, researchers, extension workers, students and other interested individuals and/or institutions. The library shall also be provided with reference materials for technical and general purposes.

Activity 1.2 : Soil Testing and Survey (APC? MA-R02)

A supportive operation started under the technical cooperation is the soil testing services provided

by the APC to farmers, researchers and institutions. The operation of the APC soil testing laboratory shall therefore be continued and intensified so as to provide adequate support to agricultural development activities in the province.

To maximize the benefits that shall be derived from trials conducted at the APC, a detailed survey on the capability and characteristics of the province's land resources shall be conducted. The result of the survey shall be the basis for the extrapolation of technology recommendation for various areas. This activity shall be jointly implemented by the APC and the Ministry of Agriculture, Regional Office II (MA-02).

Activity 1.3 : Agro-meteorological Monitoring (APC, PAGASA)

Similar to soil surveys, the monitoring of the agro-climatic conditions in various areas of the province is a supportive activity to agricultural development. The agro-meteorological observation stations established in Iguig and Camalaniugan and those to be set-up in Piat, Gonzaga and Sanchez Mira shall be maintained and the data continuously collected from these stations shall be analyzed and filed for

easy reference. Additional stations shall be established, if found necessary, within the extension period of the technical cooperation. This activity shall be jointly undertaken by the APC, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the concerned host institutions.

2. Cropping Systems Research

The development of location-specific rice-based cropping systems packages of technology has been the main thrust of the APC research activities. The following activities shall be pursued to further develop and refine technology packages to be recommended to farmers in various areas.

Activity 2.1 : Technology Development and Packaging (APC)

The research output of international, national and regional research stations shall be tested and modified to suit local conditions. The APC shall be the main test site for the development and packaging of the technologies appropriate for Cagayan conditions prior to testing these in various locations in the province.

The APC shall continue to conduct trials on (1) variety; (2) crop and soil management; (3) insect pest and disease control and management; (4) post-harvest handling and processing; and (5) cropping patterns. The economics of crop production and cropping systems shall be included in the studies to be conducted.

Activity 2.2 : On Farm Research (APC,MA-R02)

Applied research trials shall be conducted in farmers fields under various agro-ecological conditions to test the adaptability of the technology packages developed at the APC before these are recommended to farmers in the locality. Results of on-farm trials shall be fedback to the APC for appropriate action.

This activity shall be implemented in close coordination with MA-R02.

3. Agricultural Extension

The dissemination of technology through demonstration of improved agricultural practices and the provision of supportive services to accelerate adoption by farmers is the basic purpose of agricultural extension. Since the APC aims to transfer improved agricultural technology packages to the farmer, the following activities shall be implemented or increased in scope

to attain these objectives:

Activity 3.1 : Leading Extension Areas (LEA)

The Leading Extension Areas shall be made operational to serve as dmonstration blocks of improved agricultural practices developed by the APC. A feedback mechanism shall be set-up for the monitoring of actual and potential technological and socio-economic problems which may hinder the adoption of the technology by farmers in the LEA and the other service areas.

The originally identified area for LEA I shall be modified to suit actual situation in the field such that the Iguig and Alcala-Amulung Pilot Farms shall be renamed LEA-1A and LEA 1-B, respectively. These LEA's shall be expanded only upon completion of the permanent irrigation systems in these areas.

The present Lallo and Buguey Pilot Farms shall be renamed LEA-IIA and LEA-IIB, respectively. Both areas shall also be expanded as soon as irrigation and drainage facilities shall be completed.

Activity 3.2 : Model Farms

Model farms shall be set-up for the same purposes as the LEA's. These will be of smaller scale and located in areas far from the established

LEA and in areas not covered by the CIADP but with similar agro-climatic conditions. The same activities in the LEA's shall be undertaken at the Model Farms.

The model farms shall be supervised by MA-RO2 field workers with the advice of the APC.

Activity 3.3 : Extension Outreach Centers (APC,MA-RO2)

The extension outreach centers are physical facilities which shall serve as base for technology dissemination activities within and outside the CIADP's present irrigation project areas.Their establishment aims to maximize the dissemination of technology packages developed by the Project through on-farm training and technical assistance to farmers. These shall also serve as information dissemination and seed distribution centers.

The MA-RO2 shall operate these centers with the advice and support of the APC.

Activity 3.4 : Seed Production, Processing and Distribution (APC, MA-RO2)

Full implementation of this activity shall be undertaken to provide the seed requirement of the LEA's, the model farms and other farmers. It will include the continuance of the operation of the APC seed testing laboratory. Linkage with

government seed farms and seed growers shall be maintained.

The APC farm shall be expanded to provide sufficient production area to meet the expected seed requirements when the CIADP irrigation project shall be fully operational. Facilities for the processing storage and distribution of seeds shall also be set-up.

Under this activity, the APC shall also engage in the production and distribution of rice seeds for varieties which are not readily available and of planting materials for other crops recommended for the cropping patterns developed for various areas.

This shall be a joint activity of the APC and MA-RO2.

Activity 3.5 : Insect Pest and Disease Surveillance

Insect pest and disease surveillance which is presently undertaken at the APC experimental farms and at the adjacent Iguig Pilot Farm shall be expanded to the LEA's and model farms and eventually all over the project areas. The system for monitoring and forecasting of pest and disease incidence shall be developed and refined such that early warning and appropriate preventive/control recommendations shall

be provided to farmers. Parameters or factors which serve as indicators of pest and disease occurence shall be identified. This activity shall include the training of APC and MA-RO2 staff involved in the field extension on the mechanics of a surveillance and early warning system.

4. Educational, Promotional and Informational Services

The project has started dissemination and accelerated the adoption of packaged technology through various educational, promotional and informational activities. Such activities shall be enhanced under the extension period since these have proved very effective and economical methods for technology transfer.

These undertakings shall be conducted in close coordination with other agencies involved in research and extension.

Activity 4.1. Technical Training

Training of technical personnel and farmers particularly within the project areas shall be sustained. Classroom lectures, laboratory work, field practice, observation tours and other instructional techniques shall be utilized to impart knowledge and skills to the clientele. On-farm training of farmers and seminars, symposiums and workshops for technical personnel shall also be

conducted.

Activity 4.2 Agricultural Print Materials

The use of the print media as a tool for information dissemination shall be continued and strengthened. This shall involve development, production and distribution of print information materials on the technology packaged by the APC and on other related subjects for both technical personnel and farmers. This activity will include the augmentation of the APC printing facilities.

Activity 4.3. The Radio Broadcast Media

The present "University or School on the Air" program which utilizes the radio broadcast media shall be continued to provide an effective and relatively economical method of information dissemination on agriculture and related subjects. A radio station shall be set-up at the APC to be utilized in the implementation of this activity.

Activity 4.4. Agricultural Communication Research

The activity aims to identify appropriate communication strategies, tools and methodologies most effective and efficient for the transfer of technology to farmers in Cagayan. The activity

shall include surveys and gathering of related data/information for the development of appropriate audio-visual, print and broadcast materials including compilation of local equivalents of technical terminologies.

5. Agricultural Engineering

Farm machinery and implements, water management and the construction, operation and maintenace of farm facilities are the concern at the APC related to the field of agricultural engineering. As such, the Project shall undertake the following activities in this field:

Activity 5.1. Agricultural Engineering Research

The performance of farm machinery and implements shall be tested/evaluated to develop a system for the effective and economical utilization under local conditions. Tools and implements traditionally or locally used shall be studied for possible improvement in design and to possibly increase the durability to suit local conditions. Design and fabrication of manually operated equipment shall be given emphasis. Under this activity, researches on water management shall also be conducted.

Activity 5.2. Farm Machinery Custom Service

The provision of agricultural machinery support services to farmers in their land preparation, harvesting, threshing and post-harvest operations shall be sustained and expanded to cover the LEA I and II and the model farms. Farm machinery service centers shall be set-up in areas outside of Iguig. These service cneters shall be located near the LEA and model farms. Demonstration and training on post-harvest techniques shall also be undertaken.

II. SITE AND SIZE OF PROJECT FACILITIES

A. The Agricultural Pilot Center (APC)

The APC shall serve as the main facility for the implementation of the above mentioned activities under this project.

1. The APC Main Complex

The APC main complex estabished at Minanga Norte, Iguig, Cagayan shall be the main base for the Project's operations and management. The following buildings, structures and facilities shall form this complex:

a. Buildings -

a) Administration building;

b) Laboratory and Training building;

3) Dormitory;

4) Equipment and Machninery shed;

5) Drying and Milling shed;

6) Gasoline station;

7) Equipment and Machinery workshop and repair bay;

8) Green houses;

9) Residential houses for Experts and Counterparts;

10) Seed processing and storage building; and

11) Other incidental buildings and structures.

b. Farm Area -

The present six (6) hectare farm area used for research, training and seed production shall be expanded to about twenty (20) hectares to meet the additional requirements of the project.

2. The APC Sub-Station

A sub-station shall be established in the Lower Cagayan project area of CIADP. It shall serve as the base for applied research and extension activities in Lower Cagayan. The sub-station shall have a minimum area of one hectare and shall include the following buildings and structures:

1) Office building which will include a simple multi-purpose laboratory;

2) Agricultural equipment shed;

3) Working shed which will include a storage for

agricultural supplies and tools; and

(4) Staff quarter.

The center shall be properly fenced and provided with water and sewerage system.

B. The Leading Extension Area (LEA)

1) LEA-I

LEA-IA shall be located in contiguous privately owned farms at Iguig (Barangays Minanga Norte, Minanga Sur, San Lorenzo) with an area of about 60 hectares.

LEA-IB shall be located in contiguous privately owned farms at Alcala (Barangays Jurisdiccion and Baybayog) and Amulung (Barangays Jurisdiccion and Baculod) with an area of about 75 hectares.

2) LEA-IIA shall be located in Lallo (Barangay Catayauan) with a total area of 32 hectares.

LEA-IIB shall be located in Buguey (Barangay Dalaya) with a total area of 44 hectares.

C. Model Farms

Model farms shall be established at contiguous privately owned farm areas at the following locations:

1) Aparri
2) Camalaniugan
3) Allacapan
4) Ballesteros

The maximum areas for each pilot shall be 10 hectares.

D. The Outreach extension centers shall be established in Amulung, Lallo, Aparri, Camalaniugan to service the LEA's or model farms in these locations. CIADP irrigation project areas outside centers shall also be set-up at Ballesteros, Allacapan, Piat and Gonzaga. A typical center shall consist of an office building to serve as base for extension activities.

E. The Farm Machinery Service Centers

Farm machinery centers shall be set-up in the LEA I and LEA II and when possible in the other model farms. Facilities for the safekeeping, maintenance and repair and equipment shall be attached to the outreach centers in these places. A typical machinery center shall consists of a machinery shed with a simple workshop. Only the APC shall be equipped with post-harvest handling and processing facilities.

III. WORK PLAN, MONITORING AND EVALUATION

An Annual Work Plan shall be prepared at least two months before each fiscal year. It shall show in detail the work targets, schedules and resource requirement for various activities to be undertaken for the specified period.

A mechanism shall be developed and implemented for the effective monitoring and evaluation of activities. This will include assessment of the benefits derived from the technical cooperation and its impact in the areas covered.

ANNEX B

LIST OF JAPANESE EXPERTS

CATEGORY	FIELD
(1) Team Leader	
(2) Long Term Expert (one for each field)	Agronomy
	Crop Protection
	Irrigation Engineering
	Agricultural Machinery
	Soil Science
(3) Liaison Officer or Coordinator	
(4) Short Term Experts in specialized fields shall be requested and dispatched as necessity arises for short term assignment to the APC.	

ANNEX C

LIST OF MATERIALS, EQUIPMENT AND MACHINERY
TO BE PROVIDED BY THE GOVERNMENT OF JAPAN

1. Equipment, machinery, instruments, tools and their spare parts and other related materials needed for laboratory and research work.
2. Agricultural machinery and implements including post-harvest, seed processing and seed storage equipment and their spare parts.
3. Agro-climate recording and monitoring instruments and materials including their spare parts.
4. Equipment, tools and implements for soil and land survey.
5. Vehicles except sedan motorcars.
6. Audio-visual and mass media equipment and materials including equipment for printing press and a radio station.
7. Technical Books, pamphlets, journals, equipment and other materials for library and data storage and retrieval including a simple computer system.
8. Office equipment including inter-office communication equipment.
9. Other necessary equipment and materials to be mutually agreed upon by the authorities of the two governments.

ANNEX D

LIST OF BUILDING AND STRUCTURES
TO BE FUNDED BY THE GOVERNMENT OF JAPAN

1. Irrigation and drainage facilities for additional area at the APC.
2. Seed processing and storage facility.
3. Permanent pumping station for the APC model infrastructure.

ANNEX E

LIST OF REGULAR PHILIPPINE PERSONNEL

POSITION TITLE	NUMBER
1. Project Director, CIADP	1
2. Technical Director, APC	1
3. Deputy Technical Director, APC	1
4. Deputy Director for Operations, APC	1
5. Agricultural Specialists	2
6. Agricultural Statisticians	2
7. Technical Assistants	4
8. Administrative Service Staff	
a. Administrative Officer	1
b. Personnel Officer	1
c. Supply Officer	1
d. Records Officer	1
e. Cashier	1
f. Chief Security Officer	1
g. Property Custodian	1
h. Buildings and Grounds Maintenance Supervisor	1
i. Other administrative support staff such as clerks, guards/watchmen, janitors/utilitymen, drivers and others to be identified	-
9. Internal Audit and Fiscal Examination Staff	
a. Financial and Management Chief	1
b. Fiscal Examiner/Analyst	1
c. Fiscal Clerk	1

POSITION TITLE	NUMBER
10. Accounting and Budget Staff	
a. Chief Accountant	1
b. Accountant	1
c. Bookkeeper	1
d. Accounting Clerks	2
e. Budget Officer	1
f. Budget Examiner	1
g. Budget Aide	1
11. Crop Research Staff	
a. Plant Research Chief	1
b. Supervising Agronomists	2
c. Senior Agronomists	4
d. Agronomists	8
e. Junior Agronomists	5
f. Research Associates	6
g. Research Assistants	10
h. Research Aides	10
i. Farm Aides and other research support personnel	-
12. Agricultual Extension Staff	
a. Agricultural Extension Chief	1
b. Supervising Agricultural Extension Specialists	2
c. Agricultural Extension Supervisors	4
d. Agricultural Project Development Coordinators	4
e. Farm Management Technicians, etc	10

POSITION TITLE	NUMBER
13. Rural Education Staff	
a. Supervising Science Education Officer	1
b. Senior Science Education Officers	2
c. Science Education Officers	4
d. Chief Artist Illustrator	1
e. Artist Illustrators	-
f. Photographers	-
g. Audio-visual operators/technicians	-
h. Writers/Editors/Librarian	-
i. Press Operators, etc	-
14. Agricultural Engineering Staff	
a. Chief Agricultural Engineer	1
b. Supervising Agricultural Engineer	1
c. Senior Agricultural Engineers	2
d. Agricultural Engineers	3
e. Junior Agricultural Engineers	4
f. Light and Heavy Equipment Operators	-
g. Engineering Draftmen, etc	-
15. Machinery and Automotive Equipment Staff	
a. Chief Automotive Equipment Engineer	1
b. Automotive Equipment Engineer	1
c. Automotive Shop Superintendent	1
d. Automotive Mechanics	-
e. Automotive Electricians	-
f. Automotive Serviceman, Mechanic Helpers, etc	-

POSITION TITLE	NUMBER
16. Laboratory Staff	
a. Senior Soil Technologist	1
b. Soil Technologist/Technicians	4
c. Soil Laboratory Aide	4
d. Plant Pathologists	2
e. Plant Entomologists	3
f. Plant Pest Control Workers	5
g. Plant Pest Laboratory Aides	2
17. Radio Station Personnel	
(Positions to be identified later)	

NOTE: Other temporary, contractual or emergency employees shall be recruited as the need arises.

ANNEX F

FIELD OF SPECIALIZATION OF PHILIPPINE COUNTERPART EXPERTS

1. Soil Science
2. Crop Protection
3. Agronomy
4. Farm Machinery Operations, Repair and Maintenance
5. Fam Machinery Research and Design
6. Irrigation and Drainage Engineering
7. Agricultural Extension and Communications

NOTE: As the need arises Specialists in other fields may be detailed to the APC from line agencies or contracted for specific activities on a short term basis.

ANNEX G

LIST OF LAND, BUILDINGS AND STRUCTURES
TO BE FUNDED BY THE PHILIPPINE GOVERNMENT

1. LAND

   a. Additional fourteen (14) hectares farm land for the APC Main Complex.

   b. Land for the APC Sub-Station in Lower Cagayan - one (1) hectare.

   c. Land for the Outreach Centers and Farm Machinery Service Stations - total of two (2) hectares.

2. BUILDINGS AND STRUCTURES AT THE APC COMPLEX NOT COMPLETED IN THE EARLIER PHASES OF THE TECHNICAL COOPERATION

   a. Storehouse for farming materials;

   b. Equipment and machinery workshop and repair bay;

   c. Equipment management building;

   d. Drying and milling shed;

   e. Greenhouse;

   f. Power shed;

   g. Domestic water system;

   h. Domestic drainage and sewerage system; and

   i. Duplex Guest Houses (2 units)

3. ADDITIONAL BUILDINGS AND STRUCTURES

   a. Lower Cagayan Sub-Station

      (1) Office building;

      (2) Work shed and storage building for farm tools and agricultural materials;

3) Machinery shed;
4) Staff quarters
5) Fencing of the compound; and
6) Domestic water and sewerage system.

b. Office buildings for the seven (7) Outreach Extension Centers

c. Sheds and workshops for four (4) Machinery Service Centers

d. Buildings and structures for Radio Station to be located at the APC main complex

ANNEX H

COMPOSITION AND FUNCTIONS
OF THE
JOINT COMMITTEE

1. COMPOSITION

a. Chairman : Project Director

b. Members

JAPANESE SIDE	PHILIPPINE SIDE
(1) Team Leader of Japanese Experts	(1) Technical Director, APC
(2) Experts	(2) Chiefs of the APC Line Divisions
Agronomy	
Crop Protection	
Irrigation Engineering	
Agricultural Machinery	
Soil Science	
(3) Liaison Officer	(3) Counterpart Specialists
(4) Representative of JICA Manila Office	(4) Representative of the Office of the Governor, Cagayan
	(5) Representative of MA-RO2
	(6) Representative of NEDA-RO2

II. FUNCTIONS

(1) Formulates the detailed annual work plan to implement the Project;

(2) Serve as forum for maintaining technical cooperation through technical assistance and advice;

(3) Thresh out technical problems that may arise in the course of implementation; and

(4) Prepare periodic reports on the Project for submission to both governments.

ANNEX I

PROJECT FUNDS TO BE PROVIDED BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

(YEARLY REQUIREMENT ₱000)

ITEMS	YEAR I* (1982)	YEAR II (1983)	YEAR III (1984)	TOTAL
I. Current Operating Expenditures (COE)				
A. Personal Services	1,892	2,378	2,559	6,829
B. Maintenance and other Operating Expenses	5,126	6,872	7,824	19,822
SUB-TOTAL	7,018	9,250	10,383	26,651
II. Capital Outlay				
A. Land, Buildings and Structures	9,987	-	-	9,987
B. Equipment	300	350	100	750
SUB-TOTAL	10,287	350	100	10,737
TOTAL.....	17,305	9,600	10,487	37,388

*This includes the amounts appropriated to the APC for CY 1982 as follows:

COE = ₱6.026 M CO = ₱980,000

資料7　CIADP－APCに係る比側支出経費

APC-CIADP FUNDING
1979-1982

ITEMS	1979 ACTUAL RELEASE *	1980 ACTUAL RELEASE*	1981 ACTUAL RELEASE**	1982 APPROPRIATION***	TOTAL
1. PERSONAL SERVICES (Salaries, Wages, etc)	₱ 760,000	₱2,363,000	₱2,325,000	₱1,682,000	₱ 7,130,000
2. MAINTENANCE AND OTHER OPERATING EXPENSES	1,140,000	4,540,000	4,838,000	4,344,000	14,862,000
3. EQUIPMENT OUTLAY	0	30,000	-	220,000	250,000
4. CAPITAL OUTLAY (Land, Buildings, Structures)	1,029,500	1,890,000	4,400,000	760,000	8,079,500
T O T A L.....	₱2,929,500	₱8,823,000	₱11,563,000	₱7,006,000	₱30,321,500

* Actual release for CIADPO and APC except for Capital Outlay which is exclusive for the APC. Breakdown between the two offices for 1979 and 1980 is not available.

** Actual release for both CIADPO and APC. Sub-allotments are as follows:

	APC	CIADPO
1. Personal Services	₱1,525,000	₱800,000
2. Maintenance and other operating expenses	2,938,000	1,900,000
3. Capital Outlay	4,400,000	0

*** All appropriated to the APC. Estimated amount to be deducted as mandatory reserves is ₱700,000.

PREPARED BY:

VICTOR [illegible]
Acting Chief
Financial Mgt. Staff

NOTED:

EDMUND J. SANA
Technical Director, APC

SCHEDULE I

AGRICULTURAL PILOT CENTER
SUMMARY OF CAPITAL OUTLAY
CY 1977-1981

SOURCE OF FUNDS	AMOUNT APPROPRIATED	RESERVED	RELEASES	DATE OF RELEASE	ACTUAL EXPENDITURES	UNEXPENDED BALANCE	REMARKS
Kennedy Round Donation from the Government of Japan	₱1,500,000	₱ -	₱1,500,000	1978	₱1,500,000	₱ -	Directly released to MPWTC
P. D. 1250	2,500,000	162,000	1,740,000	1978	1,020,375.54	719,624.46	-do-
			598,000	1978	398,532.18	(199,467.82)	Released to CIADP and balance was reverted to the Treasury.
B. P. Blg. 1	2,000,000	970,500	1,029,500	1979	360,602	668,898	Balance revalidated for 1981
B. P. Blg. 40	2,100,000	210,000	1,890,000	1980	279,054	1,610,946	Balance revalidated for 1981
Exchange of Notes between the Phil. and Japan re: Proceeds of Rice Donation from NGA	2,000,000	-	2,000,000	1978	-	2,000,000	The amount of ₱ 1M was given to CIADP and the other half will be released by MA upon submission of status of work completed
B. P. Blg. 80	5,500,000	1,100,000	4,400,000	1981	-	4,400,000	Including programmed 4th quarter release
T O T A L	₱15,600,000	₱2,442,500	₱13,157,500		₱3,558,563.72	₱9,398,936.28*	

* Unexpended Balance - Amount Reverted = Actual Amount Available

₱9,598,936.28 - ₱199,467.82 = ₱9,399,468.46

SCHEDULE II

AGRICULTURAL PILOT CENTER
SUMMARY OF COST OF BUILDINGS AND STRUCTURES

PROJECT TITLE	PROJECT COST	AMOUNT DISBURSED	ACCOUNTS PAYABLE (OBLIGATED)	REMARKS
1. APC Main Building (Including Landscaping)	₱3,514,809.65	₱2,918,907.72	₱ 209,747.25 386,154.68	Cardella Construction MPH
2. Drainage Pump House	32,600	32,600	-	Completed by administration
3. Prawn Hatchery	215,530	185,530	30,000	Various creditors by administration
4. Model Infra Pumping Station	30,000	17,950.90	-	Project discontinued due to total damage by floods
5. Fencing of the APC Compound	352,031	349,500.20	2,530.80	Various creditors by administration
6. Agro-Met Station (Iguig)	20,622	20,622	-	Completed by administration
7. Agro-Met Station (Camalaniugan)	35,500	33,452.90	2,047.10	Completed by administration
8. Laboratory and Training Building	1,630,000	-	574,500	Construction on-going
9. Training Dormitory	2,690,000	-	403,500	-do-
10. Farm Machinery and Equipment Shed	1,234,555.70	-	185,183.36	-do-
11. Gasoline Station	220,253.36	-	33,038	-do-
12. Duplex Experts' House	1,160,000	-	163,500	-do-
13. Drying and Milling Shed	718,000	-	-	Plans and designs completed

PROJECT TITLE	PROJECT COST	AMOUNT DISBURSED	ACCOUNTS PAYABLE (OBLIGATED)	REMARKS
14. Domestic Drainage and Sewage System	550,000	-	-	Estimated amount for the whole APC complex, plans and designs being prepared
15. Domestic Water System	700,000	-	-	-do-
Power House	20,000	-	-	Plans, designs and program of work completed, to be constructed by Administration
17. Agro-Met Station (Piat)	46,000	-	-	-do-
18. Agro-Met Station (Gonzaga)	42,000	-	-	-do-
19. Agro-Met Station (Sanchez Mira)	38,000	-	-	-do-
20. Vehicle and Equipment Workshop and Repair Bay	770,000	-	-	Estimated amount, plans and designs completed
21. Green House	510,000	-	-	-do-
22. Improvement of the APC Model Infrastructure (Irrigation and rod system)	310,000	-	-	Estimated amount
Additional Experts' Duplex Jouse (2 Units)	2,320,000	-	-	Plans and designs completed
24. Renovation of the APC Main Building	450,000	-	-	Plans and program of work partially
TOTAL	₱12,807,901	₱3,558,563.72	₱1,963,201.19	

SCHEDULE [illegible]

AGRICULTURAL PILOT CENTER
STATUS OF [illegible] CAPITAL PROJECTS

[illegible]	TOTAL PROJECT COST (2)	TOTAL DISBURSEMENT TO DATE (3)	AMOUNT REQUIRED TO FINISH: CHARGED TO UNEXPENDED BALANCE (4)	AMOUNT REQUIRED TO FINISH: ADDITIONAL APPROPRIATIONS/ RELEASES NEEDED AS OF 1981 (5)	1982 BUDGET PROPOSAL (6)	ADDITIONAL APPROPRIA-TIONS/RELEA-SES REQUIRED (5-6=7) (7)	REMARKS
[illegible] APC Main Building (Including Landscaping)	₱ 3,514,809.65	₱2,918,907.72	₱ 595,901.93	-	-	-	Construction completed
[illegible] Drainage Pump House	32,600	32,600	-	-	-	-	Completed
3. Prawn Hatchery	215,530	185,530	30,000	-	-	-	95% completed
[illegible] [illegible]al Infra Pumping Station	30,000	17,950.90	-	-	-	-	Discontinued
[illegible] Fencing of the APC Compound	352,031	349,500.20	2,530.80	-	-	-	Completed
6 Agro-Met Station(Iguig)	20,622	20,622	-	-	-	-	-do-
7. Agro-Met Station (Camalaniugan)	35,500	33,452.90	2,047,10	-	-	-	-do-
8. Laboratory and Training Building	3,830,000	-	3,830,000	-	-	-	Construction on-going
9. Training Dormitory	2,960,000	-	2,[illegible]0,000	-	-	-	-do-
10. Farm Machinery Equipment Shed	1,234,555.70	-	[illegible]	-	-	-	-do-
[illegible] Station	220,[illegible]3.36	-	220,253.36	-	-	-	-do-
[illegible] Experts' [illegible]	1,160,000	-	[illegible]94,179.57	₱ 365,820.43	-	₱ 365,820.43	-do-
[illegible]	718,000		-	718,000	-	718,000	Equipments on hand
[illegible] Drainage and [illegible] System	550,000	-		550,000	-	550,000	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	REMARKS
15. Domestic Water System	₱ 700,000	-	-	₱ 700,000	-	₱ 700,000	For pumps, tank and distribution lines
16. Power House	20,000	-	-	20,000	-	20,000	Equipments on hand
17. Agro-Met Station(Fiat)	46,000	-	-	46,000	-	46,000	-do-
18. Agro-Met Station (Gonzaga)	42,000	-	-	42,000	-	42,000	-do-
19. Agro-Met Station (Sanchez Mira)	38,000	-	-	38,000	-	38,000	-do-
20. Vehicle and Equipment Workshop and Repair Bay	770,000	-	-	770,000	-	770,000	-do-
21. Green House	510,000	-	-	510,000	-	510,000	
22. Improvement of the APC Model Infrastructure (Irrigation and road system)	310,000	-	-	310,000	310,000		Repair of irrigation and road system
23. Additional Expert's Duplex Duplex House (2 Units)	2,320,000	-	-	2,320,000	-	2,320,000	
24. Renovation of the APC Main Building	450,000	-	-	450,000	450,000		Renovation of ceiling, windows, electrical system plumbing
T O T A L	₱19,907,991.71	₱3,558,563.72	₱2,399,[illegible].46	₱[illegible].43	₱ 760,000	₱6,079,800.43	

資料8　APC各部の活動報告

資料8－1　REPORT OF THE CROP RESEARCH DIVISION : 1976-81

Carlos J. Andam
Division Chief, CRD

The Agricultural Pilot Center (APC) serves as a facility for agricultural research, technology packaging and information dissemination necessary for the introduction and adoption of innovation on farming systems. These objectives are jointly implemented by the four technical divisions of the APC, one among which is the Crop Research Division (CRD).

The CRD has undergone development. Named Agricultural Research Operations Staff (AGROS) from November 1976 to December 1977, it had exercised four functions: crop production, seed production, crop protection and soil and water management. The organizational structure of AGROS is shown in Figure 1.

With the need to reorganize the APC, AGROS was renamed Technology Development Division (TDEVD) in 1978 until December 1980. Charged to develop crop production technology to increase farm productivity, TDEVD was bound to perform technology generation, technology verification and packaging and laboratory services. Figure 2 shows the organizational structure of the TDEVD.

Effective January 1981, TDEVD was transformed into what is now the Crop Research Division. The division maintains the same responsibilities except for the laboratory services which was transferred to the Farm Services Division (FSD). However, by October of the same year, the crop protection unit was restored to its former mother division.

The CRD is primarily responsible for the development of agricultural technology through area-based applied researches. Operationally, it aims to develop appropriate crop production technology that will increase farm productivity.

In the fulfilment of its important role in technology development, the CRD is implementing an on-farm cropping systems research and development for Cagayan in collaboration with the Minsitry of Agriculture (MA-Region 2), National Food and Agriculture Council (NFAC), Philippine Conncil for Agriculture and Resources Research (PCARR), International Rice Research Institute (IRRI), other agricultural Institutions and the line divisions of the APC.

GENERAL FUNCTIONS

In line with the government's goal to achieve food self-sufficiency, the CRD conducts researches on different crop varieties and production practices suited to specific locations.

Generally, the CRD has the following functions:

1. Cropping systems Research
2. Component Technology Research

Cropping Systems Research

Towards the ultimate objective of developing improved crop production technology acceptable to farmers, the cropping systems research aims to evaluate the existing rice and corn-

based cropping systems in the province and to develop verification of technology to improve cropping systems.

The program adopts the six steps of cropping systems research methods:

1. Selection of cropping systems site - Target sites are given priority on the basis of their characteristics to represent the various land types of production environment and potentials that occur in the province.
2. Site description - Target sites are selected on the basis of the existing cropping pattern and the physical, biological and socio-economic environment.
3. Cropping pattern design - This phase defines the design of the alternative cropping pattern adapted to areas and are specified based on existing knowledge and local methods.
4. Test of cropping pattern - Alternative cropping pattern management are tested in the respective environment at the farmers' fields.
5. Applied reseafch and pre-production program - The most profitable pattern is recorded for a period of 2-3 years within the specific area for which they are designed. The result is further tried in extrapolation areas.
6. Production program - Line agencies and agricultural sectors start the production program as soon as cropping patterns and specified management practices are identified.

Component Technology Research

This program is geared towards testing and developing location-specific technology. It consists of important components in the development of cropping patterns; varietal testing, soil and water management, crop protection research and development and weed control.

Varietal testing - This component covers legumes, vegetables and cereals conducted in targeted areas under different agro-ecological situations. Promising varieties will be further evaluated in the multi-location cropping pattern testing.

Cropping protection - Conducts studies using research-managed and superimposed trials. Cultural practices for different crops are adopted except for insect control practices.

Soil and crop management - The adaptability of the crop to certain location and soil fertility are some of the factors that limit crop production. To give emphasis on these, studies on soil and crop management are conducted to develop specific package of technology on cereals, legumes and vegetables under different agro-ecological situations.

Weed control - Methods of controlling weeds are conducted to provide alternative methods of control which are technically feasible and economically viable. Monitoring of weed population in the cropping pattern plots and collection and identification of weeds are also conducted.

CRD ORGANIZATIONAL STRUCTURE

The CRD is the largest of four technical divisions in terms of manpower (Fig. 3). It is headed by a division chief who plans and coordinates the various activities of the division. Under his office are the consultants who provide technical assistance in the planning and implementation of programs and projects and the monitoring unit that keep track and evaluate the projects.

The core staff is grouped into two research sections: Cropping Systems and Component Technology. Each section undertakes researches on rice and corn-based cropping systems.

RESEARCH ACTIVITIES

Reference of the finished and on-going researches are indicated in Table 1 while the schedule of activities is shown in Table 2.

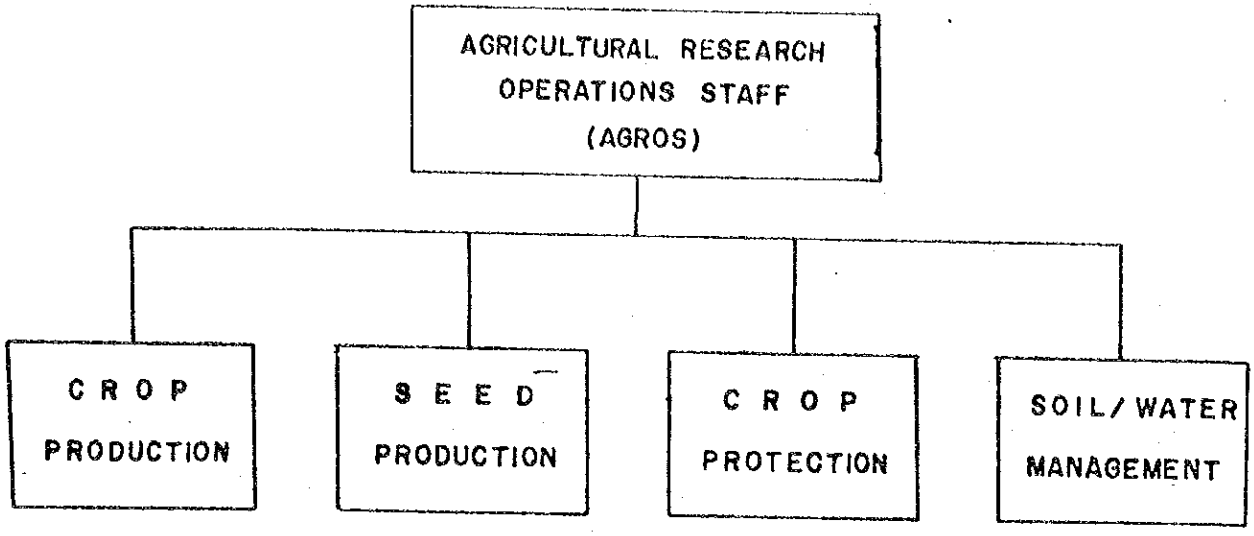


FIGURE 1. ORGANIZATIONAL STRUCTURE OF AGRICULTURAL RESEARCH OPERATIONS STAFF (1976-1977)

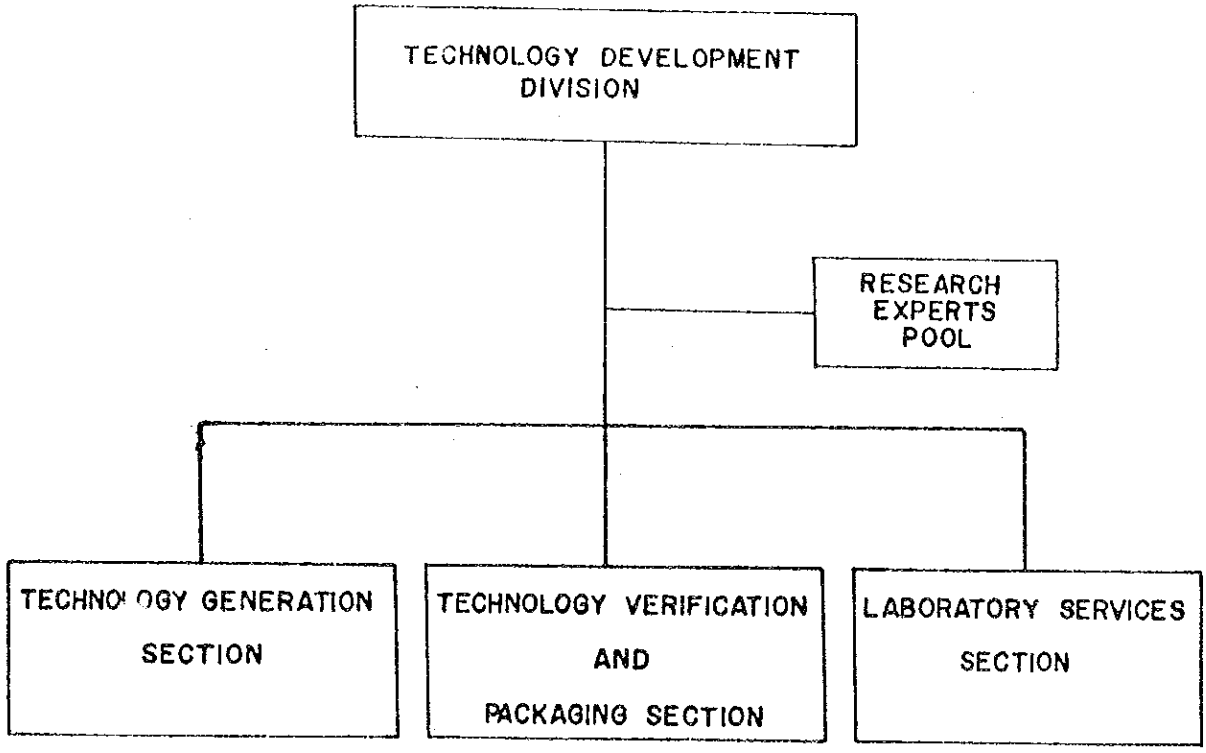


FIGURE 2. ORGANIZATIONAL STRUCTURE OF THE TECHNOLOGY DEVELOPMENT DIVISION (1978-1980)

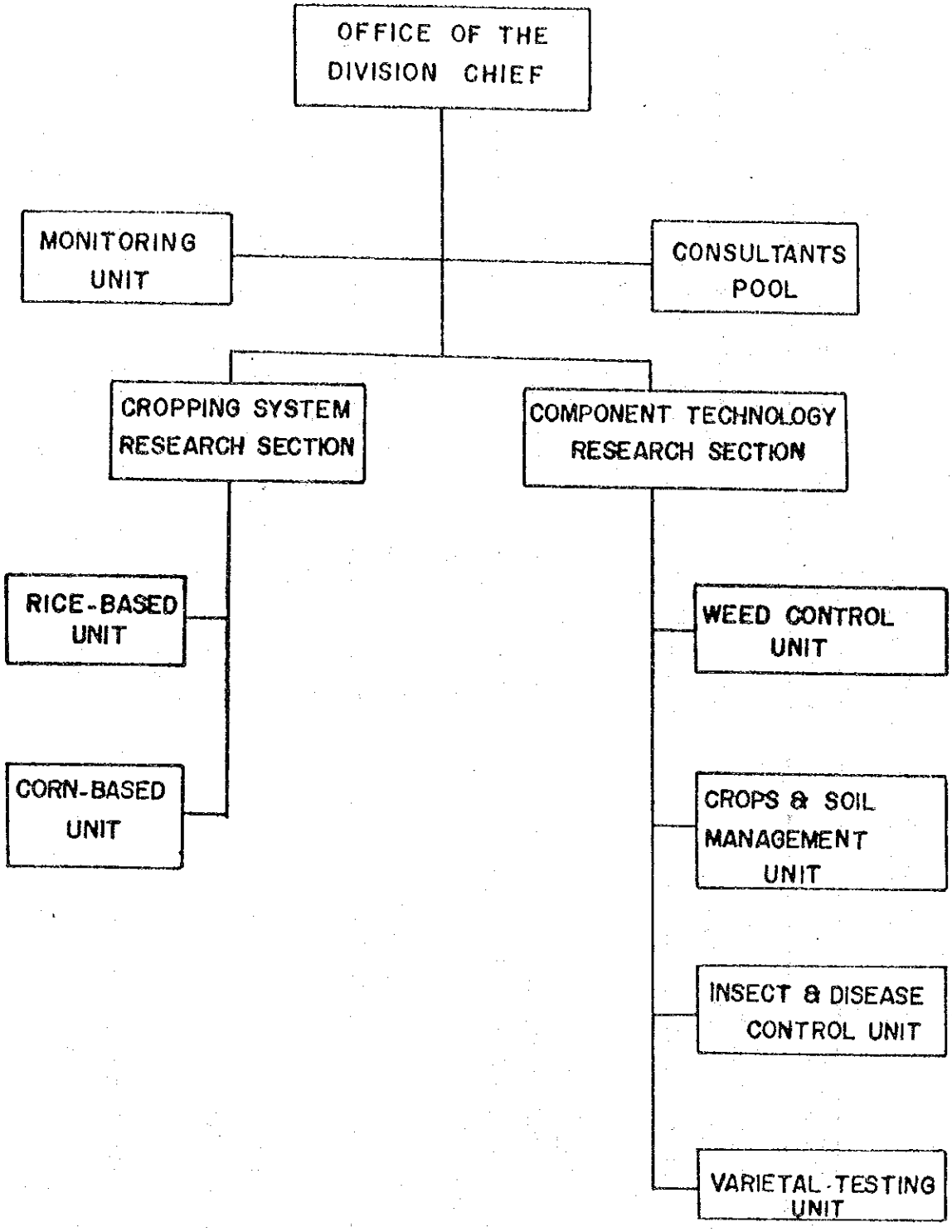


FIGURE 3. ORGANIZATIONAL STRUCTURE OF THE CROP RESEARCH DIVISION (1981)

TABLE I ACTUAL RESULTS AND EVALUATION

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
RD (1976-1978)	
Field Performance of Selected Rice Varieties Under Calantac, Alcala conditions	IR36, IR38, and IR2153-26-3-7 attained a yield of 142, 128, and 164 cav/ha. respectively.
M/A (1979)	
Response of IR42 to Varying Fertilizer Levels in Padapada Clay Soils (Wet and Dry season)	Based on economic analysis, 50-30-0 and 70-30-0 NPK is recommended for the wet and dry season respectively.
Yield TRial of IR36 Subjected to Different Water Management Practices (wet season)	Either continous flooding (Nakaboshi drainage) or intermittent irrigation is adapted during the wet season planting.
Weed Control Trial on Transplanted Irrigated Lowland Rice	Application of 2,4-D at 4 and 30 DAT + 1 rotary weeding reduced weed population to as low as 6 per square meter.
The Effect of Different Levels of Management on the Yield of IR36 (Wet and Dry season)	The study showed that the following level of managment proved better than the other levels tested: 90-20-30 NPK/ha applied basally; 21-0-0 top..

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
	dressed 25-30 DAT Rotary weeding + handweeding at 30DAT Seed soaked in Furadan 3G for 12-24 hours, and seedlings in 0.12 % concentration for 12 hours. Spraying seedbed with Azodrin 168 at 0.5kg a.i/ha 10 DAS Spray Gamma BHC at 1.0 kg. a.i/ha 5 - 6 DAT Apply Furadan 3G at 0.5 kg. a.i/ha 25 and 45 DAT Spray Azodrin 50 WP at 0.4 kg. a.i/ha 60-65 DAT
The Effect of Varying Transplanting Distances on the Yield of IR42	A 15 x 30cm spacing attained ayield to as high as 6.69 t/ha. Closer spacing increases fertilizer absorption per unit area and reduced photosynthetic activities due to shading.
Variety Applied Research Trial	IR224-22, IR9761-8-2, IR9224-117 and IR9608-298 were reported to be promising.
Continous Rice Production System (Rice Garden)	May to June is best for wet planting season and November to December for the dry planting season. Production of rice utilizing land labor to the maximum is possible.

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
Response of IR36 Applied with Three Nitrogen Source Fertilizer at Different Growth Stages (Dry season)	IR36 responded to ammonium sulfate applied at maximum tillering and panicle initiation stages. Urea is effective when applied at maximum tillering and panicle initiation stages.
Component Technology Studies on 40-day old Rice Seedlings	40-day old IR 36 seedlings with 6 seedlings/hill yielded as high as 6.63 t/ha. 40-day old seedlings which were not pruned performed best. Split application of fertilizer at seedbed plus the recommended basal treatment is best in terms of yield when using 40-day old seedlings. Spray insecticides only when necessary is beneficial to 40-day old seedlings.
First Cooperative Winged Bean Variety Evaluation	Of the varieties tested, UPS32 had the greatest bean weight. Thailand variety produced low yield but showed resistance to aphids and powdery mildew.
All Philippines Vegetable Trials for Cagayan	General Trials: The test on cabbage showed that KY-Cross out-

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
	yielded Copenhagen Market and Glory of Enkhuzen. Results of trials in Lallo, Iguig and Piat showed that Multiple Dingras (eggplant) has the highest yield potential. Of the 16 varieties of tomato tested, BPI TM-1 and 11-530-4-4-N-8-N-1-N out-yielded all other varieties. Regional trials: In terms of yield, Yolo Wonder had the most. Although the variety had the lowest number of cluster/plant, fruit sizes are comparatively big. For eggplant varieties tested, Multiple Dingras outyielded other varieties but of slight difference with 72-31-439-15-3 and Ilocos Green round. These varieties were proven to have high yield potentials. Eight tomato varieties were tested and found out that C32D-0-1-4-0-1-N, 14-4175 and R-3034-N-5-UG had high yield potentials. However, H-4175 is encouraged for commercial production because of its low seed content.

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
M/A (1980)	
Component Technology Trials for Lowland Irrigated Transplanted Rice (Iguig Pilot Farm)	The rate of 80-0-0 kg NPK/ha is the most economical level of fertilizer. Basal application of Furadan 3G at 1.0 kg. a.i/ha + spraying Azodrin at 35 and 55 DAT and 0.75 kg a.i/ha of Sevin 65 DAT had the lowest weed weight and had attained the highest yield of 7.66 t/ha. Basal application of Furadan 3G alone had the highest yield and the most economical method of control.
Component Technology Trials for Irrigated Transplanted Rice (Alcazela-Amulung Pilot Farm)	Yield and height increased with an increase in nitrogen rate from 40-80 kg/ha. Insect control is applied only when infestation occurs at economic threshold level. No herbicide treatment is needed when good control of water is attained. IR50 rice variety is recommended for planting.
Component Technology Trials for Lowland Irrigated Transplanted Rice (Pattao, Buguey)	80-40-0 kg NPK/ha is recommended. Basal application of Furadan 3G alone is best. Application of 1.5 kg a.i/ha Machete 5G at 4 DAT + spot weeding at 11-25 DAT is recommended.

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
The Effect of Liming and prolonged Sub-emergence on the Chemical Changes and Yield of IR36 on Acid-Sulfate Soils in Lower Cagayan	Leaching + 2,000 kg CaCO3/ha increases the pH from 3.6 to 5.24.
Adaptability of Azolla Under Field Condition	Azolla is well adapted under field conditions. Azolla doubles its rate and growth in 4-6 days.
Increasing Fertilizer Efficiency by Deep Placement	Fertilizer placement is deep to increase the efficiency of fertilizer.
Granular Herbicide Applied Research Trial on Transplanted Irrigated Lowland Rice	Saturn D + hand weeding is effective.
M/A (1981)	
Component Technology Trials for Irrigated Transplanted Rice (Iguig Pilot Farm)	Basal application and topdressing of fertilizer at 45-50 DAT for IR36 and IR50 and 60-65 DAT for IR42. Control insect pests when infestation oc-

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
	cure and its expected to reach economic threshold level.
Determining the Effectiveness of Azolla-anabaena Complex as a source of Nitrogen Fertilizer	Crop yield responded to the application of Azolla in combination with inorganic fertilizer applied basally. Also, Azolla application of 2.5 t/ha 17 DBT give similar effect of inorganic fertilizer at 70-30-0 NPK/ha.
Performance of White Potato in Three Different Soil Types of Cagayan	Light and well-drained soils with decomposed farm manure is best for potato.
Performance Test of Promising Upland Crops Grown After Rice Under Zero Tillage Condition	Considering the yield, crop varieties having the greatest yield were CES2-23 for peanut, BS6(LBBS #1 x C01)4-1-1-1 for bush sitao, Vita 3 for Cowpea CES-55 for mungbean, Clark 63 for Soybean and BNAS 51 for sweet potato.
The Effect of Rice Straw Mulch on Soil Moisture Profile and Performance of Mungbean After Lowland Rice	Rice straw mulch is applied to crops under zero tillage after lowland rice gives promising yield. Mulch reduces evaporation loss of moisture and prevents weed growth.

ACTIVITY	HIGHLIGHTS AND POINTS AT ISSUE
Component Technology Trials for Irrigated TPR at Lallo and Buguey Pilot Farm	IR36 and IR50 had no significant differences on varying fertilizer levels. Different weed control method did not cause any variation on the yield of the crop. Considering the yield and tillering capacity, IR9728-51-1-2 and IR9209-294-1-2-3-3 are promising.
Component Technology Trials for Irrigated Transplanted Rice at Alcala-Amulung Pilot Farm	N, P and K showed no effect on the yield of IR50 IR36 and IR42. Under research-managed superimposed trials different insect control methods had not significantly affected grain yield. For both research-managed and superimposed trials, treatments did not affect the weed wt. and yield of the crops. However, spot weeding should be done any time depending upon the occurence of weeds.
Cropping Systems Survey in Selected Municipalities of Cagayan	Data analysis
Field Adaptation of Soybean Cultivars	Data analysis

A C T I V I T Y	HIGHLIGHTS AND POINTS AT ISSUE
Yield Verification Trial of Japanese Variety (Taichung 65) Under Different Spacings and Fertilizer Rates Under Cagayan Conditions	Data analysis
Virus Diagnosis on Indicator Plants*	On-going
The Effect of Calcium Peroxide in Seedling Emergence and Yield of Direct Seeded Rice Under Flooded Condition	Data analysis
Ecological Studies of Insect Pests, Diseases and Weeds in Association with Field Crops in Cagayan**	On-going
Water Analysis on the Proposed Pumping Site of CIADP Areas	On-going
On-farm Cropping Systems Research and Development Program for Cagayan	
a. Fully Irrigated Rice Area (Tabungao, Gonzaga)	On-going
b. Partially Irrigated Area (Alcal-Amulung and Gadu, Solana)	On-going

* JICA Project

** M. S. Thesis by M. Gaspar, UPLB

A C T I V I T Y	HIGHLIGHTS AND POINTS AT ISSUE
c.Rainfed Rice Area (Allacapan)	On-going
d. Upland Area (High elevation) (Tapel, Gonzaga)	On-going
e. Upland Area (Riverflood plains) (Temblique, Baggao)	On-going

TABLE 2. SCHEDULE OF ACTIVITIES

	YEAR							
	1976- 78	1979	1980	1981	1982	1983	1984	1985- 86
I APC MODEL INFRASTRUCTURE								
A. Rice								
1. Component Technology								
a. Variety Trial	———	———	———	———	- - -	- - -	- - -	- - -
b. Fertilizer Trial	———	———	———	———	- - -	- - -	- - -	- - -
C. Insect Control Trial	———	———	———	———	- - -	- - -	- - -	- - -
d. Weed Control Trial	———	———	———	———	- - -	- - -	- - -	- - -
e. Azoll Trial			———	———	- - -	- - -	- - -	- - -
f. Calcium Peroxide Trial				———	- - -	- - -	- - -	- - -
g. Other Trial			———		- - -	- - -	- - -	- - -
2. Cropping Systems								
a. Rice Garden		———						
b. Rice - Rice/Mung -Rice				———	- - -			
B. Upland Field Crops								
1. Mungbean Variety TRial				———	- - -	- - -	- - -	- - -
2. Cowpea Variety Trial				———	- - -	- - -	- - -	- - -
3. Sorghum Variety Trial				———	- - -	- - -	- - -	- - -
4. Bush Sitao Variety Trial				———	- - -	- - -	- - -	- - -
II. LEADING EXTENSION AREAS I								
A. Component Technology								
1. Variety Trial		———	———	———	- - -	- - -	- - -	- - -
2. Fertilizer Trial		———	———	———	- - -	- - -	- - -	- - -
3. Insect Control Trial		———	———	———	- - -	- - -	- - -	- - -
4. Weed Control Trial		———	———	———	- - -	- - -	- - -	- - -
B. Cropping System DSR - TPR - Mung/Mung- TPR/ Mung				———	- - -	- - -	- - -	- - -

TABLE 2. Continuation

	1976 - 78	1979	1980	YEAR 1981	1982	1983	1984	1985- 86
III. LEADING EXTENSION AREA II								
1. Variety Trial			———		- -			
2. Fertilizer Trial			———		- -			
3. Insect Control Trial			———		- -			
4. Weed Control Trial			———		- -			
IV. LEA I SERVICE AREA								
1. Variety Trial	———							
2. Weed Control Trial				———				
V. PROVINCE WIDE								
A. Cropping Systems								
1. Rice-based				———	- -			
2. Corn-based				———	- -			
B. Component Technology								
1. Rice				———	- -			
2. Upland Field Crops				———	- -			
3. Vegetable Crops		———			- -			
4. Wheat		———						
5. Root Crops					- -			
VI. CROPPING PATTERN SURVEY				———	- -			

資料8－2

AGRICULTURAL PILOT CENTER
FARM SERVICES DIVISION
ACCOMPLISHMENT REPORT, 1976-81

CALENDAR YEAR	SPOT MAPPING & MASTER LISTING	SOCIO-ECONOMIC SURVEY	ESTABLISHMENT/IMPLEMENTATION OF PILOT FARMS	ORGANIZATION OF FARMERS	SEED TESTING	SOIL TESTING
RD/1976 1977	1. Number of Municipalities = 3	Iguig Pilot Farm				
	2. Number of Barangays = 14	Socio-Economic Survey in LEA I				
	Iguig - 9					
	Amulung- 3					
	Alcala - 2					
	3. Number of House-holds					
	Iguig - 999 Amulung 337 Alcala 327					
MA/1978	1. Number of Municipalities = 2		Iguig Pilot Farm (74 farmers) (60 Hectares) Average production per hectare - 105 cav.	Irrigators Group Association (74 Farmers)		
	2. Number of Barangays = 7					
	Amulung - 5 Alcala - 2					

CALENDAR YEAR	SPOT MAPPING & MASTER LISTING	SOCIO-ECONOMIC SURVEY	ESTABLISHMENT/IMPLEMENTATION OF PILOT FARMS	ORGANIZATION OF FARMERS	SEED TESTING	SOIL TESTING
MA/1979		Alcala-Amulung Pilot Farm Socio-Economic Survey in LEA - I	1. Alcala-Amulung Pilot Farm (115 farmers) (75 hectares) 2. Iguig Pilot Farm (74 farmers) (60 hectares)	1. Irrigators Group Association (112 farmers) 2. Samahang Nayon (112 farmers)		
MA/1980	(LEA II) CIADP-IC Activity	La-lo Pilot Farm Socio-Economic survey in LEA II	1. Lal-lo Pilot Farm (21 farmers) (31 hectares) 2. Alcala-Amulung Pilot Farm (115 farmers) (75 hectares) 3. Iguig Pilot Farm (56 farmers) (33 hectares)	1. Irrigators Group Association (21 farmers)	1. Number of farmer-cooperators- 31 farmers 2. Number of samples - 167 3. Total cavans represented by the samples Foundation - 135 Registered-1,813 Certified -6,302 TOTAL 8,250 Total Area - 159 hectares	1. Number of farmer-cooperators- 1,023 farmers 2. Number of samples - 1,810 3. Total area represented by the samples - 273 ha.

CALENDAR YEAR	SPOT MAPPING & MASTER LISTING	SOCIO-ECONOMIC SURVEY	ESTABLISHMENT/IMPLEMENTATION OF PILOT FARMS	ORGANIZATION OF FARMERS	SEED TESTING	SOIL TESTING
MA/1981	LEA II CIADP-IC Activity	Buguey Pilot Farm Socio-Economic Survey in LEA II (20 farmers)	1. Buguey Pilot Farm (20 farmers) (42 hectares) 2. Lal-lo Pilot Farm (21 farmers) (28 hectares) 3. Alcala-Amulung Pilot Farm (72 farmers) (42 hectares) 4. Iguig Pilot Farm (35 farmers) (24 hectares)	Irrigarors Group Asspciation	1. Number of farmer-co-operators 45 farmers 2. Number of samples - 782 3. Total cavans represented by the samples - 11,773 Foundation - 92 Registered 2,920 Certified 8,711 Good Seed 50 11,773 Total Area - 171 hectares	1. Number of farmer-cooperators - 155 farmers 2. Number of samples - 212 3. Total area represented by the samples - 142 hectares

Prepared By:

RUFITO C. PAGAUITAN

資料8－3

AGRICULTURAL PILOT CENTER
RURAL EDUCATION DIVISION
ACCOMPLISHMENT REPORT, 1976-81

CALENDAR YEAR	PRINT	BROADCAST	TRAINING	INTERPERSONAL
RD/ 1976				Information Campaigns on CIADP in Project Areas (7 municipalities)
1977				Information Campaigns on APC and CIADP in LEA-I (21 barangays)
MA/ 1978	1. Cagayan Recommends for Rice (Ilocano) (3,000 copies) 2. Leaflet on Iguig Pilot Farm (2,000 copies) 3. Leaflet on Compact Farming (500 copies) 4. Rice-Fish Culture (Ilocano) (1,000 copies)	University on-the-Air 1. Rice Production 2. Corn Production (275 graduates	1. Training on Rice Production for Iguig Pilot Farm Cultivators (63 farmers)	1. Information Campaign on Iguig Pilot Farm in LEA-I (21 barangays)
MA/ 1979	1. Primer on CIADP (1,000 copies) 2. Leaflet on Alcala-Amulung Pilot Farm (2,000 copies)	University on-the-Air 1. Rice Production (Irrigated) 2. Corn Production 3. Legume Production (400 graduates)	1. Training on Rice Production for Alcala-Amulung Pilot Farm (Cultivators (79 farmers) 2. Training on Cooperatives Development(112 farmers) 3. 10-day educational tour for VOA	1. Information Campaigns in Alcala-Amulung Pilot Farm (21 barangays) 2. Information Campaigns on University on the Air (21 municipalities)

CALENDAR YEAR	PRINT	BROADCAST	TRAINING	INTERPERSONAL
A/ 1980	A. Technology Packaging (English) 1. Cagayan Technoguide for Peanut (1,000 copies) 2. Cagayan Technoguide for Mungo (1,000 copies) 3. Cagayan Technoguide for Rice (4,000 copies) 4. Cagayan Technoguide for Tobacco (500 copies) 5. Cagayan Technoguide for Cotton B. Farmers Version of Technology Packaging 1. Rang-ay ti Mannalon a. Panagmula ti Balatong (Mungo (1,000 + 5,000 copies) b. Panagmula ti Mani (Peanut) (1,000 + 5,000 copies) c. Panagmula ti Tabako (1,000 copies)	University on-the-Air for Poultry and Livestock (775 graduates)	1. Training on Rice Production for Lal-lo Pilot Farm Cultivators (26 farmers) 2. Educational Tour for UOA graduates (32 farmers and technicians)	1. Information Campaigns on University on-the-Air (21 municipalities)
A/ 1981	A. Technology Packaging** (English and Ilocano) 1. Swine Production 2. Poultry Production 3. Rural Nutrition 4. Tilapia Production	University on-the-Air for Nutrition (2,380 graduates)	1. Upgrading competences of Farmer-Leaders on Tobacco Production (90 farmer-leaders and technicians 2. Seminar on Producers Cooperatives(358 farmers) 3. Training on Rice Production for Buguey Pilot Farm Cultivators (2[illegible] farmers)	Turned over to Field Services Division

* Printing scheduled for November 1981
** Being packaged to be printed in 1982

資料８－４

AGRICULTURAL ENGINEERING DIVISION (AED)

R/D 1976-1978

The Farm Operations Division (FOD), now the Agricultural Engineering Division (AED), came to function as one of the four line Divisions then of the Agricultural Pilot Center only in January 1979 upon the designation of Engr. Narciso B. Padilla, who has just arrived from training in Japan, as its Acting Chief. The additional staff to man the FOD aside from Engr. Padilla and Mr. Nelson Quintos, were recruited August 15, 1978 and had worked under the umbrella of the Project Management Office based in Tuguegarao from that time on until December 31, 1978.

The activities that transpired from August 1978 to December 1978 included the following:

- Opening of crates from first & second shipments, a total of two hundred & nine (209) crates.

- Delivery of one hundred eighty two (182) tons of fertilizers and three hundred thirteen (313) boxes of chemicals/pesticides to the bonded warehouse in Tuguegarao.

- Survey of prevailing/existing machinery rental in Cagayan province.

- Brake-in of Agricultural Machineries like tractors, power tillers, threshers, reaper binders, harvester, etc., and construction machineries like trenchers.

- Preliminary identification and negotiation of Agro-Met station sites.

- Preparation of forms to be adopted for machinery usage.

- Formulation of FOD plans and programs including study proposals for 1979.

In January 1981, a change in name for the Division was adopted, from Farm Operations Division (FOD) to Agricultural Engineering Division (AED), to cover the actual nature of work under each unit & section of the Division.

AGRICULTURAL ENGINEERING DIVISION (AED)

M/A 1979

-ACCOMPLISHMENTS-

I. ACTIVITY: Model Infra

1. Extension of farm machinery services in land preparation and threshing activities for two crop seasons and continuous operation and maintenance of two pumping stations, including all facilities of the Model Infra.

II. ACTIVITY: PILOT FARM

1. Twenty-eight (28) Pilot farm cultivators availed of the use of Tractors during land preparation.

2. Threshing services with the use of auto threshers was extended to eleven (11) hectares of rice field.

III. ACTIVITY: Farm Demonstrations

1. Conducted five (5) demonstration of different farm machineries.

IV. ACTIVITY: Machinery Research/Test

1. Conducted the first & second tests on the KUBOTA Rice transplanter and suitability tests of different farm machinery/ equipment.

V. ACTIVITY: Station Development

1. Completion of the Model Infra in Mid-May by R.G. Construction under the direct supervision of APC, JICA & MPW.

2. Completion of about 1.43 km. farm road in the Model Infra.

3. Land grading/leveling of the 6 hectares trial field of the Model Infra.

4. Established 100 sq.m temporary Agro-Met station at APC in July.

5. Constructed about 80 sq.m temporary storage house in October.

6. Constructed 22.8 sq.m drainage pump house in November.

7. Constructed 75-ha. Pilot Farm at Alcala-Amulung in September and installed two (2) 8-inch pumps in October through the assistance of NIA & JICA.

OTHERS:

1. Periodic observation of ground water table at Iguig area.

2. Survey and identification of possible sites for Agro-Met stations.

3. In coordination with MPW, NIA, PCARR & PAGASA, completed the designs and programs of work for the following:

   a. Fencing of APC Compound
   b. Elevated Water Tank
   c. Agro-Met Station

AGRICULTURAL ENGINEERING DIVISION (AED)

M/A 1980

-ACCOMPLISHMENTS-

I. FARM MACHINERY SECTION

A. Machinery Repair and Maintenance Unit

1. In coordination with the Equipment Engineering Division, repair & maintenance work was done on thirteen (13) units of Agricultural Machineries ranging from Tractors, power tillers, pumps to generators.

B. Machinery Research Unit

1. Conducted the 3rd trial on the performance test of KUBOTA Rice Transplanter.

2. Conducted the initial test on the efficiency and capacity of mechanical dryers at APC.

3. Conducted the first and second trial test on the Economic Analysis of using reaper binder with power thresher and use of combine.

4. Completed the design of a 30-cavan per batch capacity of on-the-farm type dryer.

II. FARM DEVELOPMENT & OPERATIONS SECTION

A. Farm Structure Unit:

1. Improvement ofunderdrain of the Model Infra. Installed twenty-two (22) units of relief wells

2. In coordination with MPW, drilled a total of 242-foot depth of deep well. Steel casing installation was completed May 1980.

3. With NIA-CIADP-IC, completed the construction of the relocated temporary pumping stations, both for NIA-CIADP-IC & APC pumps.

4. With PCARR & PAGASA assistance, construction of Agro-Met station in Iguig was completed in June 1980 and monitoring of Agro-climatological and meteorological data started in July 1980.

5. Constructed a 11.5 m x 4.5 m temporary storage house for agricultural inputs.

6. In coordination with CAGELCO I, electrical line of 600 lineal meters was extended to the new temporary pumping station.

7. Provision of power line to the drainage pumps. (50% accomplishment)

8. Constructed 2 m x 1.5 m - base power panel house for NIA-CIADP-IC & APC pumps.

9. Constructed the APC Interlink Wire Fence of 1,330 lineal meter perimeter. Accomplishment for this year stands at 82.67%.

10. Started the elevation of the interlink wire fence footing to an average of 0.7 m.

11. Started the site development (earthfilling) for APC buildings.

12. In coordination with NIA-CIADP-IC, established the 32-hectare Pilot Farm in Lal-lo, Cagayan.

B. FIELD SERVICES UNIT:

1. Land Preparation:

Model Infra: Provision of machinery support services to the 6 ha. experimental field of the APC. Machinery services were extended in land preparation, irrigation, harvesting & threshing.

Pilot Area: A total of forty-seven (47) farmers availed the use of Agricultural machineries,

2. Threshing:

The unit was able to thresh 65,700 kilograms of palay or aa total of thirty-eight (38) farmers served.

3. Machinery Demostration

a. Demonstrated the operations of post-harvest machineries (Combine, Threshers, reaper binders, dryers, etc.) to seventy (70) farmers of Luna, Kalinga-Apayao in February 1980 and to sixty (60) participants from different agencies under the Ministry of Agriculture in October 1980.

AGRICULTURAL ENGINEERING DIVISION (AED)

M/A 1981

-ACCOMPLISHMENTS (As of Oct. 1981)-

I. FARM MACHINERY SECTION

A. Machinery Repair & Maintenance Unit

1. In coordination with the Equipment Engineering Division and the presence of the Kubota Machinery Experts from Japan, completed the engine replacement of the Kunota 4-W Tractor Model M4000, repaired the two 4-W drive Kubota Tractor Model B6100 and Power tillers.

2. In coordination with the Ebara Expert, repaired one unit of submersible pump installed at Alcala-Amulung Pilot Area,

B. Machinery Research Unit

1. Performed the 3rd trial & last trial on the performance & efficiency of Post-Harvest Equipment (Combine, Reaper Binder, and Uto Thresher).

2. Conducted the 4th and last trial of the Rice Transplanter study.

II. FARM DEVELOPMENT & OPERATIONS SECTION

1. Completed the construction of the interlink wire fence of the APC in February 1980.

2. Completed the site development (earthfilling) for APC building facilities which covered an area of 0.84 hectare at a depth of 1.2 M.

3. Prepared the program of work for the renovation of the Technical and Lecture rooms of the APC.

4. Constructed 21M x 39M Agro-Met Station at Camalaniugan, Cagayan on July 15, 1981. Data collection started 16 July 1981.

5. Prepared the Plan & Program of Work for the CSU-Piat Agro-Met Station.

6. Installed semi-permanent power line for the APC drainage pump.

7. Coordinated with NIA-CIADP-IC regarding the incorporation of the APC pump to the permanent pumping station.

8. With the assistance of the JICA Irrigation Expert, completed the rip-rapping of drainage canal (DC-1) from Station 0+562 - 0+908.

9. Completed the rip-rapping of the three-hundred four (304M) lineal meter drainage canal at the noerthern portion of the APC.

10. Started the renovation of the APC Service entrance.

11. Started the revision of the Plan of the Guard House.

B. Field Services Unit

1. Land Preparation

Model Infra.:

Provisions of machinery support services in land preparation, irrigation, harvesting and threshing to the 6-ha. experimental field of the Model Infra.

Pilot Area:

A total of forty-two (42) farmers availed of the use of Agricultural machineries in land preparation.

2. Threshing:

Twenty-two (22) farmers were served in their threshing activity.

3. Machinery Demonstrations:

Demonstrated the Post-harvest equipment (Combine harvester, reaper binder, auto-thresher) to the Cagayan State University (CSU) students of Piat, Cagayan.

OTHERS:

1. Repair and Maintenance of Model Infra:

1. Desilting of main and sub-main drainage canal.
2. Desilting of sump.

3. Repair of broken rip-rap.

4. Cleaning of the experimental field.

II. LABOR GROUP:

1. Provided labor support to the Crop Research Division and the Farm Services Division.

MONTHLY UTILIZATION REPORT OF AGRICULTURAL MACHINERY
SUMMARY FOR C.Y. 1979

AGRICULTURAL MACHINERY	MODEL	CODE NO.	JAN. (hr)	FEB. (hr.)	MAR. (hr)	APR. (hr)	MAY (hr)	JUNE (hr)	JULY (hr)	AUG. (hr)	SEPT. (hr)	OCT. (hr)	NOV. (hr)	DEC. (hr)	TOTAL (hr)
A. IRRIGATION ACTIVITY															
1. KUBOTA Pump	SVOR-70	A-007-1							21.5	19.3	14.5	5.9	46.6	54.4	162.3
2. KUBOTA Pump	SVOR-70	A-007-2							5.9					28.3	34.2
3. DENYO Generator	DCA-35S	A-007-3					A	B	90	104	76	74	25	-	630.0
B. TILLAGE & HAULING ACTIVITY															
1. KUBOTA 4-W Tractor	M-4000	A.001.1	50*	16.3	60	12.0	61.9	14.3	24.5	29.8	28.1	81.4	29.8	41.3	350.4
2. KUBOTA 4-W Tractor	B 6100	A.002.2		32.7		17.2	4.3	20.5	6.2			34.8		13.8	129.5
3. KUBOTA 4-W Tractor	B 6100	A.001.3										25.9	36.9		62.8
4. YANMAR 4-W Tractor	YM-330T	A.001.4					C	D	18.0	33.0	27.4	5.8	24.4	28.8	137.4
5. KUBOTA Power Tiller	K-120	A.002-1									25.3	41.1			66.4
6. KUBOTA Power Tiller	K-120	A.002-2								8.3		17.5			25.8
7. KUBOTA Power Tiller	K-75	A.002-6						7.5	21.6	13.1	28.0	10.3	14.0	11.9	106.4
8. KUBOTA Power Tiller	K-75	A.002-7							2.8	2.0	8.0	16.0	20.6	2.7	52.1
9. KUBOTA Power Tiller	T-7R	A.002-14							9.5						9.5
C. TRANSPLANTING ACTIVITY															
1. KUBOTA Rice Transplanter	S-300	A.003-1				6.2			13						19.2
D. HARVESTING/THRESHING ACTIVITY															
1. Reaper Binder	HE-50A	A.004-1	4.0												4.0
2. Combine Harvester	ZXD7	A.006.1	10.3												10.3
3. Power Thresher	HHD5	A.005.1	44.5	38.4							12.0	2.1	3.9	2.3	104.0
4. Power Thresher	HHD5	A.005.2	49.2	16.1			11.6	15.3							92.2
5. Power Thresher	HHD5	A.005.3	24.2	35.5			11.8	27.7							99.2

* 109.1 - Hour of Operation for 1978

Remarks: A. + B = 261 hours For break-in and dry run of the pump of Model Infra.

C + D = Break-in

MONTHLY UTILIZATION REPORT FOR AGRICULTURAL MACHINERY
SUMMARY FOR C.Y. 1980

AGRICULTURAL MACHINERY	MODEL	CODE NO.	JAN. (hr)	FEB. (hr)	MAR. (hr)	APR. (hr)	MAY (hr)	JUNE (hr)	JULY (hr)	AUG. (hr)	SEPT. (hr)	OCT. (hr)	NOV. (hr)	DEC. (hr)	TOTAL (hr)
A. IRRIGATION ACTIVITY															
1. KUBOTA Pump	SVOR-70	A-007-1							10.2						10.2
2. KUBOTA Pump	SVOR-70	A-007-2	24.8	19.0	34.7	1.2	13.6	66.2	54.7	55.0	64.3	55.2	11.7	4.4	405.0
3. DENYO Generator	DCA-35S	A-007-3	96.0	92.0	53.0	123.0	77.0	334.0	76.0	317.0	66.0	72.0	53.0	132.0	1491.0
B. TILLAGE & HAULING ACTIVITY															
1. KUBOTA 4-W Tractor	M-4000	A-001-1	70.2	38.8	24.1	45.0	11.1	23.6			27.6	28.7			263.1
2. KUBOTA 4-W Tractor	B6100	A-001-2		23.3	16.1										39.6
3. KUBOTA 4-W Tractor	B6100	A-001-3	24.5	32.5	14.1	21.5	9.9				3.6	6.4			112.9
4. YANMAR 4-W Tractor	YM-330T	A-001-4	96.2	31.2	25.9	45.8	44.1	37.8	44.2	29.9	78.2	104.6	34.7	30.5	663.1
5. KUBOTA Power Tiller	K-120	A-002-1		16.1				58.5	16.3						90.9
6. KUBOTA Power Tiller	K-120	A-002-2							4.8	24.1	17.3	10.2	26.5	8	91.6
7. KUBOTA Power Tiller	K-120	A-002-4										25.3	25.8	22.4	73.5
8. KUBOTA Power Tiller	K-120	A-002-6					40.4								40.4
9. KUBOTA Power Tiller	K-75	A-002-7	11.9	21.1	39.0	16.3	35.5	22.8	26.0	42.5	23.0	29.4	19.5	7.8	294.8
10. KUBOTA Power Tiller	K-75	A-002-8	10.9	30.5	32.5	31.4	27.0	8.3	32.0	36.2	26.0	32.5	16.3	10.4	294
11. KUBOTA Power Tiller	T-7R	A-002-13						24.1	2.5						26.6
C. TRANSPLANTING ACTIVITY															
1. K-Rice Transplanter	S-300	A-003-1						2.0	2.1						4.1
D. HARVESTING/THRESHING ACTIVITY															
1. Combine Harvester	ZXD7	A-006-1		10.2	8.2							3.2			21.9
2. Power Thresher	HHD5	A-005-1	21.4	10.5											31.5
3. Power Thresher	HHD5	A-005-2	30.0	34.0	5.9	6.3									76.2
4. Power Thresher	HHD5	A-005-3	19.3	21.0	19.8										60.1
5. Power Thresher	HHD5	A-005-4	25.0	20.8	16.8	5.3	2.5	7.7	10.8	11.2	22.2				122.2
6. Power Thresher	HHD5	A-005-5	17.4	27.5	8.7										59.5
7. Power Thresher	PK-1E	A-005-6										8.0	9.0	5.9	22.9
E. DRYING ACTIVITY															
1. SATAKE Dryer											6.6				6.6

MONTHLY UTILIZATION REPORT OF AGRICULTURAL MACHINERY
SUMMARY FOR C.Y. 1981

MACHINERIES	MODEL	CODE NO.	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
A. IRRIGATION ACTIVITY															
1. KUBOTA PUMP	SVOR 70	A.007-1	5.4	43.7											49.1
2. KUBOTA PUMP	SVOR 70	A.007-2	26.8	48.2	78.7	39.3	9.7	19.7	44.4		14.3				281.1
3. DENYO Generator	DCA 35S	A.007-3	321	311	54	44	33								763
4. DENYO Generator(1313264)	DCA 35S									74	157				231
5. DENYO Generator(1313265)	DCA 35S					2	190	144	274	39	55				704
6. DENYO Generator(1313266)	DCA 35S						190	190	215	193	222				1010
7. YANMAR PUMP (SPRINKLER)				17.9											17.9
8. YANMAR PUMP					33.1	74.6	20.3	11.7	9.8		12.1				161.6
9. ROBIN PUMP							44	18.2	86.8	30.0	36.2				217.2
B. TILLAGE & MILLING ACTIVITY															
1. 4-W Tractor	M750 DT	A.001.5				9.3	32.2	44.1	40.8	29.7	84.3				240.4
2. 4-W Tractor	M4000	A.001.1				7.7	56.3	11.7	5.9	19.7	51.6				152.9
3. 4-W Tractor	B6100	A.001.2	2.2	15.8	6.0	8.1	9.9	12.5	2.2	28.1	11.6				96.4
4. 4-W Tractor	B6100	A.001.3									19.2				19.2
5. 4-W Tractor	YM 330T	A.001.4	63.2	54.1	9.9	2.5	25.8			4.9	9.0				169.4
6. Power Tiller	K-120	A.002.1	5.2												5.2
7. Power Tiller	K-75	A.002.6		8.3							9.8				18.1
8. Power Tiller	K-75	A.002.7	23.4	42.9	68.5	19.3	19.9	41.6	15.6	10.9					242.1
9. Power Tiller	K-75	A.002.8	18.2	39.0	37.7	3.9	22.7	22.8	9.1						153.4
10. Power Tiller	K-75	A.002.11			16.2	21.8	47.3	35.9	34.6	21.1	47.8				224.7
C. TRANSPLANTING ACTIVITY															
1. Rice Transplanter	S-300	A.003.1		1.3											1.3
D. HARVESTING/THRESHING ACTIVITY															
1. Reaper Binder	HE 50A	A.004.1	3.4												3.4
2. Reaper Binder	YB 302	A.004.2	9.1												9.1
3. Reaper Binder	YB 302	A.004.3	21.7												21.7
4. Power Thresher	HHD5	A.005.1									12.6				12.6
5. Power Thresher	HHD5	A.005.2									13.5				13.5
6. Power Thresher	HHD5	A.005.3			26.2	2.0					7.5				35.7
7. Power Thresher	HHD5	A.005.4			6.8	4.7	1.9								13.4
8. Power Thresher	HHD5	A.005.5	22.2	14.5	39.7		1.7	7.2	2.9		7.6				161.8
9. Power Thresher	PK-IE	A.005.6	5.7		2.7						1.5				9.9
10. Combine Harvester	ZXD7	A.006.1	9.5		22.8						1.5				33.8
E. OTHERS															
1. Trencher						2.2		7.7							9.9
2. YANMAR MIXER				29.2						7.2	8.8				45.2

資料９．カガヤン農業開発計画関係資料リスト

No.	資料名	刊行	年月	整理番号	保管場所
1	フィリピン共和国カガヤン・バレー地域総合開発計画調査報告書	事業団	50. 2	Ab219−3.5K 4331	図書資料室
2	フィリピン共和国カガヤン・バレー地域農業総合開発調査報告書	〃	50. 9	(農林)50−33 219−75−8農計	農計部
3	フィリピン共和国カガヤン農業総合開発フィージビリティー調査報告書	〃	51. 4	(農林)51−01 219−76−8農計	〃
4	カガヤン農業開発協力実施調査団報告書	〃	51. 2	(農林)50−61	農開部
5	*フィリピン共和国カガヤン農業開発パイロットセンター計画調査報告書	〃	51. 6	番号なし	〃
6	フィリピン・カガヤンバレー地域畑作物開発事前調査報告書	〃	52.10	(農林)52−32 219−4.14−Fa2 6484	図書資料室 〃
7	**昭和53年度フィリピン・カガヤン農業総合開発計画巡回指導調査報告書	〃	54. 9	(農開技)JR 80−10	農開部
8	昭和54年度 〃 〃	〃	55. 9	(農開技)CR 81−17	〃
9	フィリピン・カガヤン農業開発計画総合報告書	〃	55.10	(農開技)JR 81−14	〃
10	昭和55年度フィリピン・カガヤン農業開発計画巡回指導調査報告書	〃	56. 9	(農開技)JR 81−57	〃
11	***Establishment of a pilot Center for Agricultural Development Cooperation in Cagayan	JICA	76. 1	番号なし	〃

（註）*5は、50.11月～4ヶ月派遣した長期調査員報告
51.2.～3月の実施設計調査団報告
51.2～3月のR/Dミッション報告
から成る。

**7は、52年度巡回指導調査報告を含む。

***11は、4の主要部分の英訳である。

フィリピン共和国カガヤン・バレー地域総合開発計画調査報告書
（５０２　国際協力事業団　Ab　２１９　３５　Ｋ　４３３１）

1. 目　的：　目的の明記はないが、比側の要請を「地域開発のマスタープランづくり」への協力依頼として把握した旨の記載がある。
2. 期　間：　１９７４年７月から調査し、１１月末にドラフト報告書を比側に提出したとあるだけで、調査日程の記載がない。
3. 団　員：　馬場孝一団長他９人（ＪＩＣＡから鈴木治夫）
4. 要　約：　第５章　開発の戦略と結論のまとめがある。

1）米、とうもろこしの増産を主目標とし、林・漁業等第一次産業に関連する若干の工業（木材加工、食品加工など）の開発のための施策が中心。

（注、畜産のないことに注意）

2）各分野のプロジェクトを３カテゴリーに分類。

(1) 米の増産：　灌漑が最重要―流下式
―ポンプ灌漑―動力供給が重要

灌漑＋電化プロジェクトを主導的プロジェクトとする。

(2) 道路、港湾等輸送体系 ┐ 補助的だが重要度は劣らない支持的施策
技術営農指導 ┘

(3) 災害予防保全機能をもつプロジェクト。

3）部門別計画を総合調整して実施するため計画。

4）総合開発モデル地区の設置

(1) 最小限３０００ha　人口8,０００～１０,０００人　５～６バリオ。

(2) 農民が熱意ある地区、マサガナ９９、マサガナ・マイサン地区がよい。

(3) 所得の公平化への配慮。

(4) コンパクト・ファーム方式の概念を導入できる地区

（注、コンパクト・ファームの説明はない。）

(5) プロジェクトの要素

(i) 灌漑施設

(ii) 営農指導

(iii) 農作業の共同化

(iv) 村落電化

(v) バリオ間・バリオ～マーケット間道路

(vi) 農業関連サービスセンター

(vii) 農業金融

(viii) 野菜・畜産（肥育）等の農家の所得の多角化

（注、ここでは畜産のあることに注意）

(6) 農業生産主体はコンパクト・ファーム方式の共同化したものが望ましい。

灌漑の1 turn-out のサービスエリアを共同化することが適当。

共同購入、共同使用、作業の調整等をする。

技術面は普及員が、金融面はマサガナ９９方式クレディット、又は、中銀—世銀のプロジェクト機材購入金融。

(7) 村落電化、道路、資機材を扱うサービスセンター、所得向上～自家消費用野菜その他の栽培指導等をあげている。

(8) モデル地区の中に他地区が、この方式を今後採用していく時必要とされる技術・組織の指導をすゝめるような、「開発センター」設置も必要

(9) 工業開発、ローカルなアプローチ。現地資源によるもの。

精米、飼料、製糖、製材、単合板、缶詰。

サービス部門整備が必要。

(10) 輸送体系：道路、港湾整備（略）

(11) 災害防止：調査観測態勢の整備、拡充、技術向上が必要としている。

造林計画の必要性をのべている。

5）第6章　開発のスケジュール

(1) 水資源の把握、灌漑および電化の仮想的で大まかなスケジュールをガント・チャート形式で示すことにとどめるとしてある。

(2) 従って、この報告書には、農業プロジェクトのスケジュールは全く記載されておらず、目的の項の通り、プラン造りで終了することを考えているように見える。

フィリピン共和国カガヤン・バレー地域農業総合開発調査報告書

（５０.９　国際協力事業団（農林）５０－３３　２１９－７５－８農計）

1. 目　的：　明記なし。

2. 期　間：　５０.５.２５～6.２３（３０日）

3. 団　員：　高瀬国雄（前半）、遠藤寛二（後半）団長他８人（ＪＩＣＡから、遠藤、北村純一、木下清彦）

4. 要　約：

1）４９.７派遣の馬場調査団の、地域総合開発計画から、ポテンシャリティー及びプライオリテイーの高いプロジェクトを選定できた。

2）農業総合開発計画は、次の３つを含む。

(1) 農業基盤整備：　灌漑、排水、洪水防止、農道等

(2) 農業近代化：　農業技術（品種、肥料、農薬）の改善

農民組織　制度（農協、信用、流通、機械化、土地改革）の合理化

畜産・農村工業の育成

農家所得の向上と適正配分

(3) 社会開発：　農村電化、上水道普及などによる生活環境の改善、雇用の増進等

3）対象地域として、アパリ・ラロ地区　１２,０００ha

パレッド地区　１,５００

イグイグ地区　８００

計　１４,３００　を選定した。

4）１４,３００haの、灌排水施設、農道等を建設、イネ２期作を可能にする。

5）１５０haをパイロット・センターとする（試験圃　１０ha 原々種・原種圃　４０ha 展示訓練用普及農場　１００ha

これにつき、専門家派遣、機材供与を含む技術協力を行う。

パイロット・センターの位置は、当面パレッドを予定。

6）社会開発面は、センターでの実績を見ながら全域に拡げる。

7）パイロット・センターで確められた技術や方式が、農民の抵抗なしに徐々に全地域に拡大してゆくことを期待し、かつ、基盤整備に対する資金協力とパイロット・センターに対する技術協力とを最も効果的に組合わせようとするのが、基本的ねらいである。

8）事業費　３１,３０９千ドル、８０年に工事完了。

9）５８,０００t／年の米の増産、１.１百万ＵＳ＄の輸入減、農家１戸当り増収約１,６５７ＵＳ＄／年。内部収益率１５％

10）ＣＩＡＰが１９７６年に発足するためには、７５年１０月の第５次円借リストにのせる必要がある。

よって、次のことが今後のスケジュールとなる。

(1) 第２次調査報告説明団派遣

(2) ＣＩＡＰ基本計画調査

(3) パイロット・センター実施調査

(4) ＣＩＡＰ基本計画調査

(5) パイロット・センター実施設計及び技術協力ＲＤの締結

5. 以下、この基礎となった調査の詳細の記載がある。

フィリピン共和国カガヤン農業総合開発フィージビリティー調査報告書

（５１.４　事業団（農林）５１－０１．２１９．７６－１２農計部）

1. 目　的：　明記なし。

2. 期　間：　５０.１０約１ヶ月、５１.１.２５～４.３（７０日）

3. 団　員：　北村純一団長他１６人（ＪＩＣＡから、北村、甲斐、足立）

この報告書は、三祐コンサルタンツ社長名で事業団に提出されたものである。

4. 要　約：

1）開発計画面積が、イグイゲ　６００

アルカラ・アムルンブ　１,４００

ロアーカガヤン　１１,２００

計　１３,２００ha となった。

2）ポンプ３基、用水路４４,１１０m　等ＯＥＣＦ関係の数字。

3）なお、以後に行うべき調査等について勧告している。

カガヤン農業開発協力実施調査団報告書

（５１.２.　国際協力事業団（農林）５０－６１）

1. ４９.８.　５０.５の２回の農業総合開発計画調査が行われ、農業パイロット・センターの設置が提案されたと記載してある。

（注　４９.８は「地域総合開発計画調査４９.７」のことではないかと思われる。）

2. 目　的：　実施を前提とし、協力構想の骨子を検討し、併せ協力拠点（場所）を決定することを目的とした。

3. 期　間：　５０.１０.２７～１１.２０

4. 団　員：　渡辺滋勝団長他４人（ＪＩＣＡから渡辺、新保）

5. 要　約：

１）ＣＩＡＤＰは、

(1) かん排施設を中心とした基盤整備
(2) 加工・流通・農村電化を含む社会開発
(3) 農業技術

} の３プログラムから成り、本プロジェクトは、その１つである。

２）終局の目的は、この地域のみでなく、バレー全域、フィリピン全体に資することにある。

３）農業技術プログラムは、次の３つから成る。

(1) 農業パイロット・センター、プログラム

(2) １）の(1)で整備された一般農家圃場の一部でのLeading Extension Aea で行う、拠点指導プログラム

(3) (1)で開発・改良され、ＬＥＡで検認された技術の普及定着を図るプログラム

４）協力の具体的内容（別紙）

５）組　織（略）

６）スケジュール

(1) 準備期間　１９７６.４～１９７８.７　Ｒ／Ｄ

(2) 第１次協力期間（Phase Ⅰ）：ＬＥＡⅠでの活動可能となったとき～ＬＥＡⅡの活動可能となるまで、協定

(3) 第２次協力期間：ＬＥＡⅡの指導開始以降

７）パイロットセンター：　Iguig Minanga Norte Barrio　１０ha

８）ＬＥＡⅠ：　Iguig Minanga Barrio　５０ha
Amulumg Bayhayog Barrio １５０ha

９）Aparri、Lalloは、ＣＩＡＤＰの進捗状況をみてＬＥＡⅡ、現地政府が中心となって行う。

10）協力の内容：　専門家派遣　長　期　　チーフアドバイザー（R/D間）

アグロノミスト数名

短　期　　土壌肥料、病害虫

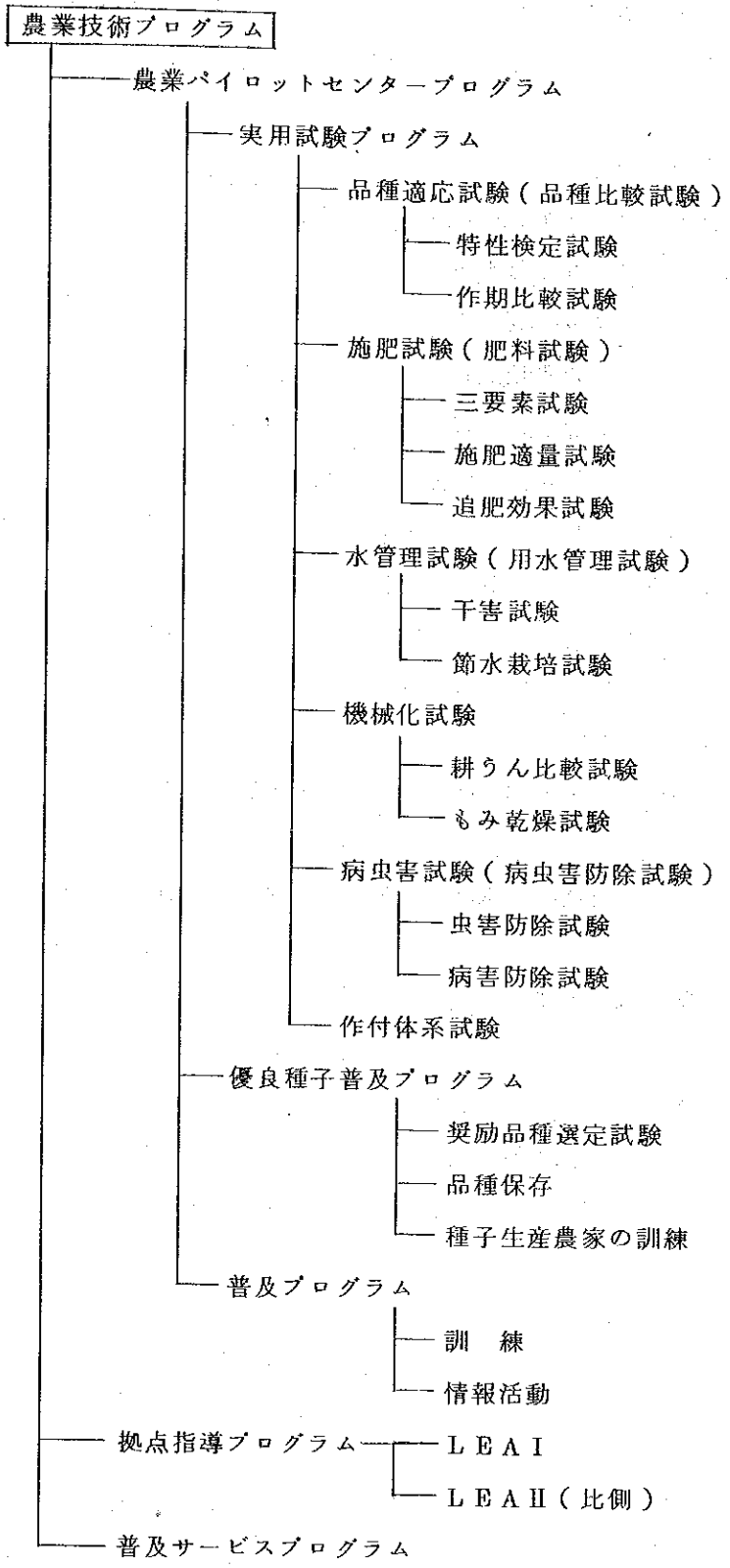
機材供与（略）、受入研修　　年間数名

11）比側の負担：　（略）

6. 巻末に、A Report of the October Mission : Feasibility Studies of the Project Areas of the CIADP　が掲げてある。

7. 別途　Establishment of A Pilot Center For Agricultinal Development Cooperation In Cagayan（Jan,20. 1976. JICA）

が印刷されている。ほゞ、本報告の訳文である。


農業技術プログラム
農業パイロットセンタープログラム
実用試験プログラム
品種適応試験（品種比較試験）
特性検定試験
作期比較試験
施肥試験（肥料試験）
三要素試験
施肥適量試験
追肥効果試験
水管理試験（用水管理試験）
干害試験
節水栽培試験
機械化試験
耕うん比較試験
もみ乾燥試験
病虫害試験（病虫害防除試験）
虫害防除試験
病害防除試験
作付体系試験
優良種子普及プログラム
奨励品種選定試験
品種保存
種子生産農家の訓練
普及プログラム
訓　練
情報活動
拠点指導プログラム
ＬＥＡＩ
ＬＥＡⅡ（比側）
普及サービスプログラム

フィリピン共和国カガヤン農業開発、パイロットセンター計画調査報告書

（１９７６.６.　国際協力事業団、番号なし）

1. この報告書は、次の３報告を含む。

1）岩崎、白石両長期調査員（５０.１１.１５～４ケ月）業務報告

2）実施設計調査団（５１.２.２～３.１５）報告書・設計図

3）Ｒ／Ｄミッション記録（５１.２.１６～３.２）

2. 目　的：　５０.１０.２７～１１.２０の実施調査団（渡辺滋勝団長）の報告を受け、技術協力協定のベースとなるＲ／Ｄをまとめること、及びパイロットセンターの実施設計を行うこと。

3. 期　間：　上記１の２)，３)，

4. 団　員：　遠藤寛二団長他６人（ＪＩＣＡから、遠藤、新保、矢部）他に外務省から古川事務官。

5. 要　約：　折衝経過があり、Ｒ／Ｄ全文の掲載あり。

6. 長期調査員の調査報告

1）５１.１.２６、日本の１月ミッション（北村団長以下１３人）と合同会議のあった旨記載がある。

2）長期調査員の提案：　ポンプ場位置、排水計画、アルカラアムルン地区面積拡大、4)　その他

7. パイロット・センター計画実施設計（略）

フィリピン、カガヤン・バレー地域畑作物開発事前調査報告書

（５２１０.国際協力事業団（農林）５２－３２. ３１９－

４.１４－Fa２－６４８４）

1. 目　的：　目的の明示なし。要請対応とだけあり。

2. 期　間：　５２.３.１９～４.３.

3. 団　員：　長谷川新一団長他４人（ＪＩＣＡから鈴木治夫、小野英男）

4. 要　約：

1）比側に Integrated Feedgrain Livestock, Poultry Development for Cagayan Valley なる計画があったことが記載されている。

2）全体の土地、水利用プログラムが必要である。

3）とうもろこしは開発可能性がある。

しかし、道路（従って輸送）、流通（とくに中間業者）、低水準技術、低収量（０.６５～０.８５ｔ／ｈａ）、研究体制不備、作付体系未確立、適品種なし等の問題を指摘している。

4）畜産、養鶏については、資金、在来家畜の低繁殖力、疾病による損耗、高いインプット、道路、輸送問題、低畜産物価格等の問題点を指摘している。

5）開発目標と戦略として、比側の構想は、

(1) 飼料穀物開発には、次の４事業が必要としている。

イ．飼料穀物、畜産の開発に必要な研究体制の整備

ロ．上記に基く訓練、普及事業

ハ．生産単位の統合と養鶏奨励

ニ．総合地域センター維持のためのインプット、施設、資金、技術指導。

(2) その妥当性について、品種、栽培技術が現地試験場でできるのに普及しない原因を究明除去しなければ悲観的だとしている。

昭和５３年度フィリピン、カガヤン農業総合開発計画巡回指導調査報告書

（５４.９.　国際協力事業団　農開技ＪＲ８０－１０）

1. 目　的：　ＣＩＡＤＰ事業に対する日比双方関係機関の考え方と同事業の現状を適確に把握し、新Ｍ／Ａによる協力に支障のないように取計らう。

2. 期　間：　５４.２.４～１２

５３.１１月実施予定であったが、専門家の待遇、特権の問題で新Ｍ／Ａ署名の見通しのつくまで延期した。

Ｒ／Ｄの４回目の延長（５４.３.３１まで）をした。

Ｍ／Ａ署名を２・２２開所式に行うこととした。

3. 団　員：　金津昭治団長他３人（ＪＩＣＡから、金津、太田）

4. 要　約：

１）３ケ年計画：　チームは最終３ケ年実施計画書を早期にまとめＪＩＣＡ本部に提出する。

(1) 比側はＡＰＣをカガヤン地域全体の Technology Center と考えている。

(2) 機材供与も、ＡＰＣ、ＬＥＡ以外でも、１３,２００ha をカバーするよう要請があった。

(3) 比側は協力の範囲を広く考えており、日側とギャップがある。

Ｍ／ＡのAnxAにおける開発プログラムを明確にし、日本人専門家の役割を相互に理解させる必要がある。（Ｍ／Ａでは関連計画に係るデータや情報の収集、分析も行うことが決めてある。）

(4) 機械管理体制が問題で、maintenanceの権限がＡＰＣにない。

(5) 種子生産事業に関しＢＰＩとの調整不充分。増殖はＢＰＩ、試験はＣＩＡＤＰとなろう。

（Ｍ・Ａでは、種子生産の研究、訓練、展示を通じて優良種子の生産を増進することが定められている。）

(6) ＬＥＡ Ⅱの規模、位置は、日比協議の必要がある。ⅰ）道路に面すること、ⅱ）排水が良好なこと、ⅲ）デモンストレーション効果のあること、ⅳ）農民の協力の得易いことが考えられる。規模は１００～２００ha。

２）進捗状況の確認（略）

３）その他

(1) Ｍ／Ａは外交マターであり、大使館に任せる。

(2) 2.２２開所式が行われ法眼総裁、エンリレ国防大臣が出席した。

Ｍ／Ａ署名は、綱川、ブリオネスで行われた。

(3) 普及ネットワーク構想は技協の範囲をこえる。ＫＲ、又は無償ではないか。この方向の要請を助言する。

(4) レポート提出要求は、毎月出すことにする。

(5) 研修員受入れは完了し、今後は、高級、準高級が必要。

5. 延長のためのExtension Noteが4つ掲げてある。

6. 口上書（１９７９．3.１５）及びM／Aが掲げてある。

7. 参考資料Ⅰ　プロジェクトの現状（矢部、神田）

大統領の Letter of Instruction №９９及びPresidential Decree１９７８。

R／D

8. 参考資料II　昭和５２年度カガヤン農業総合開発計画巡回指導報告書の記載がある。この報告は、今まで刊行されなかったようである。

昭和５２年度カガヤン農業総合開発計画巡回指導報告書

1. 目　的：　本格協力のための協力基本計画について比側、派遣専門家と事前協議し、今後の協力に支障ないように計る。

2. 期　間：　５２.１０.２４～１１.５

3. 団　員：　中原通夫団長他３人（ＪＩＣＡから中原、太田）

4. 要　約：

1）協力期間：　当方３年案、先方５年案（５ケ年計画に織込み済み）。
５年の計画で止むを得ない。５年とした。

2）事業計画：　５年に割当て、最終的に３年になれば修正する。

3）協議結果をRecord of Preliminary Discossionとして署名した。

4）その他

(1) 比側は協定の準備中。R／Dは適当でない。協定成立まではR／D延長でつなぐ必要がある。

(2) その他（略）

5. Record of Prepasatory Discussion（前掲と用語が違っている。）

昭和５４年度フィリピン、カガヤン農業開発計画巡回指導調査報告

（５５.9.国際協力事業団、農開技ＣＲ（５）８１－１７）

1. 目　的：　調査目的の記載がない。プロジェクトの推進に係る技術的・政策的問題点について、所要の調査、協議を行ったとある。

2. 期　間：　５５.　4.　9～２３.

3. 団　員：　金津昭治団長他３人（ＪＩＣＡから金津、戸上）

4. 要　約：

1）ＡＰＣ、ＬＥＡＩの活動及びロアーカガヤン開発について、比側、日本人専門家と話合い、石塚先生らの報告を参考にして、今後の方針を決める目的であったとある。

2）ロアーカガヤンの現地調査に重点をおいた。特にＬＥＡⅡの候補５地区。
（Luec Camalaniugan, Casili Camalaniugan, Dalaya, Burguey, Catayuan Lallo ）

3）結果はMinutes of Discussionにまとめた。

4）比側は、'80にロアーカガヤンにパイロット地区設置、ラジオ放送による技術普及につき協力を求めた。放送については帰国後検討する旨答えた。

5）当方は次の４点を指摘

(1) 欠員中のTech. Directorの任命

(2) 倉庫、ワークショップ、乾燥施設の早期建設

(3) 重要問題は日本人専門家に協議すること

(4) ＡＰＣの人事、機構等重要事項は早く知らせること。

6）ロアーカガヤンは現行Ｍ／Ａにもとづいて行う。

(1) ＬＥＡⅡの位置、規模は石塚チームの提案を考慮し、日本人専門家と比側で決める。

(2) ＬＥＡⅡは、比側で行う。当方は助言。

(3) ＩＲＲＩの多毛作体系試験結果は取入可能。

7）比側はロアーカガヤンのPilot Farmへの協力を強く要望。

8）工事促進の必要性。

9）前回より改善されている。

5. ５４年度運営指導チーム（遠藤団長）報告会資料の記載あり。

6. フィリピン・カガヤン農業開発計画派遣短期専門家（石塚他）帰国報告会議事録の記載あり。次の要約がある。

(1) ロアーカガヤンの湿田は塩害はそう心配しないでよい。

(2) 酸性化も、農家水田を借りて試験すれば対策は出せる。

(3) 米の買入制限があり、畑作の希望がある。

(4) 養魚、水牛放牧等の対応を考えるよう助言した。

(5) 土壌管理の長期専門家を派遣すれば、ロアーカガヤンの協力は可能。
基盤整理前でも、試験はＡＰＣでできる。

(6) ＬＥＡⅡはブリオネス局長とリーダーが決めれば充分。

(7) 4.9からの巡回指導は、体制づくり、（先方の組織、運営会議）、ＬＥＡⅡ、新分野専門家は各省協議で、石塚報告に沿って進める。

巻末に、１９８０.、３　石塚チーム報告書がある。

フィリピン、カガヤン農業開発計画総合報告書

（５５.１０.　国際協力事業団、農開技ＪＲ８１－１４）

1. 丸杉リーダー以下、５５.１０末在任中の専門家及び５５.８帰国の大久保専門家の報告。
部内資料。

2　要　約：

1）水稲２毛作の可能性実証等の成績を得たが、比側の体制後退で協力を全うし難い状況にある。

2）ＡＰＣで、水稲２毛作を実証し、マサガナ９９を上廻る収量をあげた。

3）ＬＥＡＩで、ＨＹＶを９０％以上普及し、防除、機械保全等成果をあげた。

4）日本側の問題点：　手順が悪く、工事、機械送付等が順序が逆になるものが多い。

5）比側の体制後退で、専門家の仕事がない。ＡＰＣ内部がバラバラである。

6）比側はＡＰＣから手を抜いてロアーカガヤンに重点を移す。
ＡＰＣはAgril Technology Centre とする。

7）スタッフの充実が悪い。Full Devote の必要性。

8）長い目で取組む必要がある。

9）先方に、体制整備、ニーズがなければＭ／Ａ改訂時に打切れ。

10）教育機関への教育機械供与を検討せよ。

昭和５５年度フィリピン、カガヤン農業開発計画巡回指導調査報告書

（５６.９.　国際協力事業団　農開技ＪＲ－８１－５７）

1. 目　的：

運営上の問題点につき。

1）所要の指導助言

2）５６年度運営計画の策定

3）現行Ｍ／Ａ終了（５７.２.２１）後の取り扱いにつき意向聴取。

2. 期　間：　５６.３.２５～４.９（１６日間）

3. 団　員：　野田昌治団長他３人（事業団から上谷）

4. 報告の要点：

1）ＡＰＣの運営は改善されたが、なお一層の改善を要する。

2）ポンプサイトの完了は遅れる。水路も同様で１９８５年完了。

マガットダムは１９８３年完成予定。

3）延長計画の提案があった。

4）８１.４.８付Finding / Comments on the Cagayan Agril Plot Center Project

(1)　インフラ関係工事の促進の必要性

(2)　ＡＰＣ活動、とくに、品種、肥料試験、土壌分析、試験、作付体系、Field Map法の管理への適用。

(3)　ＡＰＣ施設の改善。

(4)　供用機械の活用、標示の設置、供与機械のＡＰＣ引取りの早期化、職員のパーマネント化。

5）ＡＰＣが自らの手で機能できるまでの期間、援助の手を差し延べてやれることを念願する。

6）日本への期待が大きい。

7）ＩＲＲＩ、ＵＰ等での研修費の要請。

8）Ｒ／ＤとＭ／Ａの対照表（Ｐ７１～７７）

9）比側の拡大構想（Ｐ１４０～１４７）

Ⅰ．　R／DとM／Aの主要相違点

1. 目　的：　稲2期作の普及と農業生産性の増大を通じ、農業の近代化に貢献——→農業の近代化と拡大を目的とするＣＩＡＤＰの支援
2. 協力期間：　Ｒ／Ｄの有効期間2年、その間に以後の協定協議——→サインの日から3年間、ＪＩＣＡ・ＣＩＡＤＰは合意により延長を勧告できる。
3. Ｍ・Ｐ：
   1）目　的：　集約的な農業技術の着実な増大——→カガヤン州全体の農業開発、集約米作導入を目的とするＣＩＡＤＰへの支援
   2）活　動：　試験・種子普及・普及——→調査・研究、プロジェクト支援　米調製技術。
   3）サイト：　将来　アパリ、ラロ——→ロアーカガヤン

Ⅱ．比側の拡大構想

1. ＩＲＲＩ、ＵＰでの研修費負担
2. 工事・建物の（Annx. G）の資金提供
3. 米＋トウモロコシの州全体に適合する作付体系。
   1）土壌調査、気象観測（ＡＰＣ、ＰＡＧＡＳＡにより4ヶ所設置）
   2）適作物、多毛作、耕作技術
      (1) ＡＰＣのReseanch Center 化
      (2) ＣＳＵでの、豆、果樹、サトウキビ、綿、飼料作物等換金作物：野菜、根菜、香料等のセンター、トウモロコシ中心作付体系。野菜種苗圃、
      (3) 洪水地帯の作付体系
      (4) Sub Station：　ロアーカガヤン酸性、塩性土壌での米作
      (5) Allacapan Research Station での畑作研究、作付体系及び種苗基地
   3）ＡＰＣ印刷施設拡充
   4）Pilot Farm　設置、新設、5ヶ所
   5）各町村に種苗センター
   6）ＡＰＣにラジオステーション
   7）町内普及センター
   8）ＡＰＣの種子センター業務
   9）養豚：　種豚場　4ヶ所
      人工授精センターを各町村に設置、衛生サービスも行う。

10）牛生産：　種畜場、草地開発

11）山羊生産：

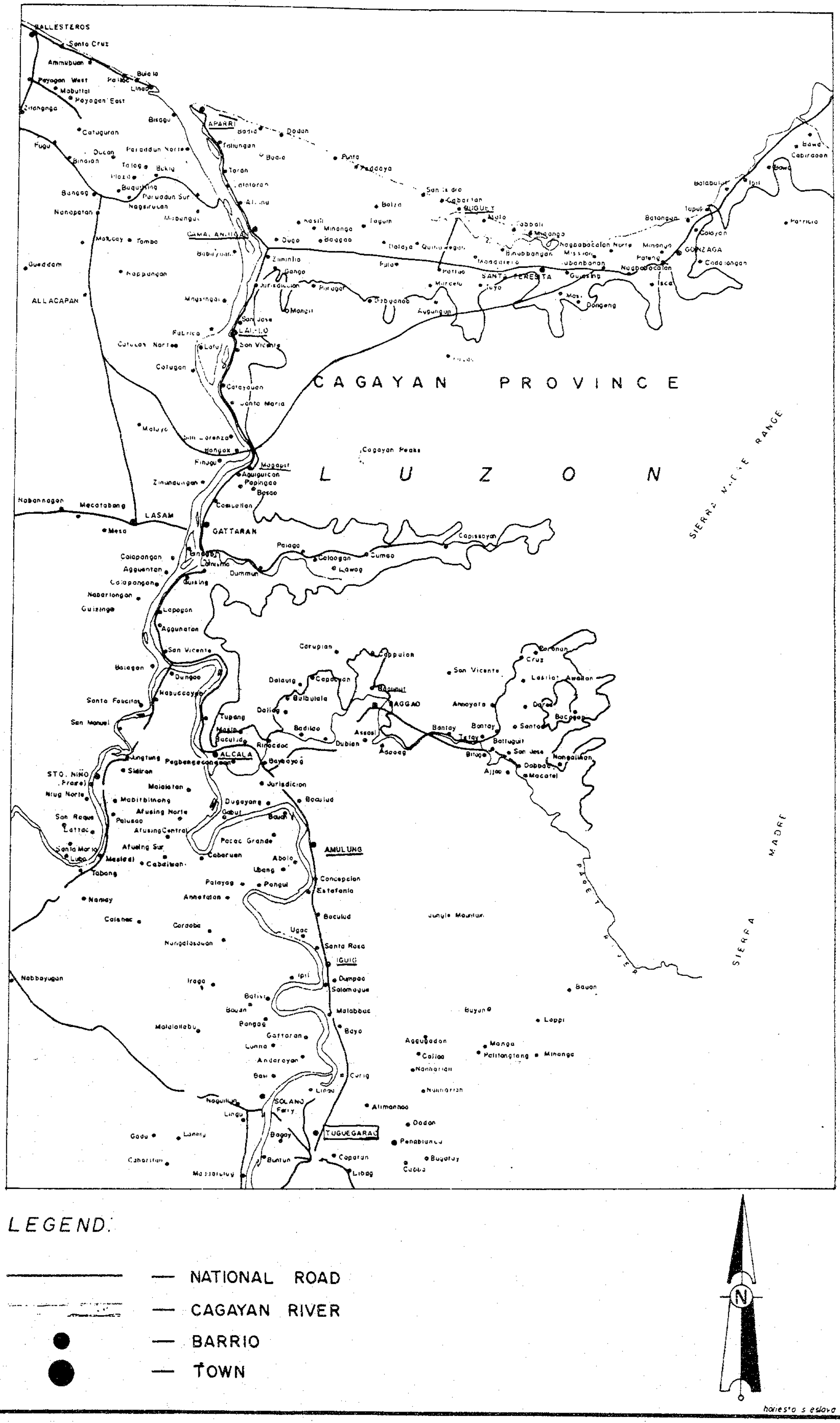
12）小規模食肉加工：

13）内水面漁業開発：　エビ（ＣＳＵアバリ）、ブラキッシュウオーター

14）Ｍ／Ａで開始した事項。

4. 専門家派遣：　野菜、獣医、畜産、養殖、電子工学、食肉加工を含む。

カガヤン州町村図


BALLESTEROS
APARRI
CAMALANIUGAN
BUGUEY
GONZAGA
SANTA TERESITA
ALLACAPAN
LAL-LO
CAGAYAN PROVINCE
LUZON
SIERRA MADRE RANGE
SIERRA MADRE
Cagayan Peaks
LASAM
GATTARAN
BAGGAO
ALCALA
AMULUNG
IGUIG
SOLANO Ferry
TUGUEGARAO
PARET RIVER
Jungle Mountain
LEGEND:
— NATIONAL ROAD
— CAGAYAN RIVER
— BARRIO
— TOWN
N
horiesto s eslova '80