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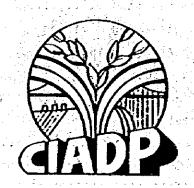
GUIDELINE

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AGRICULTURAL PILOT CENTER

IN

CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT



THIRD EDITION - OCTOBER 1982

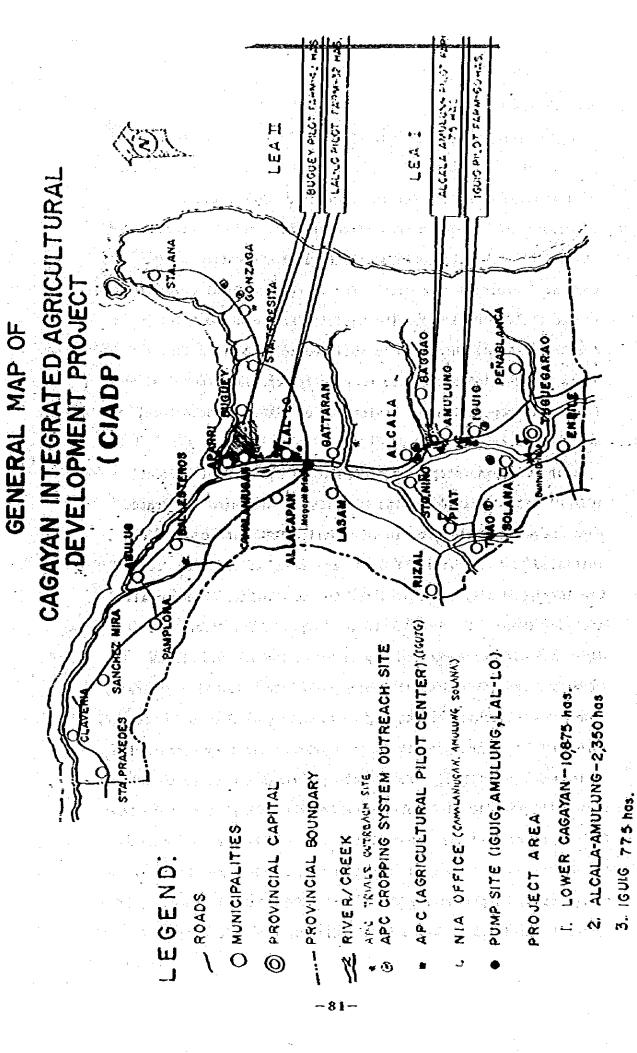
JICA - CIADP

JAPAN INTERNATIONAL COOPERATION AGENCY
CAGAYAN INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT
October 1980 (Second Edition)

June 1979 (First Edition)

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AGRO-METEROLOGY SPATION (TUGUEGARAD, 19UIG, LALLO, CAMALANIUGAN, APARKI, PIAT)

1. BACKGROUD

the integrated area two legions is a reconstant approach towards the unlifteent of sexim-iconomic status giving emphasis on the rural commity for the correction of gap between depressed and developed areas from the view point of social justice. Supportive to this concept is the creation of the Cabinet Coordination Committee for Integrated Rural Development Projects (CCC-IROP) under the National Economic and Development Authority (NEDA) which was established to identify potential areas for development and to request appropriate technical and financial cooperation and assistance of either or both local and foreign origin.

The Cagayan Integrated Agricultural Development Project (CIADP) was identified by the CCC-IRDP as the Third Integrated Rural Development Project in the Philippines. The project was initiated with the visit of Secretary Tanco to Japan in September 1973 purposely to request for possible bilateral cooperation and assistance. In response to the request, the Government of Japan had dispatched the survey teams at the various stages through Japan International Cooperation Agency (JICA) and finally a Record of Discussions was signed by both governments in February 1976 to support the project for two year preparatory cooperation. In this Record of Discussions, both governments decided to implements Agricultural Pilot Center Project as a part of the CIADP for the purpose of contributing the modernization of agriculture through the repairsion of double-cropping of rice and the increase of agricultural productivity corresponding to the improvement of agricultural infrastructure of the CIADP. Henceafter, the

cooperation period covered by the Record of Discussions was postponed for one (1) year more up to february 1979;

Center Project was prepared for the succeeding three (3) years activities and also the necessary infrastructures for the activities of APC such as main office, experiment and pilot farms were completed.

Following this stage; for the full implementation of the CIADP area, a Memorandum of Agreement was concluded by both governments in February 1979 covering the period of three (3) years up to February 1982.

But it is very difficult to attain in a short period the purpose of agricultural development which is strictly influenced to dominate for natural condition and social circumstances.

In the case of the joint evaluation carried out through the both governments on late 1981, it was pointed out the faults of sort of conception and elementary theory, still more, it was taken into consideration the delay of the whole program in CIADP-APC.

By the reason of the above mentioned, it was prolonged simply along the Memorandum of Agreement from February 1982 to March 1984, and then finally, it takes out complete agricultural techniques to APC.

In this new stage, development for Lover Cagayan will be prepared by establishing the site and size of teading Extension Area II through the fundamental studies.

CCC-IROP was reorganized to NATIONAL COUNTL ON INTEGRATED AREA DEVELOPMENT (NACIAD) in 1978 with the wider concept in the object area.

THE COULDTIMES AND PROJECTION AND AND

1. Objectives

agricultural development in the Province of Cagnyan in general, and the introduction of intensive rice culture in particular, through the facilities of the Agricultural Pilot Center.

Through the agricultural development, the project aims pushing up the situation of farmers, and furthermore contributing the economic and social growth of Cagayan province.

2. Projected Areas

The CIADP covers 14,000 hectares distributed to three (3) areas:

- 1. Tguig 775 hectares
 - 2. Alcala-Amulung 2,350 hectares
- 3. Lower Cagayan = 10,875 hectares

In the terms of administration, the following municipalities are included into the projected areas:

Upper Cagayan	Lover Cagayan
l _i lguig	4. Lal-lo
2. Alcala	5. Camalaniugan
3. Amulung	6. Aparri

7. Buguey

As a strategy for development, each area has Leading Extension Area (LEA) such as sixty (60) hertares in iguig, seventy five (75) hertares in Alcala-Aculung, thirty-two (32) hertares in Lal-12, and forty two (42) hertares in Buguey.

entral programme and the entral e

In order to supplement the pickage of improved agricultural technology, support farm resource rejutements and increase the technical capability 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 strenghtening the existence 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.

Furthermore, the center shall establish Leading Extension Areas (LEA) in Iguig, Alcala-Arulung, Lal-lo and Buguey and provide the guidance and support for demonstrating improved techniques to farmers. Problems identified in the LEA will be fed back to the APC for in-depth analysis and appropriate actions.

Ultimately, these would contribute to the agricultural productivity and output of rural income through acuste-cropping.

IV. ORGANIZATION AND FUNCTION

1. Organization

Cagayan Integrated Agricultural Development Project comprises of three (3) components namely: Irrigation component (NIA), Agriculture components (APC) and supporting infrastructre component such as rural electrification, barangay road (NEA and others).

APC is under the jurisdiction of CIADP. The organizational relationship of APC to CIADP is shown at Figure I.

The activities of the APC are being implemented by five (5) technical divisions namely: Crop Research Division, Farm Services Division, Rural Education Division, Agricultural Engineering Division and Equipment Engineering Division.

The organization charts of these divisions will be shown at Figure 2 to 7.

2. Function

The function of each division is as follows:

The Crop Research Division is primarily responsible for the development and packaging of location specific for agricultural technology through area-based applied researches.

The Farm Services Division is primarily responsible in the delivery of farm level extension services of APC through the establishment of LEA/pilot farms, demo farms and on farm demonstration trials.

The Rural Education Division is primarily responsible in the training of farmer-leaders and technical staff and in the production of printing materials for extension anthers and farmers.

The Agricultural Engineering Division is primarily responsible for the introduction of rice mechanization technology to farmers and in establishing and maintaining facilities of the development stations.

The Equipment Engineering Division is to take charge of the overall management of the Engineering and Equipment of APC, namely: maintenance, repair, operation, utilization, distribution and control.

Through the Agricultural Pilot Center, it is envisioned that farming within the Cagayan Integrated Agricultural Development Project areas will be transformed from the traditionally inefficient practice into an effective productive system.

V. FACILITIES OF APC

APC is composed of main complex building and model infrastructure farm as shown in ennex I, I and III.

Main irrigation facilities for Model infrastructure
Farm is described below:

Main Irrigation Facilities:

i. Purping facilities

Submersible Motor pump - 2 sets

Total Head - 30m

Capacity - 1.3253/min. (0.046m3/sec.)

Rotation Speed - 3,500 r.p.m.

Output 15 Kr

Voltage - 220 V

Phase - 3 phase

Current - 50 A

2. Water Pipe (from pumping station to water tank)

Pipe Vynil Pipe - 0 200 1 = 5.00 Rubber Joint

Pipe Length - 770 m

Designed Water Quantity - 0.046m³/sec.

Air Valve - 2 (Sta. 6.38 Sta. 470.37)

90°Curve Pipe - 3 (ipi. Ipl0, Ipl1)

5 5/8 Curve Pipe - 1 (1g4)

45° - 22% Ourve Fire - 1 (1p6)

 $45^{\circ} + 127^{\circ}$ Surve Fire - 1 (1p7)

22% + 11% Curve Pipe - 1 (1p8)

45⁶ Curve Pipe - 1 (1p9)

11½° Curve Pipe - 1 (1p12)

3. Water Tank

Capacity

- 3.05 x 3.00m x 3.00m = 31.5m3

Water Capacity

- 3.50n x 3.00n x 2.68 = 27.03m³

Material of Tank

- Fiber Glass Plastic Board

Connecting Material - Stainleys Colt 3 Special Rubber Pkng.

Connecting Pipe

- 3 2005 in gilding steel pipe

Flexible Joint 0200m 4 pieces

Sluice valve 6200mm 1 piece

Water Pipe in Farm

200 m Vinyl Pipe

Water pipe

Inside diameter

Length of water pipe -

Water concrete flume - 0.40 x 0.30m 156m

Spillway 6 0.30n 10m

Main Drainage

Width 2.50m Oepth 1.00m 401m

Sub Drainage

width 1.900 Depth 0.70n 301m

Lateral Drainage

width 0.300 Depth 0.600 5000

Underdrainage

0 50 m

3.753n

Diversion and Others

A Type

B Type

C Type

Concrete Water Pipe

In Farm & Aber: Vilve

Discharge Manhale

Drainage Pipe of Residual water 0 75 Vinyl Pipe Adverse underdrainage 0600rn 1 : 6.00m

6. Drainage Pump

Pump - 0200 m 2 sets

Output - 3.7 KV

Fhase - 3 phase

a Wolfage and the end 200 V ferrors and the cold in

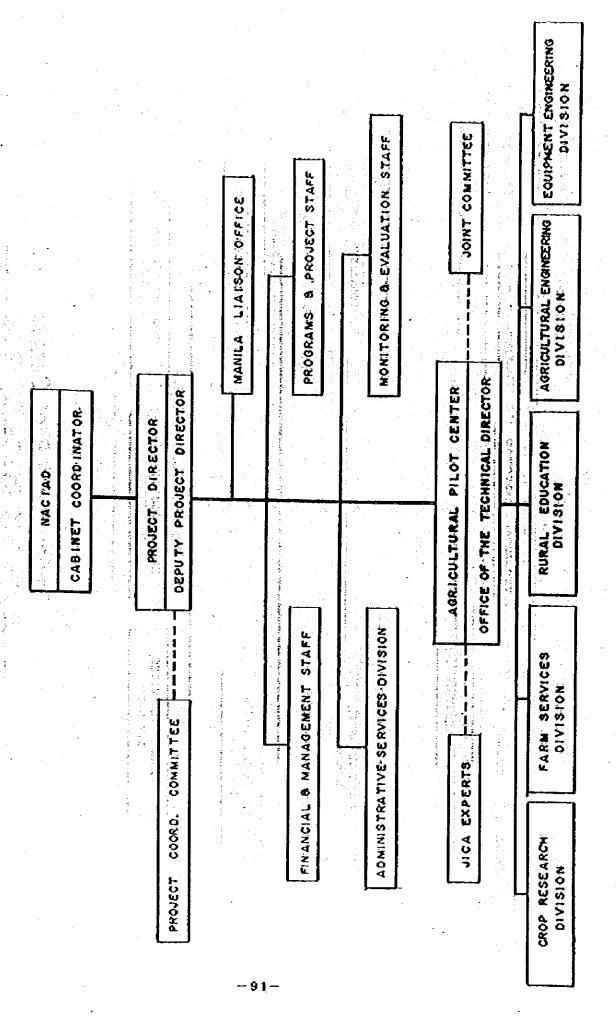
Rotation Speed - Motor-1800 r.p.m. pump - 925 r.p.m.

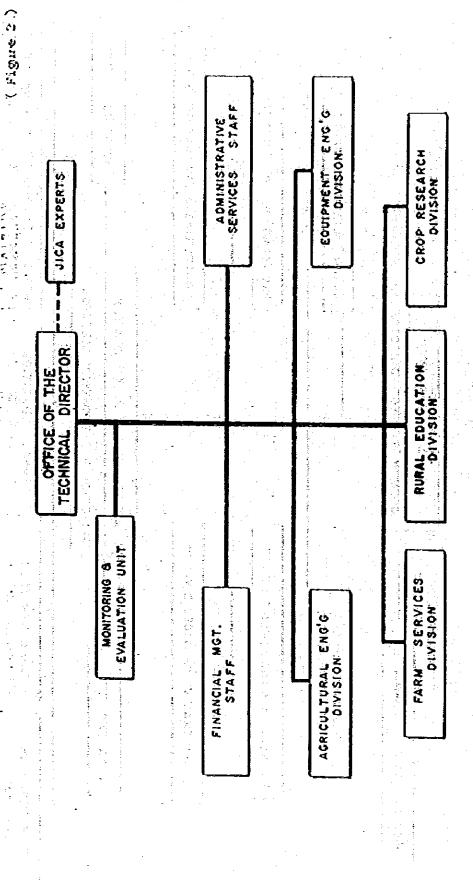
with automatic operation apparatus

Head ~ 3.50m

Capacity - 3.6m/set

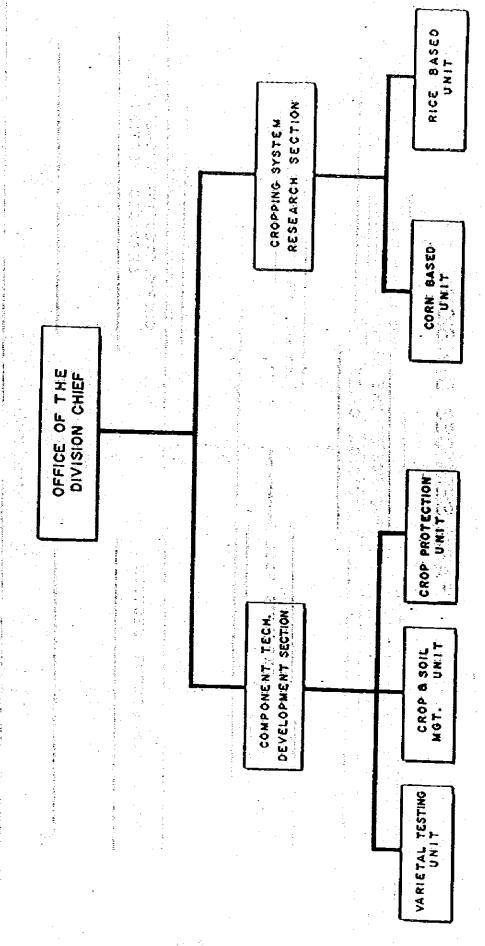
ORGANIZATIONAL CHART CIADPO-APC CY=1982





Agricultural Pilot Center EXISTING ORGANIZATIONAL CHART

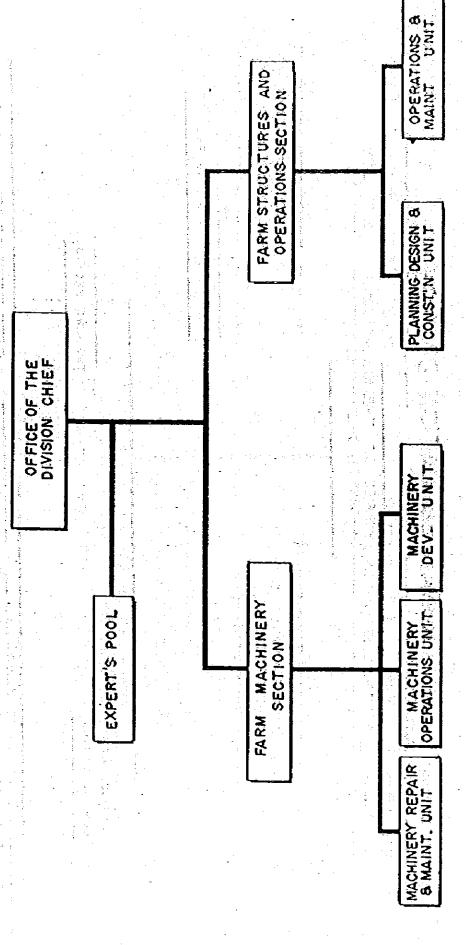
CROP RESEARCH DIVISION

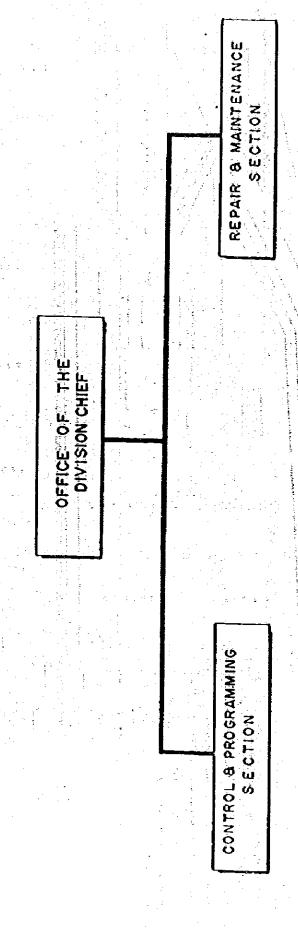


FARM SERVICES DIVISION

SEED TESTING CROP PROTECTION & LABORATORY SERVICES SECTION SOIL TESTING UNIT CROP PROTECTION LINO DIVISION CHIEF OFFICE OF THE VEGETABLE UNIT 100d SECTION EXPERT'S UPLAND CROPS MANAGEMENT LINO FARM RICE BASED LIND

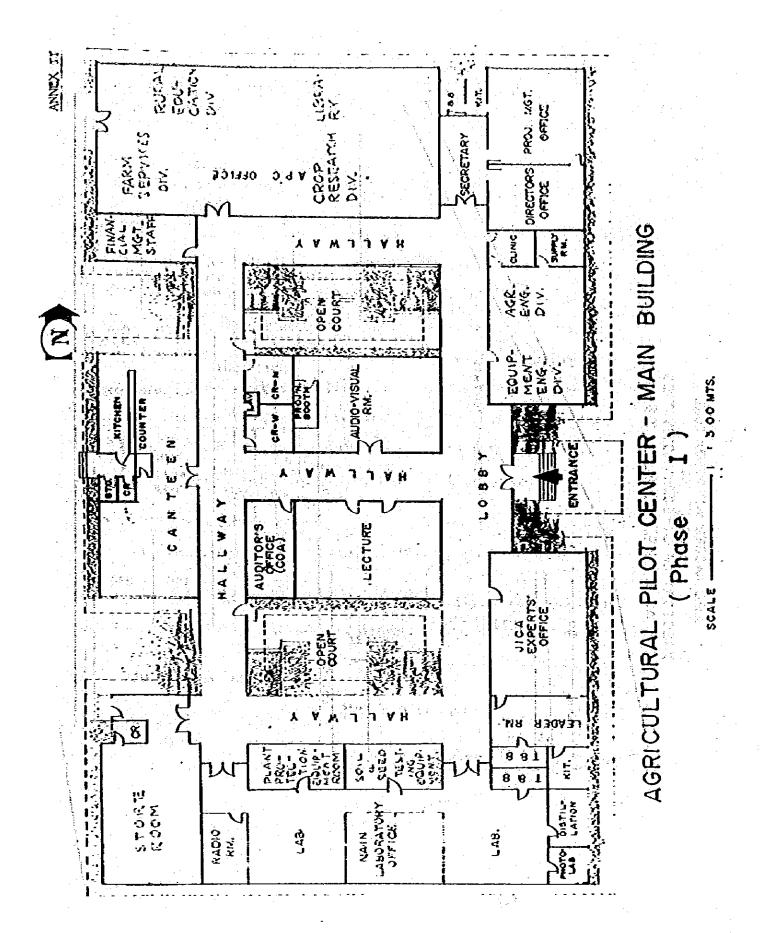
AGRICULTURAL ENGINEERING DIVISION

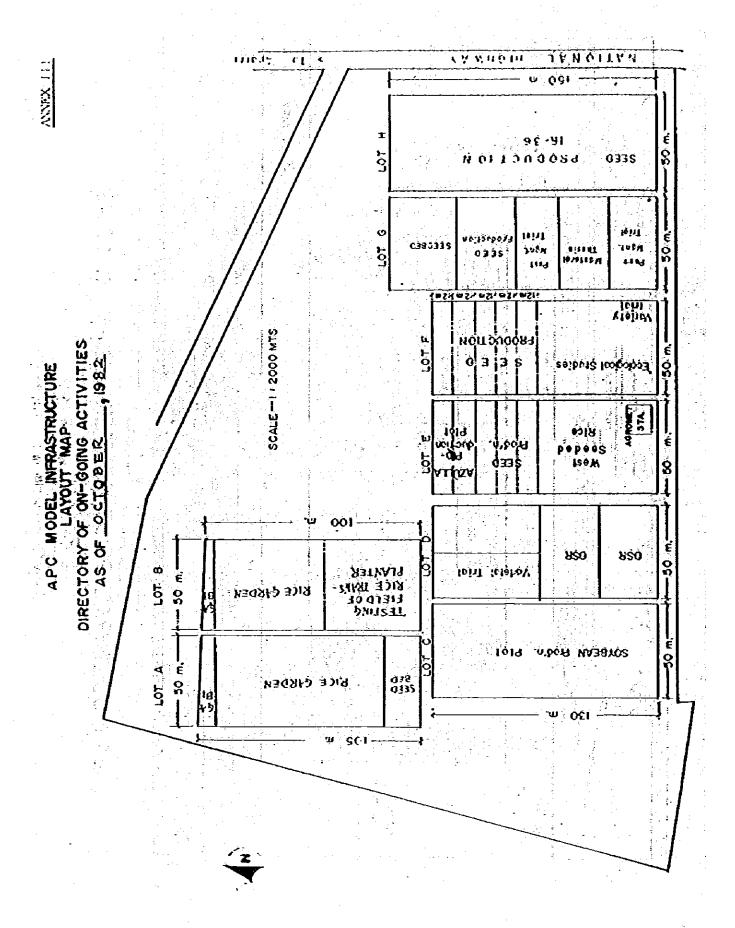




EQUIPMENT ENGINEERING DIVISION

AGRICULTURAL PILOT CENTER COMPLEX





LIST OF NET PERSONNEL OF STATE

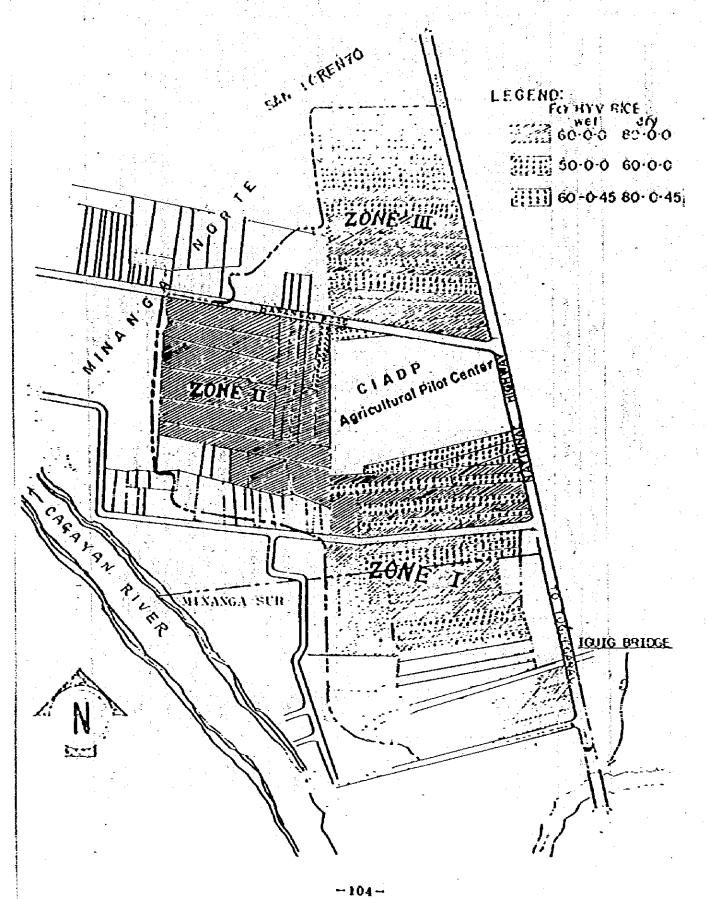
ì.	Cabinet Coordinator	_	Minister Juan Ponce Enrile
24	Director of CIADP	_	Atty. Alfonso R. Reyno, Jr.
3.	Deputy Director of CIADP	· ::. -	Ordr. Juan de Leon
4.	Project manager of CIADP-NIA		Engr. Vicente Galvez
5.	Technical Director, CIADP-APC	· -	Mr. Edmund J. Sana
6.	Head, Crop Research Division	_	Mr. Edmund J. Şana
7.	Head, Farm Services Division	-: 	Mr. Rufito Pagavitan
8.	Head, Rural Education Division	_	Miss Rosalinda Feri
9.	Head, Agricultural Engineering Division	 	Engr. Jovén Válle
10.	Administrative Office	-	Mr. Loreto Valdepeñas
11.	Head, Equipment Engineering Division	Ψ,	Engr. Oriculo A. Pèrez
12.	Head Manila Liason Officer (MLO)	- .	Atty. Carole Quirolgico
13.	Head, Financial Management Staff	_	Mr. Wilson Sedano

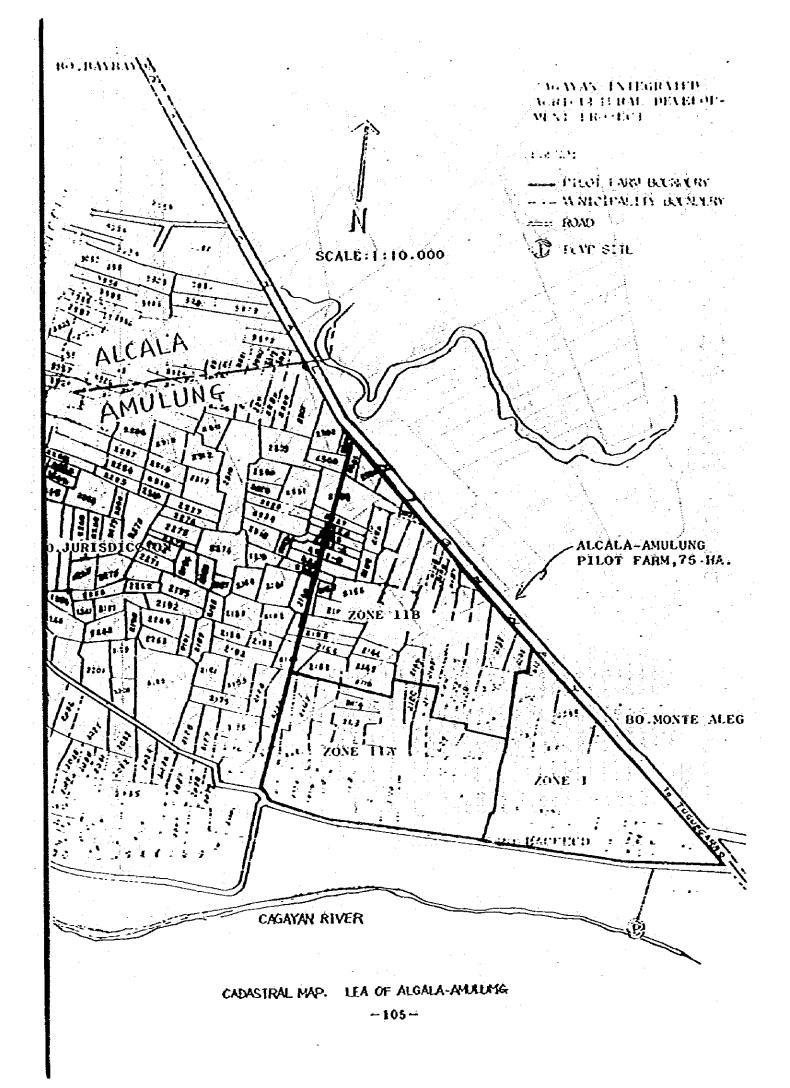
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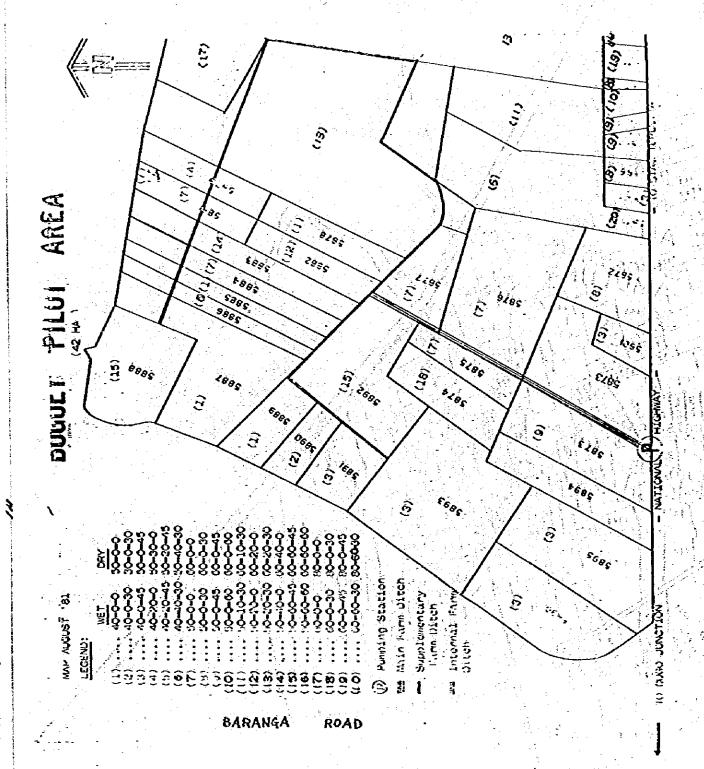
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	1979	-	Y 52,541,000
	1980	-	Y 38,815,000
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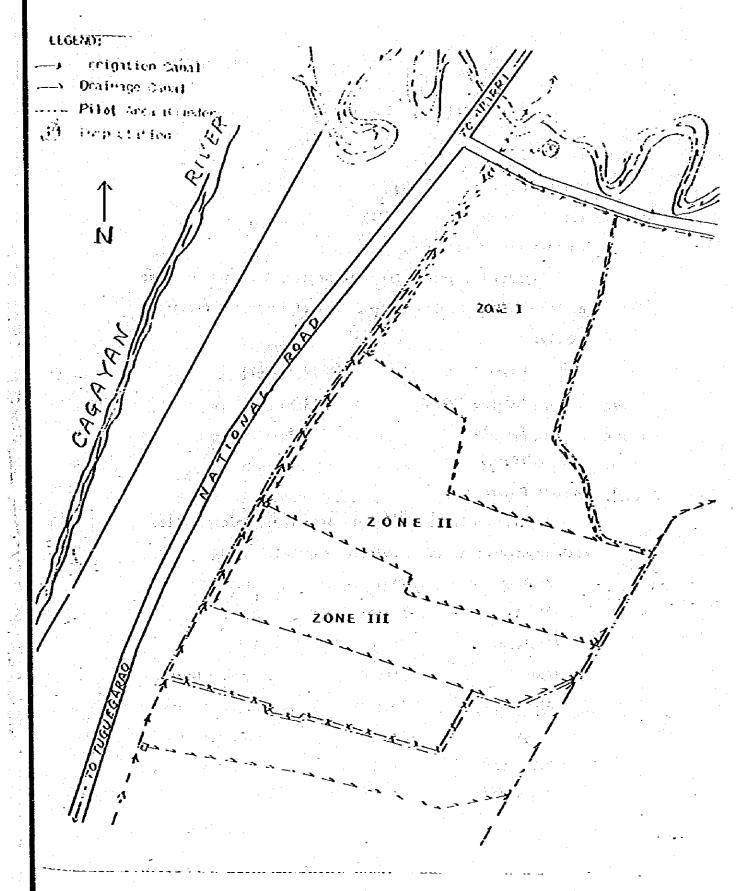
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FERTILIZER RECOMMENDATION MAP 1981 (60 HA)









LALLO PILOT FARM 32 HA.

United of Marine terminal

L. Location

2. Administrative Region

Cagayan Province belongs to Region II with Juguegarao as the center. Region II comprises of seven (7) provinces namely:

Cagayan Nueva Vizcaya Kalinga Apayao Quirino

Isabela Batanes

Ifuĝao

3. Cagayan Province

Cagayan comprises of twenty nine (29) municipalities with Tuguegarao as the provincial capital.

· · · · · · · · · · · · · · · · · · ·	in the second of	
Abulug	Claveria	Piat
*Alcala	Êncile	Rizal
≈Accolung	Faire	Solana
*Aparri	Gattaran	Sanchez Mira
Allacapan	Gonzaga	Sta. Praxedes
Baggao	*looig	Sta. Teresita
Billesteros	≒∟al-lo	Sta. Ana
≈Sugaey	Lasy	Tuao
Salayan	Paroleea	Tuguegarao
Almi misma	คือกัสตร์ พวล	-

Hunicipality includes CIADP area

4. Land area Charles in the Court man b. Pepulation 644,076 (1676) werest gowin 2,07% a. Urban - Sorat Population ... Urban 19-11-11-11-25 88.8% 6. Mother tengue Ilocaño -67.9% Ibanag -14.4% Itanes - 13.44% Walaneg -1.4% Major Land Use a. Commercial Forest 294,301 has. 33% b. Cultivated Farm Land 188,930 has. 21% c. None Commercial Forest 171,093 has. 19% d. Abandoned Idle, open brushland, other lands 69,852 has. 7.76% suitable for cultivation 8. Climate Average annual precipitation - 1,600 mm (Max. 2,700 mm - Min. 950 mm) Average temperature 9. Soil Type Undifferential mountain soil -393,733 has. (53.8%) Loan of sand stone and igneous rock parent material - - -311,670 has. (34.6%) Clay low of allovial parent -165,420 has. (18.39%)

raterial

10. Per Capita IRon - 1976 Region II

11. CIADP Area and Winter of Farmers

CIADP Area - 13,200 has.

Mrber of famers - 8,000

12. Crop Production (1977)

Total - 554,617 m/t

Palay - 311,287.72 (65%) 1.8 t/ha

Commercial crops - 188,087.63 (34%)

(coconut, sugar, tobacco)

Corn - 44,443.15 (0.6 t/ha.)

PRODUCTION OF AGRICULTURAL COMMODITIES IN CAGAMAN (1982)

				the state of the s
GROBS		HROUTHOR	ANTHAGE	
<u> </u>	AREA 114.	103	Vieto and	HOTE
Rice Irrigitor	***			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Rainfed	50 :02	257,48314	566	*Includes INV and
Colland	59,796	68,765	1.15	traditional
Total	4,778	3,561	0.75	varieties
	92,805	329,829		**Yield in 2
				croppings
• •				Source: BAEx,
	MONTOTEO	± 1. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and the second second	Cagayan, 1979
	HARVESTED		YIELD/HA.	
	AREA HA.	QUANTITY	IN LOCAL UNIT	
Corn	16,030	Add Add		
6.	10,030	226,023 cav.	14.1 cav.	cav. = 50 kg.
Root crops	-17 1 1 1 1 1 1			
Cassava	100	400,000 kg.	4,000 kg.	
Gabi	20	60,000 kg.	3,000 kg.	**************************************
Jinger	-	_	~	* · · · · · · · · · · · · · · · · · · ·
Irish Potato	· • • • • • • • • • • • • • • • • • • •	and the second a control of the	and the second	
Sweet Potato	-	-		<u>-</u>
Beans			· · · · · · · · · · · · · · · · · · ·	
Cowpea	81		and the second s	
Mungbéan		405 càv.	5 cav.	cav. = 50 kg.
Pea		. 	- ÷	•
Péánuts in shélli	ed 400	320,000 kg.	~ ^^^ •	
Sitao	-	32 0,000 kg.	800 kg.	
Soybean	· <u>-</u> -		- - 1	
Connercial Crops			-	
Abàcca .				-
Cocoa	- ,		-	ie jaa
Coconuts	6	6,000 kg.	1,000 kg.	
Coffee	3,600	14,400,000 nuts	150 nuts	per bearing tree
Cotton	35	22,750 kg.	650 kg.	
I am a second and a			-	
Sugarcane Tea	10,548.6	358,652 tons	34 tons	· ·
Tobacco		-	- .,:	•
TOOLCO	1,237	2,138,190 kg.	1,728.5 kg.	
<u>Fruits</u>	-		•	
Avocado	, -	<u>-</u>	· •	-
Banana	340	170,000 bunch	500 bunch	•
Guava		-	Joo Dunch	-
Guayabano	10	34,000 fruits	17 fruits	per bearing tree
Mandarin/Citrus	11	2,750,000 fruits	800 fruits	per bearing tree
Mango	90	378,000 fruits	120 fruits	per bearing tree
Papaya	35	350,000 fruits	20 fruits	per bearing tree
Pineapole				see bearing ting
Pumble	ĵį.	180,000 festis	80 fruits	per bearing tree
	-			ber ocaring cites

18.12	HARVESTED AMEA HA.	<u>u Maliy</u>	NICLOMA.	NOIE
				· .
Vegetables				
Aspalaya	76	311,280 kg.	2,780 kg.	,
Cabbage	3;	52,500 kg.	1,500 kg.	
Cantaloup	-		-	
Carrot	=	<u> </u>		n na na sistema na mara
Cucumber	0.2	500 kg.	2,000 kg.	· • • • • •
Eggplant	127	4,445,000 kg.	35,000 ng.	
Garlic	-	, .,		
Okra		—	_	•
Onion	=	<u> -</u>		•
Pechay	25	62,500 kg.	2,500 kg.	
Radish	~	-	2,000 kg.	•
Sayote	-			the second
Squash	80	222,400 kg.	2,780 kg.	
orato	100	800,000 kg.	8,000 kg.	
Watermelon	60	120,000 kg.	2,000 kg.	- 1
•			ajova ng.	and the second state of the second

Source: Same Annual Field Report Selected Crop Statistics (1982) Jan.-Juné.

ENTERIOR PRODUCTION IN PAGAYAN CHIEF.

ITEM	PVPU Large fårm	cation Seall fam	11000C1	2023 1011
Livestock				
Carabao	5,653	94,337		
Cattle	32,231	8,065		12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Goats		7,404		
Hogs	4,163	147,210		
Horse		4,555		
Rabbits		837		
Sheep		125		
Patt	•	•		
Poultry				:
Broilers	129,586	518,132		ng li
Chicken	189,627	740,203	9,627	740
Geese	- ,	3,351	3	,612
Layers	60,041	222,681	9,291	.710
Turkey	195	3,684	32	.590

LOCATION OF AGRO-METEOROLOGY STATION IN CAGAYAN

1011 V/21 1 20	LOCATION	LATITUDE	LONGITUDE	ELEVATION ABOVE SEA LEVEL	BEGINNING OF OBSERVATION	ITEMS OF OBSERVANTION	KITIJS AND INGREES
Agricoltu-	Minanga Norto,			1.8m	July, 1980	Rainfall	Rain gauge recording
Center						Evaporation	Evap. Fan. mini
-						Wet bulb temperature) Dry bulb temperature) Atmospheric temperature	-The men yaregnaph -Psychonenene Aubskalent The mone
	- 11					Soil temperature	makanan meniman Soti thermener
-		-					if f Do
-						Solar Radiation Atmospheric Pressure	Agricust et Brezzo et
		-	•			Wind Velocity, haim Wind direction, velocity	Output Market State Stat
	1			· · · · · · · · · · · · · · · · · · ·		Amount	
Ė	Minamon.	 			Jely, 1981	Rainfall	8840 0200 8440 0200
Comalaniu- gan. Caoayan	ciugan. Obgazza	÷ .				Evaporation	Evaporation Services
>	1 :		:			mentalty Wet bulb temperature	Thermovices Thermovices
		-			100 min 100 mi	Soil Temperature	Atmosphering Thermo- meter Soil Thermometer
							600

CASER WITCH	LOCATION	LATITUDE	LONGITUDE	ELEVATION ABOVE SEA LEVEL	BEGINNING OF OBSERVATION	ITEMS OF OBSERVATION	KINDS AND NUMBERS OF INSTALLED MATERIALS
						Solar radiation Atmospheric pressure Wind velocity, h=2m velocity, h=10m Cloud amount	Actinograph BArometer Cup Anemaneter Wind Mast. System
	Ch gayan				April, 1982	Rainfall Evaporation Evaporation Dry & wet bulb tempera- ture Atmospheric temperature Soil temperature Solar Radiation Atmospheric pressure Wind velocity, hezm	100 to 10
1		18° 12°N	121°.39 E	2.44m	1972	wind direction, coloud amount	Rain gauge

	Wind Uirection		: ::				
Mind that over a	wind Velocity						-
Borrenser	Pressure				• •	· • · · ·	
	Solar Radiation						
Thermonitor max	Temperature			-		CAL PARTIES	
Evaporations Pan	Evaporation						7, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
Rain grage	Rainfall	1949	18.53m	121,44.6	177° 37'N	To the state of the state of the	Carrie Constitution
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	wind Direction	 		- - 	! !	·	
Rationalisa	Pressure Wind Velocity						
Thermoneter	Tenperature		-			Capayan	1,50000
אוזיה השתה	Rainfall	1970	49	121 ⁰ 38'E	18°22°N	Apares	720:12 1
OF LIGHT LINE AND		OBSERVATION	SEA LEVEL				
	ITEMS OF OBSERVATION	Ö	ABOVE.	LATITUDE LONGITUDE	CATITUDE	LQ2772QV	00.1400.1100.1100.
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CLEAR OF VEHICLES & HEAVY EQUIPMENTS IN AND

	<u> </u>
al legota Land Cruiser Hard Top	4
b) Missan Fatrel	1
or Toyota Land Cruiser Pick-Up ,	7
d) Hi-Lux	1
e) Delica	1
f) Canter	
g) Mitsubishi Van	tion of the state
h) Toyota Hi-Ace	
i) Toyota Coaster	and the second of the second o
j) Isuzu Wini O.mp Truck	···· 2
k) Hino Dump Truck	···· 2
1) Isuzu Crane Truck	tana di kacamatan di Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn
m) Komatsu Bulldozer 045 P,	1
n) Komatsu Payloader 0313 \$	••••• 1
o) Koratsu Forklift	
p) Trencher	···· 2
q) Concréte Mixer	••••• 1
r) Corpacter	2
s) Boring Machines	1

FARM MACHINERY LIST (APC)

MANC OF MACHINERY	Model	QUANTITY	PONER KATING
1) Kubota 4-nheel Tractor	# #500		45 HP
2) - do -	3 6169		13-16 HP
3) Yannun 4-Mieel Tractor	1M 330T	1	33 PS
4) Kubota 4-Wheel Tractor	M 750001	3	71 HP
5) Kubota Power Tiller	K-120 x GA-100	1	9-10 HP
6) - do -	K-75 x GA-70	7	7 HP
7) - do -	T-7R	1, -1 1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1	6 HP
8) Iseki Power Tiller	KS 650 x R 12	1	6.5 HP
9) Kubota Rice Transplanter	S 300	2	3 HP
0) Kubota Reaper Binder	HE 50A	1	. 3 Hb
1) Yannar Reaper Binder	YB 302	កាសនាវិ វ េស្សិ	3 HP
S) ~ do ~	YB 602	2	3.5 HP
3) Kubota Power Thresher	HD 5	5	5 HP
4) Yamar Power Thresher	PK-IE	\mathbf{i}^{-1}	5 HP
5) Kubota Combine Harvester	Z x 0 7	1.4	12 HP
6) Yannar Pump	15 - 700	1	7 8
7) Robin Pump	EY - 18 - 30	2	3.5 PS
8) Satake Tempering Dryer	NOR - 1802	2	1.0 HP
9) Satake Ventilation Dryer	HO-360	1	0.75 KW
O) Yananoto Grain Dryer	F8 - 38 F	2	0.75 KW
1) Hand Seed Drill		7	_
2) Sprinkler		2	-
3) Grass Mover	i i i i i i i i i i i i i i i i i i i	5	_
4) Rotary Weeder		100	
5) Power Wist Duster		6	
6) Pover Sprayer		2	·
7) Hurt Sprayer	_	13	_
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9) Foot Inceshor		7	
O) Alemage		5	
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CUSTOM SERVICE BY APC (1980)

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	3.	Rotávat	ion				49		**	55		
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8.	Thrack								2			<u>168-</u> 1
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OBSERVATION AND TRAINING IN JA

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the empired than extitle	Observation Study	June 1 - 21, 1976	CIADP Project Director	
the ingres CINDAGO	Observation Study	June 1 - 21, 1976	CIADP Coordinator	
in, intone P. Quinds	Agricultural Machinery Maintenance and Repair	May 2 - June 2, 1577	Transfer from BAEx to CLADP-APC	Shok to BAEx
The Paragraph B. Propieta	Irrigation and Orainage	February 5 - November 30, 1978	APC Farm Operations Division Chief	Left ARS
Tr. Apolonio C. DAMIL	Rice Cultivation and its extension	March 2 - December 22,	Temp. transfer from BAEx to APC	Tomp. transfer fre BAEx to APC
The Gestin B. GRUZ	Control of Rice Disea- ses and Insect Pests	ce Disea-June 1 - December 20, t Posts	APC Technology Develop ment Division Chief	Left APC
":ss Lydia AlmeRon	Developing Economy	December 1 - March 31,	APC Office of the Project Manager	Lefts APC
th. Gregorie Zinampan	Rice Cultivation and Extension	February - December 21, 1979	Temp. transfer from BPI to APC	Trap. Louisfer fro BPI to APD
ars. Providencia N. FERJ	Agricultural Extension Service	April 19 - July 31,	APC Technology Disso- mination Division Staff	Farm Services Divi Section Chief
in testito pasaultan	Control of Rice Disea- ses and Insect Pests.	May 22 - Docember 16, 1980	APC Technology Dissemination Division Staff	Fam Services Divi Chief
ar. allson wated	Agricultural Machinery	June 12 - December 24,	APC Farm Operations Division Staff	Agricultural Engin Division Section C

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			150d	1 2 0 1
NAME		URATION	AT THAT TIME	Procession Procession
Mr. Joven VALLE	irrigation and Orainage	February 18 - November 30, 1982	APC Agricultural Engineering Division Chief	APC Agricultural Engineering Division Chief
Mr. Flor Rebordso	Rice Production and Mechanization	March 5 - November 30. 1982	APC Agricultural Engineering Division Staff	APG Agel Sutternal Engineer to a Statistical Staff
Mr. Vicente MIGUEL	Rice Cultivation and Extension	March 5 - November 30.	APC.Crop Research Division Staff	Marchab Resear h
Mr. Edmund J. SANA	Observation Study	May 16 - June 16, 1982	16. 1982 APC Technical Dire Con	APC Technical Director
Mr. Vicente GALVEZ	Observation Study	May 16 - June 6, 1982	the Project Manager	Nin Project Manager
	-			

JAPANESE EXPERTS (LONG TERM)

CHARISE	NAME	SPECIALITY	TEKN
trunter Advisor Project Leader	Mr. Hirokiyo IWASAKI	Agricultural Economist	0,019, 21, 1076 55 64, 20, 1677
September 200	Mr. Yoshio YABE	Economist	Jahuany 15, 1927 16 Jahuany 14, 1979
Austronty	mr. Hisao Yamanaka	Agnonomist	December 20, 1978 to October 11, 1979
Irrigation	Mr. Susumu SHIRAISHI	Inrigation Engineer	December 27, 1976 50-10-10-10-10-10-10-10-10-10-10-10-10-10
Extension	Mr. Hideo HARA	Agronomist	April I. 1977 to March 31, 1979
Agricultural Machinery	Mr. Haruo MIYAISHI		0ccember 20, 1976 to June 13

Dr. Konosuk
Mr. Hinonao
Mr. Toshizo
Mr. Yoshitaka OKUBO
Dr. Yoshina
Mr. Kanai CHOUAN

CHARGE	NAME	SPECIALITY	TERK
surjon Advisor	Dr. Sachihiko Tawaka	Thrematologist	November 1, 1985 to August 31, 1982
Joond in tor	Mr. Shiro Kanayama	Irrigation Engineer	January 20, 1981
in the second of			
7 rr. g. 110n	Mr. Hirotaka OCHI	Irrigation Engineer	April 1. 1981 to
Extension			
Agricultural Machinery	Mr. Hironori KOBAYASHI	Engineer of Agentinery	February 24 . 1982 50 March 31, 1984

Seritor Advisor Mr. Winoru Wildleway Agronomist Coordination Irrigation Extension Extension Aggress 17: 1982 Agronomist Agronomist Agronomist Agronomist Agronomist Agronomist Agronomist Aggress 17: 1982 Agronomist Aggress 17: 1982	O'AARGE,	NAME	SPECIALITY	1
on wr. Hitoshi HORIKOSHI Agronomist August-17.	Senton Advison Project Loader	Mr. Minoru KURIHARA	Agronomist	August 17: 1982
on White Hitchia Horaconist Agronomist Agronomist			en e	
	Agronany	Mr. Hitoshi HORIKOSHI		August 17. 1982 to
	Irrigation			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	tension			
	Agricultural Machinery			

JAPANESE EXPERTS (SHORT TERM)

CHARGE	NAME	SPECIALITY	TERM
Planning/Management of Extension	Mr. O s a m u PUKUDA	Irrigation Engineer	November 19. 1978 to March 31. 1979
Installation of Pump	Mr. Yoshitaka NISHIKAWA	Irrigation Engineer	April 17, 1979 May 7. 1979
Secting of Pipe	Mr. Nario MISHI	Irrigation Engineer	November 19, 1978 to December 9, 1978
Soil Survey of Lower Cagayan	Dr. Yoshiaki ISHIZUKA	Soil_Scientist	February: 22, 1980 to November 15, 1980
	Dr. Kazuichi SHIGA	Soil Scientist	
Hydrologic survey of Lower Cagayan	Mr. Takehiko YAWO	Irrigation Engineer	
Training of soil survey	Dr. Kenzo KOMAMURA	Soil Scientist	October 25. 1981 to December 24. 1981
Socio-Economic Ammanante and Survey of LEA area.	A COMMENT OF THE PROPERTY OF T	Married Farm Economiss.	Avgust 11, 1982 Cetober 10, 11982

ABBREVIATION

ADB Asian Development Bank AYC. Area Marketing Cooperatives APC Agricultural Pilot Center (Iguig. Cagayan) BAEcon Bureau of Agricultural Economies BAEx . Bureau of Agricultural Extension BAI Bureau of Animal Industry **335** Bureau of Census and Statistics BFAR Bureau of Fisheries and Aquatic Resources 8FD Bureau of Forest Development BISA Barangay Irrigators Service Association BPI Bureau of Plant Industry BS Bureau of Soils CAGELOO Cagayan Electric Cooperative CASUCO . Cagayan Sugar Corporation CS Central Bank Cabinet Coordinating Committee-Integrated Rural CCC-IROP Development CIADP Cagayan Intègrated Agricultural Development Project CIADPO Cagayan Integrated Agricultural Development Project Office C\$J Cagayan State University CYAD Cagayan Valley Agricultural College JYAFAR Cagayan Valley Agricultural Resources Research Complex CYIT Cagayan Valley Institute of Technology LEP Development Bank of the Philippines FSX Farm System Development Cooperation

International Rice Research Institute

[RR]

KKK - Kilusang Kabuhavan at Kaunlaran Adlion for Livelihood and Progress)

1.B - Land Bank

LBP - Land Bank of the Philippine's

MA Ministry of Agriculture

1997 - Winistry of Agricum Refere

MOIAD - Xitional Council on Integrated Area Development

NACIDA - National Cottage Industry and Development Authority

NCPC - Vational Crop Protection Center

NCSO - National Census and Statistics Office

NEA - National Electrification Administration

NEDA - National Economic and Development Authority

NFA - National Food Authority

NFAC - National Food and Agricultural Council

NIA - National Irrigation Administration

OECF - Overseas Economic Cooperation Fund

PAGASA - Philippine Atmospheric Geophysical and Astronomical-

Services Administration

PCARR - Philippine Council for Agriculture and Resources Research

PDBs - Private Development Banks

POS - Provincial Development Staff

PAB - Philippine National Bank

PVTA - Philippine Virginia Tobacco Administration

RB - Rural Bank

RBs - Roral Backs

RIAS - Regional Integrated Agricultural Research System

595 - Saving Banks

SLAS - Savings and Loans Associations

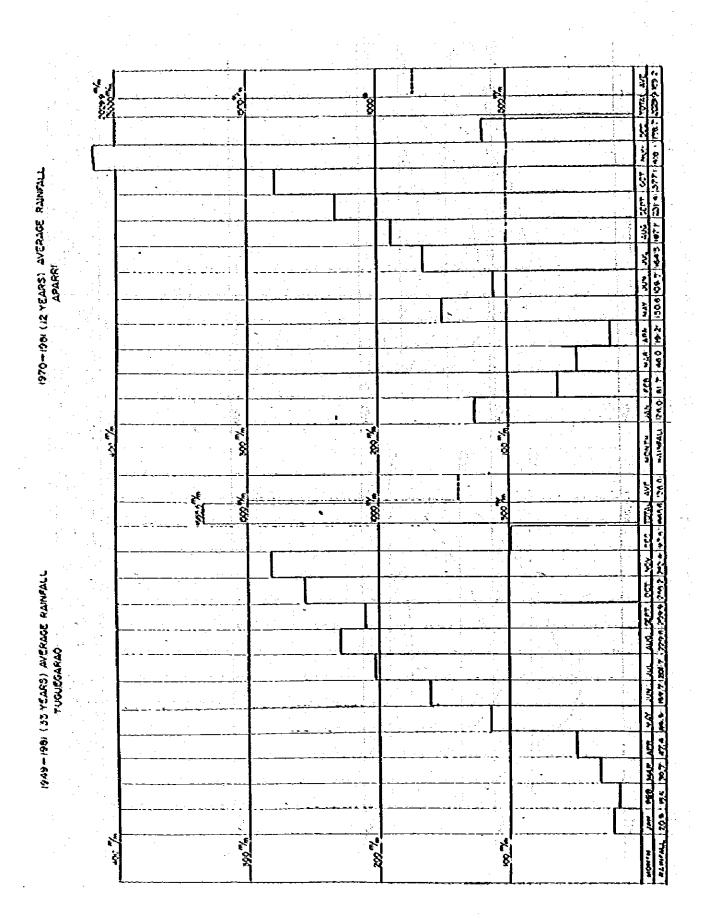
UPLB - University of the Philippines at Los Banos

VRARTIP Unified Rice Applied Research Iraining and Information Program (UPLB) a.i. active ingredient CLT Certificate of Land Transfer DAT Days after Transplanting EC Emulsifiable Concentrate fig. figure (s) ha. hectare (s) HYV High Yielding Variety (ies) M-93 Masagana 99 O/4 Organic Natter ppin parts per million PT Production Technician SP Soluble Powder WSC Water soluble concentrate 'nΡ Wettable Powder G Granules SSDA Special Saving Deposit Account Year (s)

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Report on Woter Requirement of Rice

for 1952

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Hirotoko Ochi & Generoso Oli

1982 12. 24

ABSTRACT

A preliminary investigation of water requirement of rice was conducted within three project areas of the Cagoyan Integrated Agricultural Development Project to determine the amount of water needed by the crop to supplement its daily needs for growth and development plus losses.

Paddy method was used with at least three to five fields or as per requirement, serving as observational field.

Results revealed on average water requirement of 9.0 mm/day for Agricultural Pilot Center, 7.8 mm/day and 7.4 mm/day for Iguig Pilot Farm and Buguey Pilot Farm respectively. The total water requirement however, may be 10 mm/day with enough allowance for losses. A generalization was formed that an irrigation requirement of 50 mm every five days may be sufficient to grow a good crop of rice in these areas.

RATIONALE

A preliminary investigation of water requirement of rice is continuously conducted at Agricultural Pilot Center, lying Pilot Farm and Bugues Pilot Farm. Two cropping seasons were observed at Agricultural Pilot Center, one at Iguig Pilot farm and likewise one at Buguey Pilot Farm. Investigation is still going on with Lallo Pilot Farm as an additional project to be investigated.

Paddy method was used in the preliminary investigation with at least three to five fields or as per requirement, serving as observational fields.

Stoff gages were fabricated with similar graduations in millimeter. These staff gages were installed on a properly levelled paddy field during transplanting date. Staff gage reading were observed and recorded everyday at 8:30 A.M. from transplanting date to terminal irrigation. If irrigation water is applied, the staff gage reading is also recorded just after irrigation. The reading of the previous day minus the reading of the present day is the depth of water consumed by the crop for the previous day. Likewise, if rainfall and/or irrigation occured the previous day, the amount of rainfall and/or irrigation water is added to the staff gage reading of the previous day before subtracting the reading of the previous day. The mean water requirement of the crop are then calculated for each month.

Mean water requirement longed from 6,6 nm/day to 10.4 nm/day indicating that while the crop was voung the water requirement was low. But during the tillening stage through the beating stage, there was a significant increase in water requirement, an average of 10.0 mm/day and 10.4 mm/day respectively, which went down to 7.9 mm/day during the naturing age.

The same trend was observed for the cropping season which was grown from June to September. However, the mean were slightly higher than the period from February to May, because of the pronounced heat and sunlight of summer.

Table 2. - Summary of Daily Water Requirement for Rice in millimeter per day at Iguig Pilot Form.

Months Studied	! Mean in mm/day ! General Mean
Moy, 1982	2 : 1 : 6.4 man part a sile of 21 state
June, 1982	
July, 1902	A part and 7.5 and the part of the contract of the
Leaf Control of the	Learning of the state of the st

As shown in Table 2, the general mean daily water requirement at Iguig Pilot Form is 7.8 mm/day. Range of mean water requirement is from 6.4 mm/day to 9.1 mm/day. The mean water requirement during the early stage of the crop was low, and as it reached tillering to booting stage it increased to a mean of 8.3 mm/day and 9.1 mm/day respectively. On the latest stage of growth however, the water requirement decreased.

Table 3 - Summer of Daily Water Requirement for Rice in millimeter per day at Buguer Pilot Farm.

Months Studied	•	Heon in	no/dov	:	Genera	l Hea
June, 1982	•	5.7		•		
July, 1982		8.2	ing to deficiency. The transfer of the transf	•		
August, 1932	2 :	8.5		. ! .	1.00	
September, 1982	: !	7.3	e., 1.			
	t.			!	7.	4

Table 3 shows the mean daily water requirement at Buguey Pilot farm. The general mean daily water requirement of rice in the area was 7.4 mm/day. Mean water requirement on the atherhand ranged from 5.7 mm/day to 8.5 mm/day. Results also denotes that as the crop is young the water requirement is low. At tillering stage through booting stage, water requirement increases, and as it approaches maturity stage the amount of water required decreases.

GENERALIZATION & RECOMMENDATION

Results revealed an average water requirement of 9.0 mm/day for Iguig for Agricultural Pilot Center, 7.8 mm/day and 7.4 mm/day for Iguig Pilot form and Buguey Pilot form respectively. These values varies depending on such factors as weather and sail conditions of the area. The total water requirement, however, may be 10 mm/day with enough allowance for losses. An irrigation requirement of 50 mm every five days may be sufficient to grow a good crop of rice in

these ofnos.

However, further investigation is recommended considering factors as weather and sail conditions. And for us to be able to determine from the total water requirement, the amount of evaporation, transpiration, percolation and seepage losses, tank lysimeter method should be used.

REMARKS AVERAGE 3 19 19 10 - 33, 63 10 - 63, 63 23, 23 4, 66 1978 - 1982 TOTAL 1981 - 1982 BUGUEY ** 31.30 2 S 1960 - 1902 LALLO ACALA-AMULUNG HE SR. SELEC. JAMES 1979-1962 1978 - 1982 \$100 I 00 Teny CONC ***

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PRODUCTION REPORT

PRODUCTION REPORT

1979 - ISCR (5) CHOMPING SEASONS

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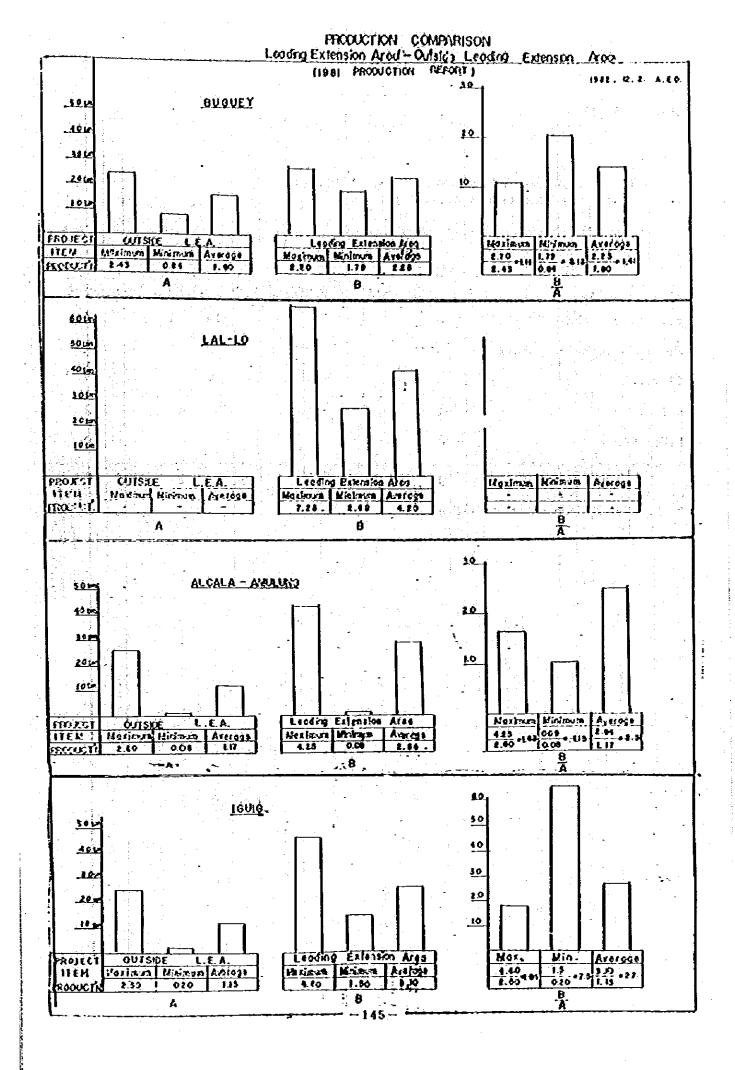


Table 1. Manpower of the Crops Research Division by Educational Attaintment

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^{*} Four staff are on study leave.

SUMMARY OF PROGRAM OF WORK

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CROWS RESEARCH TAINTSTON TO ASSIST SUMMANY OF PROGRAMMON WORK 1982—1984—

PROGRAM / PROJECT / ACTIVITY 1.03.5. Allacapan—Lallo West Rolling D. Screening, Evaluation and Schoction of Crop-Varieties and/or Lines suitable for specific Gropping Patterns and Soil Conditions 1.04. Rice Recommendations (Irrigated and Rainfed) 1.04.2. Varieties and Addity 1.04.3. Japonica Rice Varieties 1.04.3. Japonica Rice Varieties 1.04.4. Glutinous or Wary Rice	UNIT OF WORK MEASUREMENT	5.	1.982	Q	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	6 6 7 0 0	\$	80 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	0	<u>8</u>
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AGRICULTURAL PILOT CENTER SUKKARY OF PROGRAM OF WORK 1902-1904

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SUMMARY OF PROGRAM OF WORK

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AGRICULTURAL PILOT CENTER
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AGRICULTURAL PILOT CENTER AGRICULTURAL ENGINEETING DIVISI BUMMARY OF PROGRAM OF WO

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