附　属　資　料　3

プロジェクトの事業実績表

フィリピン・ボホール農業開発計画事業実績表（R/D協力期間　昭和５８年２月２日～昭和６３年２月１日）　（注）経費，人数実績は会計年度区分／線表示実績は暦年区分

区　　分	57	58	59	60	61	62
調査団派遣 〔派遣経費〕（千円）	（24,712）	1/20—2/4 実施協議(7) （3,609）	1/24—2/4 計画打合せ(5) （1,503）	3/18—3/24 巡回指導(3) 6/10—6/16 巡回指導(1) 7/10—8/23 実施設計(4)	1/27—2/4 巡回指導(1)	
〔長期専門家〕				（16,551）		
		6/8 ← 5/11		安尾正元（リーダー）		6/7
				坪井達史（稲作）		5/10
			9/18	大柿　隆（農業普及）	9/17　11/18	井口尚樹（農業普及） 63.2.1
			9/18	白石勝恵（土壌肥料）	9/17	1/7 櫃田木世子（土壌肥料） 63.2.1
		11/27		日高銀夫（畑作栽培）		63.2.1
			5/10	正崎雄三（業務調整）		5/9
〔短期専門家〕		8/10—11/9 松原八寿雄（施工管理）		11/26	6/8 →	
			10/9—10/22 ①吉田　久（稲作） ②井上康昭（畑作） ③西入恵二（畑作）	2/4—2/16 毛利勇（ビデオ操作）	5/15—5/27 井上斉（病虫害）	
		10/1 ← 3/31 渡辺真道（施工管理）		2/15—2/28 ①多和田真吉（飼料作物） ②水沢荘太郎（農業機械）	6/10—9/9 井口尚樹（農家経営調査）	
〔派遣経費〕（千円）	（1,634）	（35,931）	（63,233）	（64,874）		
研修員受入		12/11 視察 12/24 ①Reynald de Sagun ②Constantino Lucero	3/6 視察 3/14 ①Roland Butalid ②Venerand Dumadag 11/14 土壌研究 12/12 Richardo Obelena	2/1 vicento Malubay(畑作栽培) 10/1 8/15 Piezas 農薬普及 12/4 10/20 視察 11/7 ①A. Bondal ②Mdelacruz	8/1 Ruperto Batingal 畑作栽培 12/31 11/15 視察 11/30 ①Tony Yap ②Nicanor Ferrer	Charlie Cabild 3/10—5/19 農業開発計画
機材供与（千円） 実績（計画額）	携行 3,641 機材供与	1,359 72,949	3,139 129,144	0 54,722		
ローカルコスト負担事業（千円）	（129）	（35,388）	（36,235）	（54,100）		
現地業務費	129	5,850	7,079	11,273		
応急対策費		2,771	733	1,582		
基盤整備費		26,767（モデル）	22,360（モデル）	30,605（パイロット）		
技術普及広報費						
中堅技術者養成対策費			6,063	10,640		
実施計画費（千円）	191	312	92			
経費合計	30,308	149,548	233,346	190,247		
経費累計（千円）	30,308	179,856	413,202	603,449		

附　属　資　料　4

プロジェクトの活動実績・計画（最終年度）一覧表

― 研　究　活　動 ―

1．稲　作

フィリピン・ボホール農業開発計画年度別活動内容一覧表

マスタープランの項目	T．S．Iの項目	研究細部課題				
研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
Ⅰ．研究活動 1．稲の適正品種の選択	1．適正品種の選択	陸稲品種試験 （日本品種8品種）	品種×肥料　試験 （ビラール） （ウバイ） 陸稲品種試験 (APC-IRRI) （ダオ） 種子生産 IR-58,60,62	品種適応試験 （ビラール） 品種適応試験 陸稲品種試験 （ウバイ） 陸稲品種試験 （ダオ） 種子生産　IR-60,62	アルカリ土壌耐性 品種試験(APC-IRRI) ［15品種］乾➡雨 （ビラール） アルカリ土壌耐性 IRRIライン試験 (APC-IRRI) ［50 ライン］乾➡雨 （ビラール） 品種適応試験 （ビラール）雨乾 （カルメン）雨乾 種子生産 IR-58,60,62,64	品種適応試験 ［15品種］ （ビラール） （カルメン）
	2．栽培法の改善		苗代期のツングロ 防除対策 （ビラール）	直播栽培試験 （ビラール） 栽植密度×肥料 （ウバイ） 根付け肥効果試験 （ビラール） （ウバイ）	栽植密度×肥料 （ビラール）雨 （ウバイ）雨 浅植効果 （カルメン）乾 ゴマ葉枯れ薬剤散布 （ビラール）乾	最高収量試験 （ビラール） （ウバイ） （カルメン） （ツビゴン）
	3．施肥効率向上の検討 4．亜鉛及び要素欠乏の実態把握と対策	亜鉛施用効果試験 （カルメン農家圃場）	長期肥料試験 （ビラール）雨乾 （ウバイ）　乾 肥料反応試験 （ビラール）雨 （ウバイ）　乾	長期肥料試験 （ビラール）雨乾 （ウバイ）雨乾 肥料反応試験 （ウバイ）雨 NP肥料反応試験 （ビラール） （ウバイ） 施肥時期試験 （ビラール） （ウバイ）	長期肥料試験 （ビラール）雨乾 （ウバイ）雨乾 （カルメン）雨乾 施肥反応試験 （ツビゴン）雨 （ビラール）　乾 （ウバイ）　乾 （カルメン）　乾 N反応試験 （ビラール）雨乾 （ウバイ）　乾 K反応試験 （ビラール）　乾 P反応試験 （ウバイ）　乾	長期肥料試験 （ビラール） （ウバイ） （カルメン） 肥料反応試験 （ビラール） （ウバイ） （カルメン）

研究課題	研究項目	第１年度（８３）	第２年度（８４）	第３年度（８５）	第４年度（８６）	第５年度（８７）
	５．有機物還元効果と還元法の検討		Sesvania Aculeta 栽培試験（ビラール）乾 グアノ施用ポット試験（ウバイ）雨 グアノ施用試験（ウバイ）乾	有機物施用試験（ビラール）雨乾 グアノ施用ポット試験（ウバイ）雨 グアノ施用試験（ウバイ）乾	グアノ施用試験（ビラール）雨 （カルメン）乾 グアノ残効試験（ウバイ）雨乾 キャッサバデンプンカス施用ポット試験 雨 陸稲及び緑豆に対するグアノ施用試験（カルメン）雨	グアノ残効試験（カルメン） セスバニア（緑肥）に関する試験（ビラール）（カルメン）
	６．地帯別耕種基準の策定	水稲の収量調査	農家圃場における肥料反応試験（１４ヵ所）	収量及び栽培状況調査（１００ヵ所） 農家圃場における肥料反応試験	農家圃場における肥料反応試験（１４ヵ所）雨 [Post Training 活動] 陸稲栽培状況調査 雨	地帯別坪刈収量調査 アルカリ土壌（ビラール地域）に対する耕種基準の策定
	７．水田高度利用体系の組立・展示	降雨量の収集・分析 水田裏作における緑豆の耕種法試験（ウバイ）		乾季の水田利用 最適畑作物の決定（ビラール）	水稲跡地における緑豆栽培（カルメン）乾	全島にわたる病害虫発生調査の実施 カルメン・パイロット・ファームにおける病害虫発生研究 APC-IRRI協同研究 防除組織の確立
	８．そ の 他			フリップチャート作成 稲作 ツングロ病 ＨＹＶ品種の種子生産・配布 ツングロ病発生調査	カルメン・パイロット・ファーム技術営農指導 雨乾 ツングロ病発生状況調査 雨乾 農家の家計簿調査 １年間 稲作ハンドブックの作成 稲作ビデオ教材作成	カルメン・パイロット・ファーム農家に対する指導 種子生産

2．畑作　　フィリピン・ボホール農業開発計画年度別活動内容一覧表

マスタープランの項目	T．S．Iの項目	研究細部課題				
研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
畑作物の適正品種選択および栽培法の改善	1．適品種の選択	手引の作成	品種適応性試験 1．緑豆 2．落花生 3．大豆 4．カウピー 5．トウモロコシ 6．ソルガム	品種適応性試験 1．キャッサバ 2．トウモロコシ 3．落花生 4．さつまいも 5．緑豆 品種比較試験 1．トウモロコシ（在来種、改良種）	品種適応性試験 1．キャッサバ 2．さつまいも 種子増殖 1．トウモロコシ 2．落花生	品種適応性試験 1．キャッサバ 2．さつまいも
	2．栽培法の改善			トウモロコシ 1．栽植密度試験（在来種、改良種） 2．施肥時期決定試験 さつまいも 1．薬剤施用試験 2，耐虫性品種比較試験（アリモドキゾウムシに対する）	キャッサバ 1．栽植密度試験 2．植付法の違いが収量におよぼす影響 3．収穫適期決定試験 4．施肥時期決定試験 5．中耕・除草が収量に及ぼす影響 6．種苗の保存法が発芽に及ぼす影響 7．塊根形成に関する試験 8．石灰施用効果試験 ウベ・キナンバイ 1．発芽試験（メディアタイプ，Sett size 塊根部位） 2．肥沃度が収量に及ぼす影響	キャッサバ 1．収穫適期決定試験 2．中耕・除草が収量に及ぼす影響 3．石灰・グアノ施用試験 さつまいも 1．塊根収量とアリモドキゾウムシの被害関連試験 2．アリモドキゾウムシの被害関係試験 ウベ・キナンバイ 1．発芽試験（部位別）

研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
	3．施肥法の改善		トウモロコシ 1．施肥効果現地確認試験 2．肥料三要素試験 サツマイモ 1．肥料反応試験 緑豆・大豆 1．肥料反応試験 落花生 1．肥料反応試験	トウモロコシ 1．肥料反応試験 2．酸性土壌におけるリン酸施用試験 サツマイモ 1．肥料反応試験 キャッサバ 1．肥料三要素試験 ウベ・キナンバイ 1．肥料反応試験（アルカリ、酸性）	トウモロコシ 1．酸性土壌におけるリン酸施用効果試験 キャッサバ 1．肥料三要素試験 2．カリ効果試験 3．グアノ施用効果試験 4．施肥効果現地確認試験 5．しぼり粕の有効利用について 緑豆 1．石灰、リン酸の施用効果予備試験（ポット試験	キャッサバ 1．しぼり粕の有効利用について
	4．深耕及有機物還元法と効果		セスバニア（緑肥） 1．品種適応性試験	ウベ・キナンバイ 1．有機物施用試験	ウベ・キナンバイ 1．有機物施用試験 サツマイモ 1．有機物施用試験 キャッサバ 1．豆科作物との間作試験 2．有機質施用試験	キャッサバ 1．有機物施用試験
	5．輪作体系の組立て展示	1．水田裏作緑豆栽培試験			1．水田裏作緑豆栽培試験	1．水田裏作緑豆栽培試験 2．キャッサバと豆科作物の間作試験
	6．その他					1．酸性土壌における石灰、リン酸施用試験 2．耕種基準の策定 3．種子生産

3．野菜関係　　フィリピン・ボホール農業開発計画年度別活動内容一覧表

マスタープランの項目	T．S．Iの項目	研究細部課題				
研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
Ⅰ．畑作物の適正品種の選択	1．野菜適正品種の選択			野菜農家の栽培状況調査		優良品種の選抜 平地： ピーマン，西瓜 山間地： キャベツ，白菜 カリフラワー 大根，人参
	2．野菜品種適応試験			日本品種野菜適応試験 トマト，茄子 ピーマン，西瓜 大根，蕪，南瓜 強酸性土壌における各種野菜の試作 キュウリ，ササゲ 西瓜，大根	品種適応試験 大根，キャベツ 導入適応試験 日本種小豆 品種適応確認試験 白菜（AVRDC）5種 品種比較試験 キュウリ，西瓜 農家圃場栽培による品種適応試験 トマト，キャベツ カリフラワー 西瓜，キュウリ	導入野菜の試作検討 平地： マスクメロン，小豆 ブロッコリー 山間地： レタス玉葱
Ⅰ．栽培方法の改善	1．栽培法の改善			野菜農家の栽培状況調査 野菜の種類別栽培実習指導 （APCスタッフ）	山間地野菜栽培状況調査	適正栽培技術の確立 平地： トマト，西瓜 キュウリ，小豆 山間地： 葉菜，根菜類
	2．施肥法の改善			堆肥舎増設	肥料効果試験 トマト，小蕪 大根，小豆 堆肥応用栽培試験 ローカル種の西瓜	適正施肥量の選定 平地： ピーマン，西瓜 キュウリ，茄子 オクラ 山間地： キャベツ，白菜 カルフラワー 大根，人参 速成堆肥の作り方

研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
	3．有機物還元法と効果				有機物施用による長期栽培試験 茄子	有機物施用の効果確認
	4．合理的な輪作体系の組立て					
Ⅲ．そ　の　他					種子生産試作栽培 ササゲ，キュウリ 苦瓜	健全種子の生産 ササゲ，小豆 苦瓜，パパイヤ パッションフルーツ
					野菜栽培研修 （篤農家，山間地）	野菜栽培技術研修 （普及員，農家）
				野菜市場価格調査	野菜市場価格調査	野菜市場価格調査
						野菜栽培手引書作成

4．土壌肥料　　フィリピン・ボホール農業開発計画年度別活動内容一覧表

マスタープランの項目	T．S．Iの項目	研究細部課題				
研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
化学的・物理的な土壌の改良	1．地域別主要作物の施肥基準の策定			作物の栄養吸収特性と施肥肥料の肥効調査		
	2．地域別土壌の理化学的特性の把握			東北部酸性土壌の化学特性と土壌改良対策試験 ＊		①性質を異にする水田土壌における作物成育特性の調査 ②性質を異にする畑土壌のｐＦ水分曲線の作成
	3．微量要素欠乏の実態調査と対策技術			アルカリ性土壌地帯における微量要素欠乏の実態調査と対策試験	落花生に対する施肥法試験	①アルカリ水田におけるゴマ葉枯障害の解明 ②水稲における亜鉛欠乏地帯の確認と成育改善試験 ③アルカリ土壌における落花生の成育障害の解明
	4．酸性土壌対策技術（天然資源の利用）			＊未実施で次年度に見送った。天然資源としての豆科樹木の梢葉及びボホール産グワノ燐鉱石の肥効試験を実施したためである。	豆科樹木の梢葉を利用した土壌肥沃度増強試験	①ボホール酸性土壌の特性と施肥法の検討 ②酸性及びアルカリ性土壌におけるリン供給機構の比較 ③グワノリン鉱石の有効性の検討

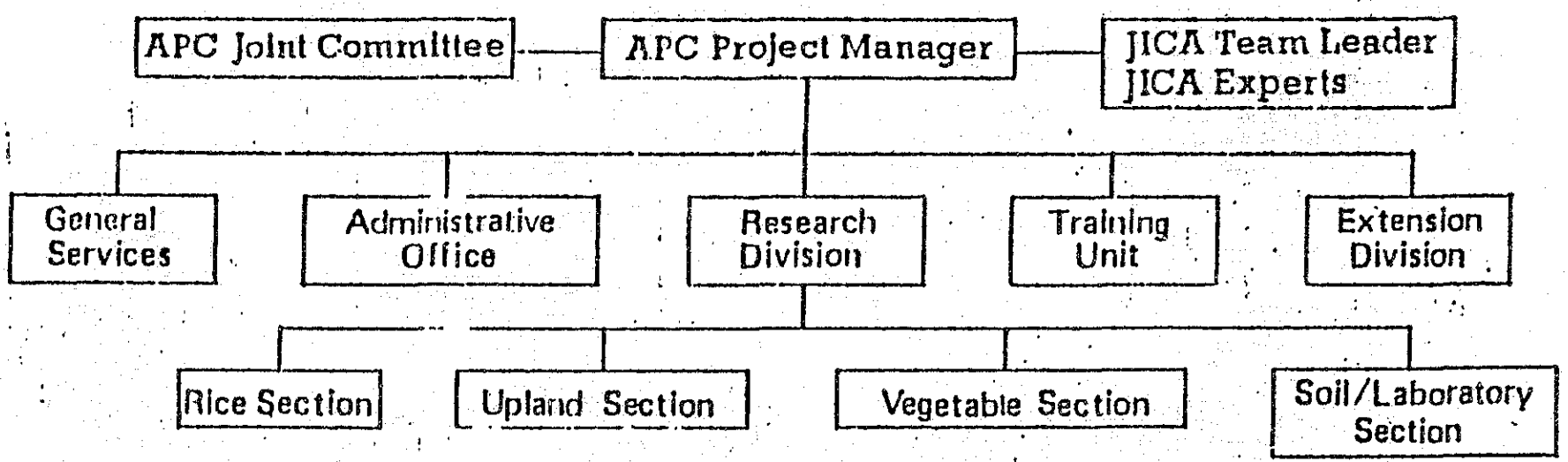
5. 農業機械　　フィリピン・ボホール農業開発計画年度別活動内容一覧表

マスタープランの項目	T．S．Iの項目	研究細部課題				
研究課題	研究項目	第1年度（83）	第2年度（84）	第3年度（85）	第4年度（86）	第5年度（87）
農業機械化体系の導入	1．小型農業機械の現地適応性の検討				適応性及び性能試験 1．NORCOS TILLER（フィリピン製、5hp） 2．カルメン圃場 3．刈取り作業リーバー装着 86年雨季作 4．耕起・代かきブラウ・レーキ 87年乾季作準備作業	適応性試験 1．NORCOS TILLER機械化体系導入モデル地区設定 1．カルメン圃場 10戸、5台
	2．小型農業機械による作業体系の組立、展示					
	3．農機具の改良				NORCOS TILLER 1．水田車輌の試作 2．リーバーの取付位置の変更 3．プリーの位置変更	NORCOS TILLER 試作改良の継続
	4．農業機械の補修及管理				1．巡回点検整備 2．部品庫整理 3．器具・道具類の補充	1．巡回点検整備 2．機材のセルフメンテナンス体制強化
	5．その他				1．グアノ粉砕生産コストの分析 2．車輌保守整備	1．車輌保守整備 2．日常・定期点検の強化体制整備

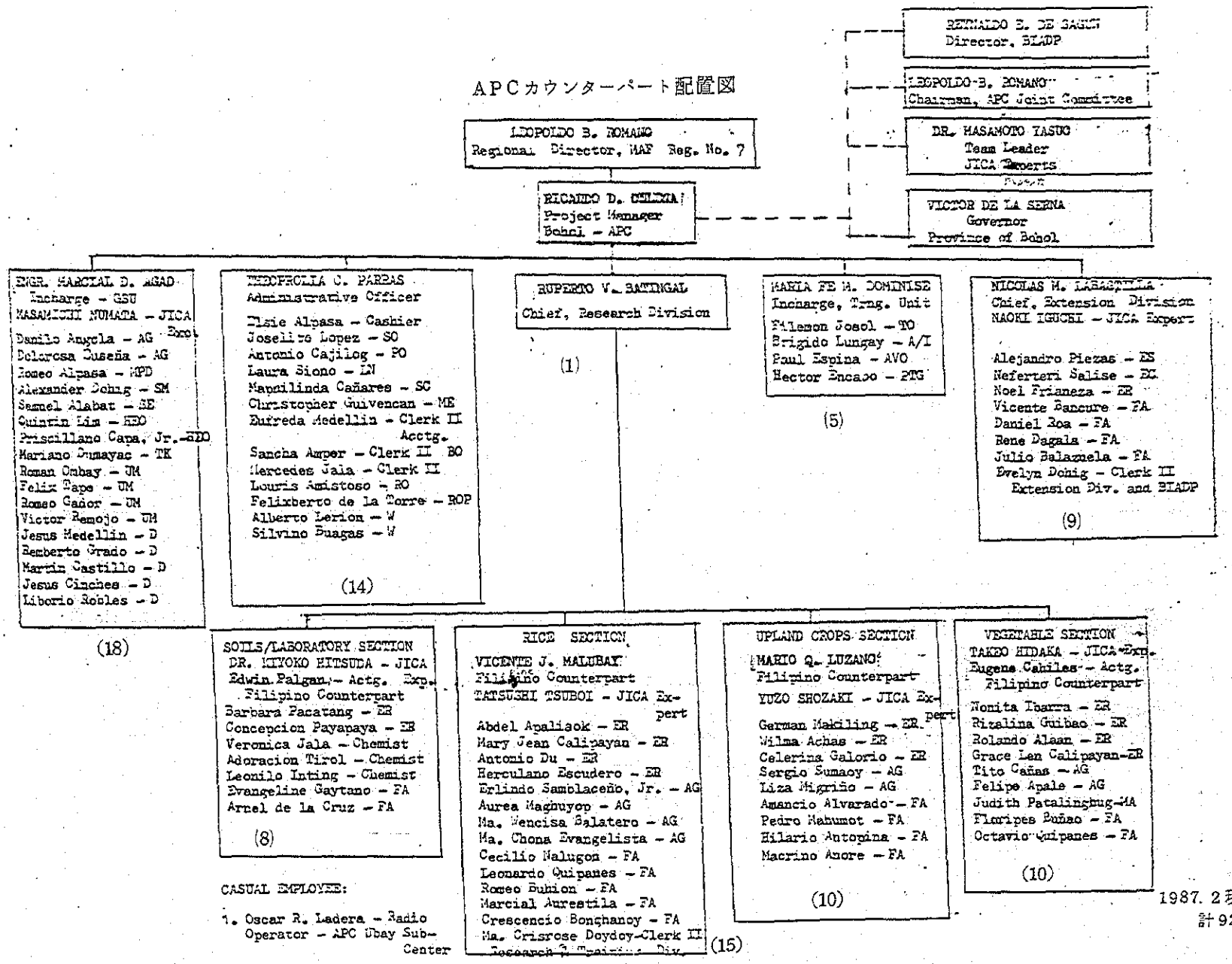
附　属　資　料　5

ＡＰＣ組織図及びカウンターパート配置図

APC組織図


APC Joint Committee
APC Project Manager
JICA Team Leader
JICA Experts
General Services
Administrative Office
Research Division
Training Unit
Extension Division
Rice Section
Upland Section
Vegetable Section
Soil/Laboratory Section

APCカウンターパート配置図



1987. 2現在
計92名

附　属　資　料　6

ＡＰＣカウンターパートに対して実施した質問表

(Answer in block letters) DATE;

Q U E S T I O N N A I R E

1. (Only for the training participants to Japan)

Have you acquired any adaptable technics or methods to your present job by the given subjects during the training in Japan ?

(1) If yes,what are they ? And please describe how you apply them to your routine job definitely.

(2) If no,what do you suppose that reasons ? And what subjects you should have been required ?

2. Do you think you have been certainly transfered technology from Japanese experts ?
(1)If yes,what are they ?(Please describe them technically and definitely.)

(2) During the project cooperation left up to Feb 1,1988,which subjects should be mastered to achieve the objectives of the Master Plan of the Project ?

3 Comments and request ,if any.

(1) To; Philippine side(MAF.,BIADP and APC)

(2) To;Japanese side(JICA,Japanese experts)

Your name and age

( )

Assignment

( )

Thank you very much for your kind cooperation in this matter. This sheet will be utilized for the successful implementation of the Bohol Agricultural Promotion Center Project.

附　属　資　料　7

ＢＩＡＤＰによるプロジェクト評価レポート

APC EVALUATION REPORT

DECEMBER, 8th 1986

APC EVALUATION REPORT

I. INTRODUCTION

The Bohol Integrated Area Development Project (BIADP) is a project support staff attached to the National Council on Integrated Area Development (NACIAD). Its main functions are monitoring, evaluation and coordination of the implementation of high priority development projects previously identified in the Bohol Development Master Plan jointly prepared by Japan International Cooperation Agency (JICA) and NACIAD.

In addition, it undertakes project studies on other possible integrated area development (IAD) projects that help foster the development of the Bohol province.

The Bohol Agricultural Promotion Center (APC) has been identified as top priority component of the BIADP. Through the JICA, the Japanese Government has extended technical and financial assistance to the project. Likewise, the technical assistance, in the form of equipment, training of Filipino counterparts and deployment of Japanese experts, ends on January 1988.

As the catalyst to the province's agricultural development, the APC serves as the main channel for packaging and dissemination of technology primarily suited to the poor quality of soil in the province. It serves as the center for research, extension and training for field technicians and farmers.

Within its span of three years of operation, the APC is expected to have accomplished baseline activities that will have formed the basic institutional development framework for the APC. Recognizing the present demands of agricultural production, a review and planning workshop for the APC is deemed necessary to reflect on previous project accomplishments and experiences and its thrusts and directions in line with its mandated objectives and functions.

Thus, charged with the task of planning, monitoring and implementing projects that will accelerate the development of the Bohol province, the BIADP has initiated the conduct of review and planning workshops for the APC.

II. REVIEW OF PROJECT ACCOMPLISHMENTS

For 1986, the APC had the following accomplishments:

A. Research Division

Accomplishments of this division are partly expressed in net returns after application of the APC technology. The following are the highlights of APC's research accomplishments:

1) The average net return per hectare for rice in the three APC rice experimental field are summarized as follows:

a) Tubigon Experimental Farm (using IR-64) - 7.85 tons/ha. (₱17,281.35)
b) Bilar Experimental Field (using IR-60) - 4.832 tons/ha. (₱9,311.85)
c) Ubay Sub-center (using IR-64) - 7.302 tons/ha. (₱15,461.00)

2) On the other hand, profitability of the different upland crops under an intercropping pattern is illustrated below:

First Pattern	Yield (ton/ha.)	Net Income (per ha.)	Return of Investment
Corn/Cassava/Peanut/ Corn/Mungbean			
a. Corn	1.180	(₱1,420.00)	.71
b. Cassava	13.6	(₱3,170.00)	1.07
c. Peanut	0.4	(₱1,400.00)	.46
d. Corn	1.0	(₱1,400.00)	.93
e. Mungbean	0.425	(₱1,300.00)	.44

3) Likewise, the cost and return analysis of sweet potato production per hectare using different fertilization rates reveal the following:

Treatment	Yield (ton./ha.)	Net Return (per ha.)
0-0-0	6.6638	(₱2,391.50)
40-0-0	6.7246	(₱2,087.90)
0-40-0	7.9506	(₱3,166.70)
0-40-50	11.3181	(₱7,893.45)
40-40-100	13.5129	(₱10,924.45)

4) For fertilization, the cost and return analysis for rice using phosphorus and guano per hectare is as follows:

Treatment	Yield (Ton/ha.)	Net Return (₱/Ha.)
20 kg./ha. P	3180.28	(₱5,142.00)
40 kg./ha. P	3601.32	(₱5,424.00)
300 kg./ha. guano	3890.83	(₱7,110.00)
600 kg./ha. guano	4313.38	(₱8,057.00)
600 kg./ha. guano	4318.63	(₱8,070.00)
900 kg./ha. guano	5435.23	(₱10,868.00)

As to studies conducted, the Research Division had the following accomplishments:

1984

Component Technology	Operational Targets (Studies)	Actual Accomplishments
1. Rice	-	7
2. Upland Crops	-	5
3. Soils and Fertilizer Section	-	3
4. Vegetables	-	1

1985

1. Rice	4	24
2. Upland Crops	8	22
3. Vegetables	None	11
4. Soils and Fertilizer	4	10
5. Soils	1,802 samples to be analyzed	1,802 samples analyzed

1986

	Component Technology	Operational Targets (Studies)	Actual Accomplishments
1.	Rice	14	30
2.	Vegetables	12	16
3.	Upland Crops		
	Rootcrops, Legumes, Corn	11	17
4.	Soils and Nutrition	6	12
5.	Laboratory Services	1,200 samples to be analyzed	2,399 samples analyzed

Other Activities

1.	Rice Farmers Economic Condition Survey	-	3 sites (1-C. Luzon, 2-Bohol)
2.	Publication of Training Materials	-	2 publications (250 copies each)
3.	Fertilizer Revolving Fund	-	12 sites
4.	Seeds Distribution	-	12 municipalities
5.	Distribution of kits for Post Training Fertilizer Trial	-	44 technicians received
6.	Iodine Test Kit Distribution	-	23 kits
7.	Fertilizer Revolving Fund Release	-	₱169,147.20

B. Extension Division

1984

In 1984, this division proceeded with the bench mark survey to determine the farmer's present conditions and the technical problems confronting Bohol agriculture. In addition, the extension division focused its attention on gathering technical informations from various research stations in Bohol which will be utilized in the establishment of farm demonstration. Likewise, promotion of pelletizing machines and revitalization of the Samahang Nayons were actively pursued.

1985

During 1985, extension activities were carried out through extensive information campaign and the establishment of farm demonstration trials. These farm demonstrations were mostly established in the farmer's field to serve as show windows to farmers on better agricultural production practices and likewise, to encourage the participation of farmers in the establishment of farm demonstrations.

Also for the same year, the extension functions of the APC included training of farmers attending and organizing farmers' associations, conducting practical farmers classes and other communication processes involved in the transfer of technology to farmer-clienteles.

The targetted number of farm demonstrations to be established for 1985 was ten (10). These were to deal mainly with the different cropping patterns, derived from other research stations in Bohol for rice, corn, and root-crops with fertilizer and spacing as the variable factors.

As to accomplishments for the year, the (10) farm demonstrations were established by the end of the year. (See Table 1). Lay-outing of the demonstration field design planting of the crops and basal application of fertilizers, replanting of non-emergent seedlings, side-dressing and other related activities were done by the extension staff together with the farmer cooperators.

Other activities in 1985 included the holding of farmers meeting in Dauis and Loon, demonstration on the use of the pelletizing machine, swine-feeding tests comparing the effect of pelletized feeds vs. rice bran on the weight of swine, showing on recent agricultural production practices and the formulation of economic survey forms.

1986

In 1986, the Extension Division has adopted various methods and approaches among which are the following:

		Targetted	Accomplished
1.	Farm Demo Establishment-Cropping Pattern	14	16
2.	Barangay Economic Survey	5	6
3.	Livestock Production Project	4	4
4.	Reactivation of Farmers' Association	5	5
5.	Coordination and conduct of Farmer's Training	2	1
6.	Handling of Fertilizer Revolving Fund		200 has.
7.	Palay Seed Distribution		BPI IRI 10 8666/kg. IR 60 IR 64
8.	Demonstration of corn sheller to Samahang Nayon		2 shellers
9.	Coordination with the Research Division in the evaluation of results		

C. Training Division

This division started its activities in 1985. Since then it had the following outputs:

1.	No. of trainings	9
2.	No. of workshops (provincial agricultural development)	2
3.	No. of farmers trained	106

4. No. of extension workers trained 144

5. No. of workshop participants 160

A total of 410 participants were trained since 1985.

III. PROJECTED ACTIVITIES BY COMMODITY

The present rate of yield and cost of production per commodity is summarized on Table 2. This is compared with the commodity's targetted yield and cost of production in tons per hectare for the province to determine gaps and additional requirements.

Since APC's perceived role is to serve as a catalyst for agricultural development in Bohol, the farmer cooperators are reckoned as its primary clientele. In turn, the latter permits the shift of technology transfer from the APC to the small farmer through farm demonstrations and other extension activities.

To achieve APC's target outputs, the requirements would include activities in research, extension and training needed to realize the projected yield and accompanying cost of production for a specific commodity.

For instance, with irrigated rice on alkaline soil, existing yield is 2.5 tons per hectare with an equivalent cost of ₱3,500.00. If the target is 4.0tons per hectare (or a total cost of ₱5,800.00), the difference in yield is 1.5 tons per hectare. To meet this gap,

the APC should engage in such activities as training and information dissemination of APC packaged technology and successful implementation of the land reform program.

The other requirements per commodity are shown in Table 2.

IV. PROJECT SCENARIO

As shown above, the APC has shown a number of requirements to meet the gap between targetted yield and existing yield of commodity production. Majority of these entail extension and training activities like dissemination of packaged technology, follow-up of varietal screening and distribution of planting materials.

Subsequently, technical assistance will be required to efficiently supervise and support the APC activities. Thus, Japanese aid, in this regard, is still needed even beyond the original term of Japanese technical assistance date of expiration in 1988.

To illustrate, some projections were made at the workshop regarding the project scenario with and without technical assistance after 1988. Estimates of production per commodity were expressed in terms of percentages of annual increase.

For example, for irrigated rice on alkaline soil the increase in annual production is approximately 10 percent with Japanese technical assistance. Without the assistance annual

growth of production is estimated only at two percent. The estimates in annual crop production are listed on Table 3.

V. RECOMMENDATIONS

In conclusion, the BIADP has the following recommendations:

1. The Japanese technical assistance to the APC should be extended for two or more years, considering that actual APC operations started only in 1984. Activities were focused on research and on the gathering of basic data relevant to the studies conducted for specific crops. Actual transfer of technology will yet have to be realized more extensively through more extension and training activities for the APC.

2. A major shift in APC's thrust in research, from conduct of basic to post-harvest research, i.e., marketing, storage, etc., is vital. In rice, for instance, actual production for the provice is more than enough. Hence, research on rice should now be focused on post harvest handling and marketing of this crop.

3. Consequently, the emphasis on APC's activities should be geared towards extension and training. If the APC were to realize fully its direction, it should embark on strengthening its institutionalization process, i.e., farmers' organizations should be of utmost concern. Working harmoniously with existing farmer cooperators is one initial step to revitalize

farmers' organizations as a forum for discussion on whether or not APC technology is relevant to the farmer.

4. At this stage, special attention should be focused on the maintenance of APC vehicle and equipment in anticipation of the eventual pull out of the Japanese Technical Assistance. This will ensure continuous operation of the APC upon turn over to the concerned implementing agency.

5. Corollary to the above, an irrigation expert (short-term) and additional slots for training in Japan will be necessary as support to research, training and extension activities of the APC. Likewise, additional research and extension equipment and special tools for the maintenance of vehicles and equipment will be needed.

TABLE 1

LOCATION OF THE RESPECTIVE FARM DEMO SITES ESTABLISHED ARE THE FOLLOWING:

	CROP-CORN	AREA	DATE PLANTED	VARIETY	NAME OF COOPERATORS	REMARKS
1.	San Vicente, Sagbayan	.5 ha.	4-26-85	DMR 2	Alfonso Dayganon	Heavy rain after planting
2.	Bogtongbod, Clarin	-do-	4-25-85	-do-	Esperidion Ruben	Good stand of crops
3.	Bogtongbod, Clarin	.5 ha.		-do-	Pablo de Gamo	-do-
4.	Buenos Aires, Tubigon	-do-	5-7-85	-do-	Arcadio Andamon	-do-
5.	Biking, Dauis	.25 ha.	4-29-85	-do-	Priscilo Nisnisan	Growth affected by less rain
6.	Tabalong, Dauis	-do-	5-13-85	-do-	Antonio Lood	Better growth
7.	Mayacabac, Dauis (w/ Japanese Cooperation-Upland Crop Section)	.059 ha.	5-13-85	-do-	Pedro Lupoy	Affected by lack of rain
8.	Lourdes, Panglao	-do-	5-10-85	-do-	Maximina Cloma	Rain only at time of planting
9.	Tangnan, Loon	.1194 ha.	5-20-85	-do-	Ignacio Molina	Poor germination due to dry soil
10.	Sambog, Corella	.068 ha.	5-14-85	-do-	Roman Rebuta	Better growth

Table 2
EXISTING AND PROJECTED ACTIVITIES BY COMMODITY

COMMODITY	EXISTING YIELD (tons/ha.)	COST (₱)	TARGETTED YIELD (tons/ha.)	COST (₱)	DIFFERENCE/GAP (tons/ha.)	REQUIREMENT TO MEET THE GAP
RICE						
Alkaline						
Irrigated	2.5	3,500	4.0	5,800	1.5	- Training and information dissemination of APC packaged technology
Rainfed	2.3	3,500	4.0	5,800	1.7	- Successful implementation of land reform program
Acidic						
Irrigated	3.4	3,500	5.5	5,500	2.1	- credit and financing services
Rainfed	2.8	3,500	5.0	5,500	2.2	- researches on post harvest technology - additional researches on cropping pattern and water management
UPLAND CROPS						
Cassava	15	2,700	25	4,000	10	- Follow-up varietal screening - Credit support

COMMODITY	EXISTING YIELD (tons/ha.)	COST (₱)	TARGETTED YIELD (tons/ha.)	COST (₱)	DIFFERENCE/GAP (tons/ha.)	REQUIREMENT TO MEET THE GAP
Sweet Potato	6.5	7,600	11	9,000	4.5	- Researches on varietal screening and time of planting - Training and information dissemination on APC packaged technology - Researches on cultural management practices like control of pest and diseases, fertilizer and soil management - Planting material distribution
Ubi						
Alkaline	13	32,000	21	34,500	8	- varietal screening trials - distribution of planting materials - researches on marketing and post harvest technology - training and information dissemination on APC packaged technology
Acidic	3	32,000	13	34,500	10	
Corn	1.3	3,000	3.0	4,500	1.7	- researches on pest and disease control, time of planting, fertilizer and soil management and cultural management practices - distribution of planting materials - training and information dissemination on APC packaged technology

COMMODITY	EXISTING YIELD (tons/ha.)	COST (₱)	TARGETTED YIELD (tons/ha.)	COST (₱)	DIFFERENCE/GAP (tons/ha.)	REQUIREMENT TO MEET THE GAP
Mungbean	0.8	2,000	1.5	3,700	0.7	- do -
Peanut	0.7	4,000	1.1	5,200	0.4	- do -
VEGETABLES						
Tomato	20	19,188	32	?	12	- do -
Watermelon	3.4	6,000	5.8	7,500	2.4	- do -
Cucumber	7	8,300	20	10,000	1.3	- do -

TABLE 3

ESTIMATED ANNUAL INCREASE IN PRODUCTION OF MAJOR COMMODITIES WITH AND WITHOUT JAPANESE TECHNICAL ASSISTANCE

COMMODITY	WITH TECHNICAL ASSISTANCE (%)	WITHOUT TECHNICAL ASSISTANCE (%)
RICE		
Alkaline	10	2
Irrigated		
Rainfed		
Acidic	10	2
Irrigated		
Rainfed		
UPLAND CROPS		
Cassava	10	5
Sweet Potato	10	1
Ubi		
Alkaline	12	3
Acidic	30	3
Corn	20	3
Mungbean	15	2
Peanut	10	3
VEGETABLES		
Tomato	10	3
Watermelon	10	3
Cucumber	25	3

附　属　資　料　8

圃　場　試　験　一　覧

(On-Going　Trials)

CARMEN PILOT FARM
On Going Trials

Bohol APC Rice Section
Research Proposals - Carmen Pilot Farm
CS December 1986 - April 1987

I. Long Term Fertilizer Trial

- T1 = control (0-0-0)
- T2 = 63-0-0
- T3 = 33-46-0
- T4 = 33-46-30
- T5 = 63-0-30 + 600 kg/ha Guano
- T6 = 63-46-30 + 10 t/ha rice straw compost

Experimental Design: RCB with 3 replications
Variety : IR60
Planting Distance : 20 cm x 25 cm
Plot Size : 6 m x 7 m

II. Fertilizer Trial

- T1 = control (0-0-0)
- T2 = N:23 + 300 kg/ha Guano
- T3 = 32-23-0
- T4 = 32-23-0 + 300 kg/ha Guano
- T5 = 63-46-0
- T6 = 63-46-30
- T7 = 63-46-30 + 10 t/ha rice straw compost
- T8 = 72-69-30

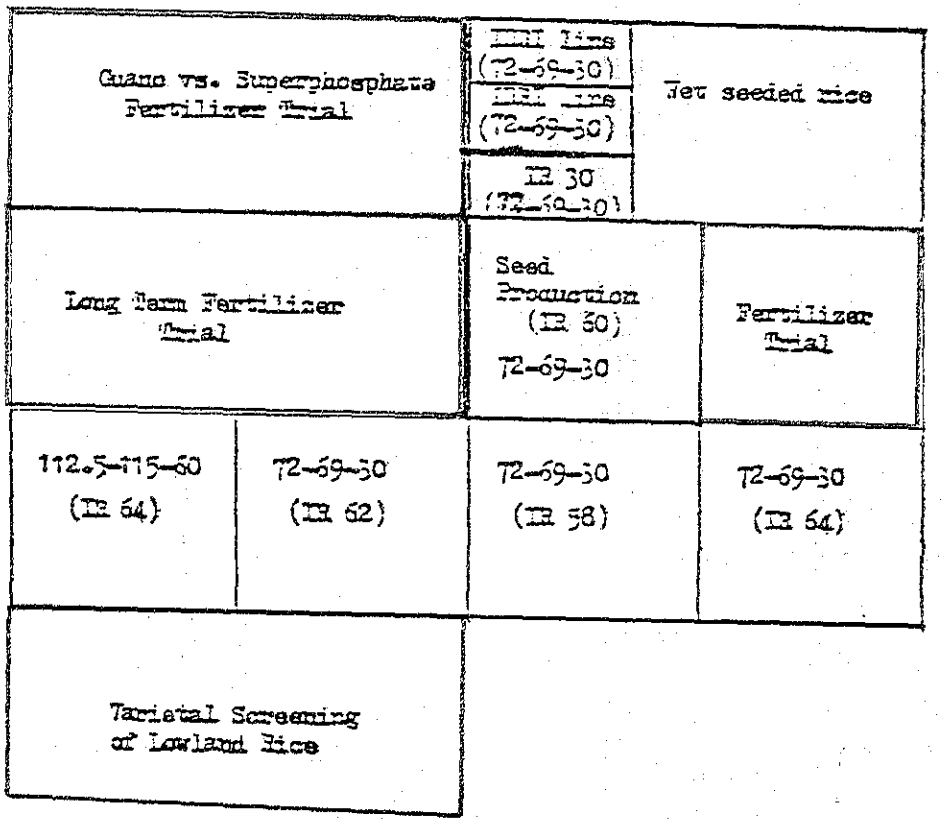
Experimental Design: RCB with 2 replications
Variety : IR60
Planting Distance : 20 cm x 25 cm
Plot Size : 4 m x 5 m

III. Guano vs. Superphosphate Fertilizer Trial

- T1 = control A (0-0-0)
- T2 = control B (60-0-30)
- T3 = P:30 + MK (superphosphate)
- T4 = P:60 + MK (superphosphate)
- T5 = P:90 + MK (superphosphate)
- T6 = Guano : 300 kg/ha + MK
- T7 = Guano : 600 kg/ha + MK
- T8 = Guano : 900 kg/ha + MK

Experimental Design: RCB with 2 replications
Variety : IR60
Planting Distance : 20 cm x 25 cm

CARMEN EXPERIMENTAL FIELD



IV. Varietal Screening of Lowland Rice
* same trial as in Bilar

V. Rice Production/Seed Production

T1 = 72-69-30
T2 = 112.5-115-60 (3 bags urea + 5 bags UB-46-0 + 2 bags 0-0-60)

*Planting Distance for T2: 25 cm x 25 cm

Bonal APC Rice Section
Research Proposals - Bilar Experimental Field
CS December 1986 - April 1987

I. Long Term Fertilizer Trial

T1 = control (0-0-0)
T2 = 60-0-0
T3 = 60-60-0
T4 = 60-60-60
T5 = 60-60-60 + 10 t/ha rice straw compost

Experimental Design: RCB with 3 replications
Variety : IR60
Planting Distance : 20 cm x 25 cm
Plot Size : 9.5 m x 12.5 m

II. Fertilizer Trial

T1 = control (0-0-0)
T2 = 51-28-28 + 2 kg/ha Zinc Oxide
T3 = 51-28-28
T4 = Foliar Fertilizer
T5 = 60-46-0
T6 = 60-46-30
T7 = 60-46-30 + Foliar Fertilizer
T8 = 60-46-60
T9 = 60-46-30 + 10 t/ha rice straw compost

Experimental Design: RCB with 3 replications
Variety : IR60
Planting Distance : 20 cm x 25 cm
Plot Size : 4 m x 5 m

III. Potassium Response Trial

T1 = 0-0-0
T2 = 60-46-0
T3 = 60-46-30
T4 = 30-46-60
T5 = 60-46-30
T6 = 60-46-30 (split application of K : 60-30)
T7 = 60-46-120
T8 = 60-46-120 (split application of K : 90-30)
T9 = 60-46-0 + 500 kg ash/ha.
T10= 60-46-30 + 500 kg ash/ha.

Experimental Design: RCB with 3 replications
Variety : IR60
Planting Distance : 20 cm x 25 cm
Plot Size : 4 m x 5 m

IV. Nitrogen Response Trial

T1 = 0-0-0	T10 = 120-45-45		
T2 = 30-0-0	T11 = 0-90-90		
T3 = 60-0-0	T12 = 30-90-90		
T4 = 90-0-0	T13 = 60-90-90	—	
T5 = 120-0-0	T14 = 90-90-90	—	
T6 = 0-45-45	T15 = 120-90-90	—	
T7 = 30-45-45	T16 = 60-0-0	}	Urea
T8 = 60-45-45	T17 = 60-45-45	}	Urea
T9 = 90-45-45	T18 = 60-90-90	}	Urea

Experimental Design: RCB with 3 replications
Variety IR64
Planting Distance 20 cm x 25 cm
Plot Size 1 m x 5 m

BILAR SUB-CENTER
On Going Trials

V. Water Management x Fertilizer Trial

Experimental Design: Split Plot with 3 replications

Mainplot: M1 = APC Management
M2 = Continuous flowing (Farmer's practice)
M3 = Intermittent Irrigation

Subplot : F0 = control (0-0-0)
F1 = 39-46-60
F2 = 60-46-90

Variety: IR60
Planting Distance: 20 cm x 25 cm
Plot Size: Mainplot = 5 m x 12 m } 3 replications
Subplot = 5 m x 4 m }

VI. Chemical Application for Brown Spot Control

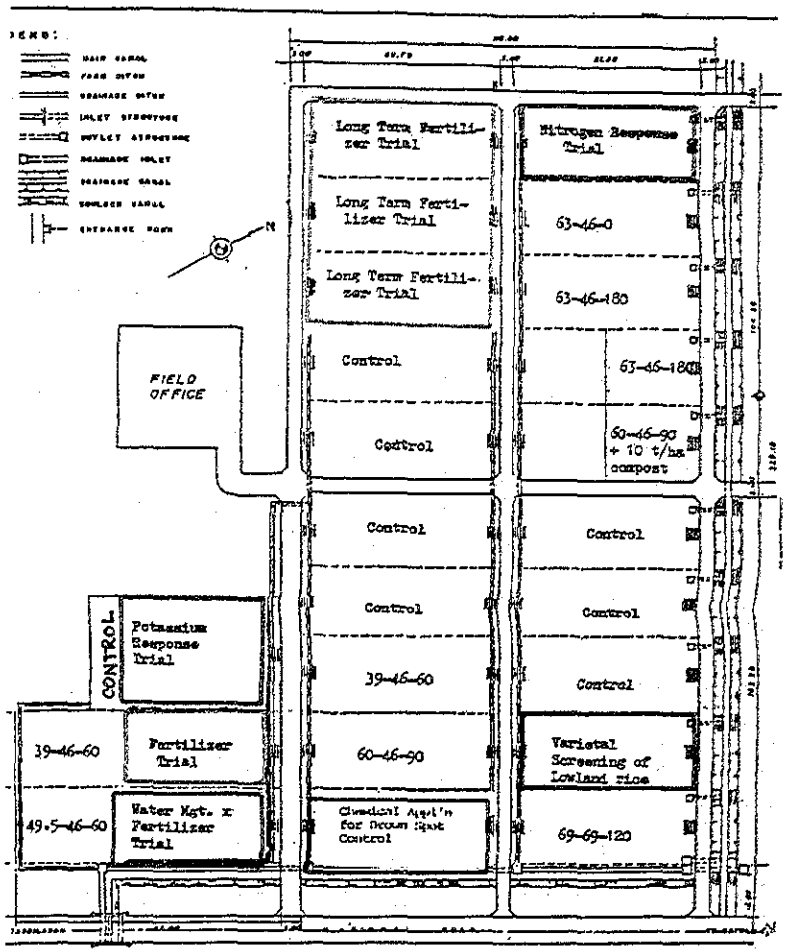
T1 = control
T2 = Hinosan spraying at 60 DAT
T3 = Hinosan spraying at 40, 50 DAT
T4 = Hinosan spraying at 40, 60, 80 DAT

Experimental Design: RCB with 3 replications ; plot size 5m x 12 m

*One rice production plot with uniform growth of plants will be used for this trial.

VII Varietal Screening for Lowland Rice

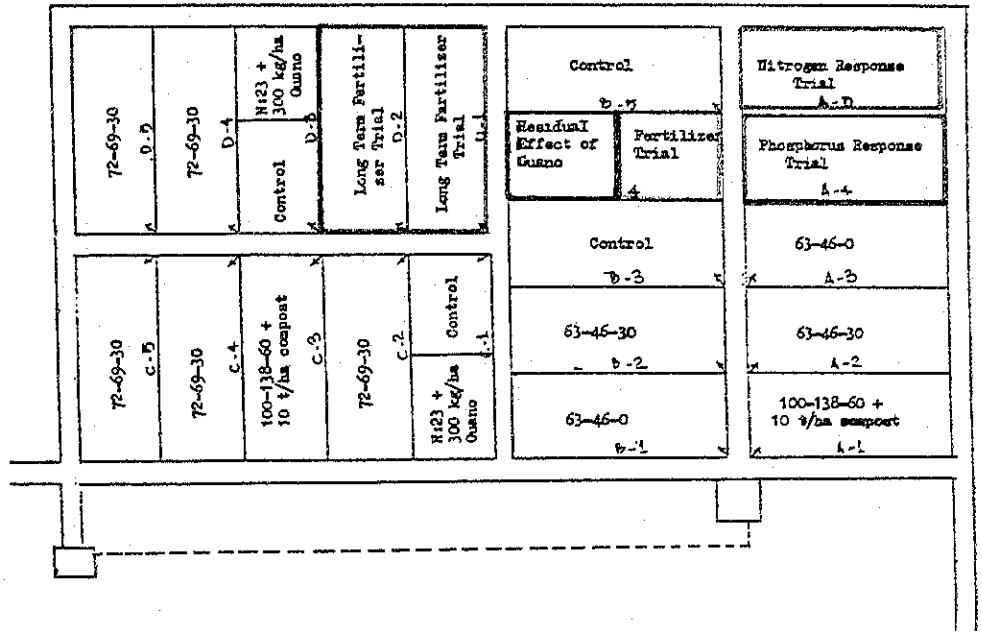
Experimental Design: RCB with 3 replications
Planting Distance : 25 cm x 25 cm
Fertilization : 61-46-10 kg 2WK/ha
Varieties : 24 varieties (Pls. see attached sheet for list of varieties to be used)
Plot Size : 3 m x 3.75 m



UBAY SUB-CENTER
On Going Trials

Bohol-APC Rice Section
Research Proposals - Ubay Experimental Field
CS December 1986 - April 1987

UBAY EXPERIMENTAL FIELD



I. Long Term Fertilizer Trial

T1 = Control (0-0-0)
T2 = 60-0-0
T3 = 60-40-0
T4 = 60-40-40
T5 = 60-40-40 + 10 t/ha. rice straw

Experimental Design: RCB with 2 replications
Variety : IR 60
Planting Distance : 20 cm. x 25 cm.
Plot size : 9.5 m. x 18 m.

II. Fertilizer Trial

T1 = Control (0-0-0)
T2 = N:23 + 300 kg Guano/ha (1 bag urea + 6 bags guano)
T3 = 33-23-0 (1 bag urea + 1 bag 18-46-0)
T4 = Foliar Fertilizer
T5 = 40-46-0 (2 bags 18-46-0 + 1 bag urea)
T6 = 63-46-30 (2 bags 18-46-0 + 2 bags urea + 1 bag 0-0-60)
T7 = 72-69-30 (3 bags 18-46-0 + 2 bags urea + 1 bag 0-0-60)
T8 = 63-46-30 + Foliar Fertilizer

Experimental Design: RCB with 2 replications
Variety : IR 64
Planting Distance : 20 cm. x 25 cm.
Plot size : 5 m. x 4 m.

III. Nitrogen Response Trial

T1 =	0-0-0	T10 =	120-45-45
T2 =	30-0-0	T11 =	0-90-45
T3 =	60-0-0	T12 =	30-90-45
T4 =	90-0-0	T13 =	60-90-45
T5 =	120-0-0	T14 =	90-90-45
T6 =	0-45-45	T15 =	120-90-45
T7 =	30-45-45	T16 =	60-0-0
T8 =	60-45-45	T17 =	60-45-45 } ammonium sulfate
T9 =	90-45-45	T18 =	60-90-45 }

Experimental Design : RCB with 3 replications
Variety : IR 64
Planting Distance : 20 cm. x 25 cm.
Plot size : 3 m. x 5 m.

IV. Phosphorus Response Trial

T1 =	0-0-0	T10 =	45-90-30
T2 =	0-30-0	T11 =	45-120-30
T3 =	0-60-0	T12 =	45-150-30
T4 =	0-90-0	T13 =	90-0-30
T5 =	0-120-0	T14 =	90-30-30
T6 =	0-150-0	T15 =	90-60-30
T7 =	45-0-30	T16 =	90-90-30
T8 =	45-30-30	T17 =	90-120-30
T9 =	45-60-30	T18 =	90-150-30

Experimental Design: RCB with 3 replications
Variety : IR 64
Planting Distance : 20 cm. x 25 cm.
Plot size : 3 m. x 5 m.

V. Rice Production/Seed Production

T1 = Control (0-0-0)
T2 = N:23 + 300 kg/ha. Guano
T3 = 63-46-0
T4 = 63-46-30
T5 = 72-69-30
T6 = 100-138-60 + 10 t/ha compost

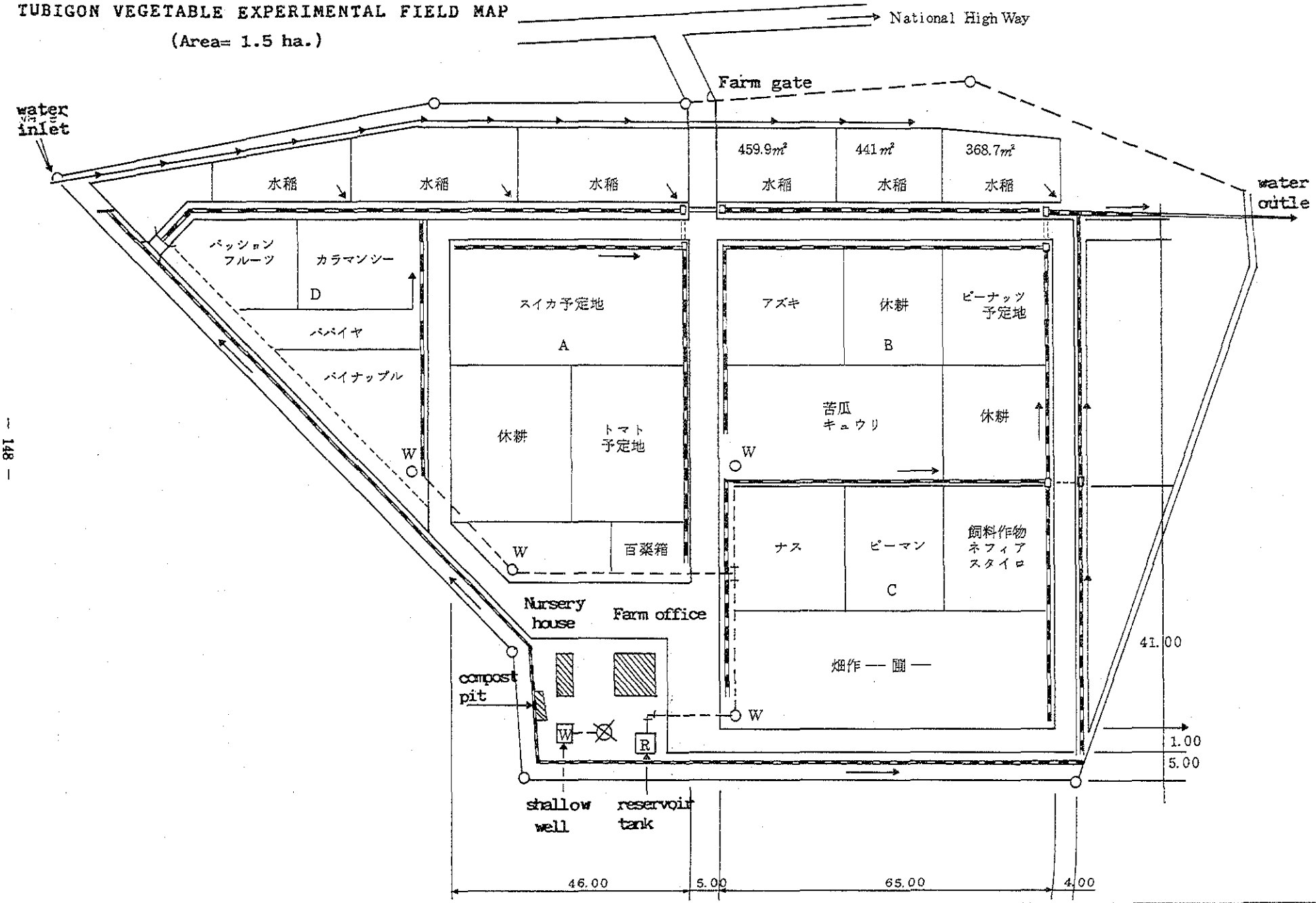
VI. Study on the Residual Effect of Guano

Previous Treatments:		Present Treatments:
T1 = control (N:50 K:30)	–	N:40 + K:30
T2 = 20 kg/ha P (superphosphate)	–	N:40 + K:30
T3 = 40 kg/ha P (superphosphate)	–	N:40 + K:30
T4 = 300 kg/ha guano (APC)	–	N:40 + K:30
T5 = 600 kg/ha guano (APC)	–	N:40 + K:30
T6 = 600 kg/ha guano (Farmers)	–	N:40 + K:30
T7 = 900 kg/ha guano (APC)	–	N:40 + K:30
T8 = 600 kg/ha organic fertilzier	–	N:40 + K:30

Plot size : 5m x 4m
Experimental Design: Randomized Complete Block Design with 2 replications
Variety : IR 64
Planting Distance : 20 x 25 cm.

TUBIGON VEGETABLE EXPERIMENTAL FIELD MAP

(Area= 1.5 ha.)



持 ち 帰 り 資 料

1. 農民リーダー訓練

2. 普 及 員 訓 練

3. 専 門 員 訓 練

4. ボホール農業開発計画戦略ワークショップ

5. ＡＰＣ研究員訓練

6. ポスト・トレーニング

7. 「Agriculture department reorganized」

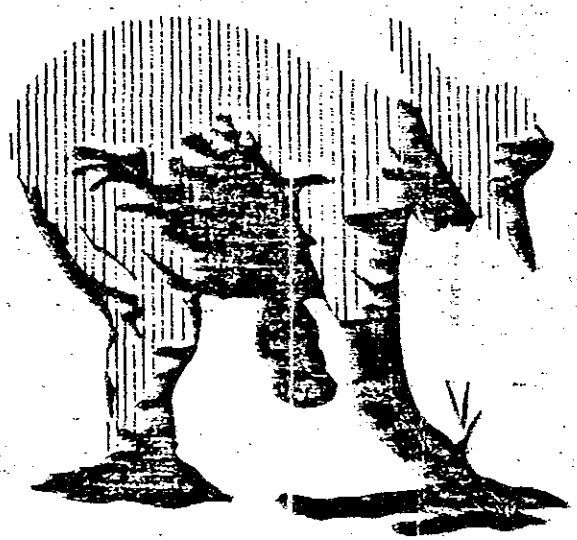
（1987年3月5日付「Business Bulletin」紙抜すい）

（別添 6　リーダー農民トレーニングの１事例）

BOHOL AGRICULTURAL PROMOTION CENTER
DAO, TAGBILARAN CITY, BOHOL, PHIL.

R I C E　T R A I N I N G

FOR FARMERS IN BOHOL



September 8-15, 1986

PROGRAM OF ACTIVITIES

DATE	Morning Session (8:30-12:00)	Afternoon Session (1:30-5:00)	Evening Session (6:30-9:00)
Sept. 8 (Mon)	Opening Program	Overview: "Rice in Bohol"	Discussion
9 (Tue)	Lecture	Lecture	Discussion
10 (Wed)	Field Trip (Bilar, Carmen and Ubay)		Film Showing
11 (Thu)	Lecture	Lecture	Discussion
12 (Fri)	Field Demonstration (Carmen)		-
13 (Sat)	Lecture	F r e e	-
14 (Sun)	Beach Party	F r e e	-
15 (Mon)	Assessment of Learning	Closing Program	-

Rice Training for Farmers in Bohol

Program of Activities

Sept. 8 (Monday)

Morning	(10:00 - 12:00)	Opening Program
Afternoon	(1:30 - 5:00)	An overview: "Rice in Bohol"
Evening	(6:30 - 8:30)	Discussion

Sept. 9 (Tuesday)

Morning	(8:30 - 12:00)	Lecture:"Importante ug Ilustong Pama-agi Aron Mosaka ang Ani sa Ilumay"
Afternoon	(1:30 - 5:00)	- continuation-
Evening	(6:30 - 8:30)	Discussion

Sept. 10 (Wednesday)

Whole Day	(8:00 - 5:00)	Field Trip (Bilar - Carmen - Ubay)
Evening	(6:30 - 8:30)	Video Show: Agriculture in Japan

Sept. 11 (Thursday)

Morning	(8:30 -12:00)	Lecture: "Mga Maayong Paagi sa Pag-gamit sa Abuno ug Pamatay-dangan"
Afternoon	(1:30 - 5:00)	- continuation -
Evening	(6:30 - 8:30)	Discussion

Sept. 12 (Friday)

Morning	(8:30-12:00)	Lecture: "Mga Peste ug Sakit sa Ilumay"
Afternoon	(1:30 -5:00)	- continuation -
Evening	(6:30 -8:30)	Discussion

Sept. 13 (Saturday)

Assessment of Learning and Closing Program

（別添７　普及員トレーニングの１事例）

BOHOL AGRICULTURAL PROMOTION CENTER

DAO, TAGBILARAN CITY

TRAINING FOR EXTENSION WORKERS ON

UPLAND CROPS AND VEGETABLES

SEPT. 22 – OCT. 3, 1986

BOHOL APC

DAO, TAGBILARAN CITY

PROGRAMME

OPENING PROGRAM
1:30-2:30 PM

Pambansang Awit
Awit sa Bohol

Welcome Address - - - - - - - - Aniano P. Bondal
Project Manager

General Overview of Activities

Introduction of Participants

Message - - - - - - - - - - - - Dr. Masamoto Yasuo.

Video Show: The APC Story

GENERAL PROGRAM OF ACTIVITIES

	A.M.	AFTERNOON	EVENING
Sept. 22	Registration	Opening Program Session, Upland crops	Workshop
Sept. 23	Upland Crops	Upland Crops	Plenary Session
Sept. 24	FIELD TRIP,	Carmen, Tubigon	- - - -
Sept. 25	FIELD EXERCISES	Do field	Slide Show
Sept. 26	Guidelines in Conducting Trials, Data analysis, Fertilizer calculations		
Sept. 27	FIELD TRIP	Valencia	
Sept. 29	Session, Vegetable	Vegetables	Slide Show
Sept. 30	Vegetables	Agrometeorology Field Exercises	
Oct. 1	Session, Rice	Rice	
Oct. 2	Livestock and Soils		
Oct. 3	Machinery Operations		Graduation

DATE	TIME	ACTIVITIES/TOPIC	
Sept. 22	8:00-12:00	Registration	:Training/Upland
	1:30- 2:30	Opening Program	:Training/Upland/Veg.
	2:30- 3:30	Overview : Discussion of Training Schedule *Post Training Program	:Upland/Vegetable
	3:30- 3:45	B R E A K	:
	3:45- 5:00	Benchmark Exam	:
	6:00- 7:00	D I N N E R	:
	7:00- 9:00	Workshop	:
Sept. 23	8:00-10:00	Cassava	:Wilma Achas
	10:00-10:15	B R E A K	:
	10:15-12:00	Sweet Potato	:German Hakkling
	12:00- 1:30	L U N C H	:
	1:30- 3:00	Computations (Fertilizer, Chemicals, etc.)	:Engr. Marcial Agad
	3:00- 3:15	B R E A K	:
	3:15- 5:00	Field Legumes Production	:Noel S. Frianeza
	6:00- 7:00	D I N N E R	:
	7:00- 9:00	Plenary Session (Continuation of Workshop)	:
Sept. 24	8:00-10:00	Ubi	:German Hakkling
	10:00-10:15	B R E A K	:
	10:15-12:00	Corn	:Wilma Achas
	12:00- 1:30	L U N C H	:
	1:30- 3:00	Soil Acidity	:Engr. Marcial Agad
	3:00- 3:15	B R E A K	:
	3:15- 5:00	Economic Analysis (Cost & Return)	:Noel Frianeza
	6:00- 7:00	D I N N E R	:
	7:00- 9:00	Discussion (Of work outputs -----> Workshop)	:
Sept. 25	8:30	F I E L D T R I P (Bilar, Carmen, Ubay)	:Upland
	6:30	Slide Showing	:

DATE	TIME	ACTIVITIES/TOPIC	
Sept. 26	8:00-10:00	Guidelines in Conducting Fert. Trial	Engr. Marcial Agad
	10:00-10:15	B R E A K	
	10:15-12:00	Briefing on Field Exercises	German Makiling/ Noel Frianeza
	12:00- 1:30	L U N C H	
	1:30- 3:00	Field Exercise	Wilma Achas/ German Makiling/ Noel Frianeza
	3:00- 3:15	B R E A K	
	3:15- 4:00	Continuation of Field Exercises	Wilma Achas/ German Makiling/ Noel Frianeza
	4:00- 5:00	Pace Factor	Engr. Marcial Agad
	6:00- 7:00	D I N N E R	
	7:00- 9:00	Wrap - up & Slide Showing	

VEGETABLE TRAINING SCHEDULE

Sept.27	**8:30-4:00**	**Field Trip Valencia & Tubigon**	**Veg. Staff**

APC VEGETABLE TRAINING SCHEDULE

DATE	TIME	ACTIVITIES/TOPICS	LECTURER
Sept. 29 (Monday)	8:00-10:00	Introduction to Vegetable Farming	T. Hidaka; E. Cahiles
	10:00-10:45	B R E A K	
	10:45-11:00	Vegetable Market Survey	Honlia Ibarra
	11:00-12:00	Nursery Management	Rizalina Gulbao
	12:00- 1:00	L U N C H	
	1:30- 3:30	Cucurbita Production *Cucumber Cultural Management Fertilizer Trial on Acidic Soil Fertilizer Trial on Alkali Soil *Watermelon Cultural Management Varietal Trial Pest Management	R. Alaan, H. Ibarra
	3:30- 3:45	B R E A K	
	3:45- 5:00	Cabbage Production - Varietal Trial	Rizalina Gulbao
	6:00- 7:00	D I N N E R	
	7:00- 9:00	Slide Showing	Vegetable Staff
Sept. 30 (Tuesday)	8:00- 9:00	Agritech on Tomato Production *Varietal Trial Fertilizer Trial	Eugene Cahiles
	9:30-10:00	Fertilizer & Chemical Calculations	Eugene Cahiles
	10:00-10:30	B R E A K	
	10:30-12:00	Importance of Organic Fertilizer Compost & Compost Making	Rolando Alaan
	12:00- 1:00	L U N C H	
	1:30- 3:00	Agrometeorology in Relation to Agriculture *Instrumentation Data Collectio Data Analysis	Eugene Cahiles
	3:00- 3:15	B R E A K	
	3:15- 5:00	Field Exercises	Vegetable Staff

（以下略）

ROOTCROPS SPECIALISATION TRAINING
(December 1-12, 1986)

OPENING PROGRAMME

Dec. 1 (Monday) 10:00 AM - 12:00 AM

Pambansang Awit	
Awit ng Bohol	
Welcome Address	Mr. Rick Labastilla Actg. Project Manager Bohol-APC
Presentation of Participants, BES & APC Staff	
Short Message	Dr. Masamoto Yasuo Team Leader, JICA Experts
Overview of Topics	Mr. Yuzo Shosaki JICA - Upland Crops Expert

SCHEDULE OF TRAINING ON ROOTCROPS SPECIALIZATION
(December 1 - 12, 1986)

Date	Activities/Topics to be Discussed	Lecturer
Dec. 1 (Monday)		
9:00 - 10:00 AM	Registration of Participants	Training Staff
10:00 - 12:00 AM	Opening Program & Overview of Topics	-do-
	N O O N B R E A K	
1:30 - 2:00 PM	Benchmark Examination	Upland & Training Staff
2:00 - 3:30 PM	Discussion on Technicians Problems on Field Trials	-do-
3:30 - 3:45 PM	B R E A K	
3:45 - 5:00 PM	Tour - Dao Experimental Field	Upland Staff
6:30 - 8:30 PM	Film Showing & Discussion	Upland & Training Staff
Dec. 2 (Tuesday)		
8:00 - 9:45 AM	Cassava Production & Utilization in Bohol	C. Galorio & S. Suma-oy
9:45 - 10:00 AM	B R E A K	
10:00 - 12:00 AM	Cassava Researches in APC & PhilStarch	V. Achas
	N O O N B R E A K	
1:30 - 2:45 PM	Sweet Potato Researches in APC and Weevil Prevention	G. Makiling
2:45 - 3:45 PM	Ubi Researches in APC & Economical Evaluation	G. Makiling
3:45 - 4:00 PM	B R E A K	
4:00 - 5:00 PM	Procedures in Conducting Trials on Rootcrops	G. Makiling
6:30 - 8:30 PM	Continuation of the Procedures in Conducting Trials.	G. Makiling

Date	Activities/Topics to be Discussed	Lecturer
Dec. 3 (Wed.)		
8:00 – 12:00 Noon	Field Activities (Land Preparation, Lay-outing, Planting, Fertilizer & Chemical Application, Harvesting, Data Collection, etc.)	G. Makiling/ V Achas
	Venue: Dao Cassava Trial – Farmers Field	
12:00 – 1:30 PM	N O O N B R E A K	
1:30 – 5:00 PM	Data Analysis, Fertilizer Calculation, Preparation of Report, etc.	G. Makiling/ V. Achas
Dec. 4 (Thursday)		
8:00 – 9:45 AM	Cassava Production & Researches in BES	J. Ladera
9:45 – 10:00 AM	B R E A K	
10:00 – 12:00 AM	Ubi Production in Acidic Soil & Researches Conducted in Ubay BES	J. Ladera
	N O O N B R E A K	
1:30 – 2:30 PM	Gabi Production & Researches Conducted in BES	A. Medellin
2:30 – 3:30 PM	Sweet Potato Production & Researches in BES	A. Medellin
3:30 – 3:45 PM	B R E A K	
3:45 – 5:00 PM	Post-Training Trials on Sweet Potato and Economical Evaluation	G. Makiling
Dec. 5 (Friday)		
8:00AM – 5:00PM	Field Trip – Albur, Carmen, Ubay	Upland & Training Staff

Root Crop Specialists Training
December 1-12, 1986

Schedule of Study Tour

December 7-12, 1986
VISCA, Baybay, Leyte

Date	Morning 8:30 AM – 12:00 NN	Afternoon 1:30 PM – 5:00 PM	Evening 6:30 PM – 8:30PM	Resource Persons
Dec. 7, Sun		Departure for Cebu 4:40PM	Overnight stay Cebu	
8, Mon	Departure for Tacloban, 7:45 AM To VISCA		Overnight stay, VISCA	
9, Tues	Tour of PRCRTC Plant Prot. Lab., Cassava/Sweet Potato/Ubi Prod'n Sections, Post-Harvest Technology Section, Engineering Section	Lecture, cassava pests & diseases management	FORUM	VISCA Specialists
10, Wed	Tour of cassava/ubi/camote field trials	Lecture, sweet potato pests & diseases management	FORUM	VISCA Specialists
11, Thurs	Lecture, Pests & Diseases Management of Ubi, Gabi	Departure for Tacloban	Overnight stay, Tacloban	VISCA Specialists
12, Fri	Departure for Cebu, 6:10 AM Departure for Dagb., 10:15 AM	Closing Program, 2:00 PM		

（詳細日程以下略）

（別添 9 ）

BOHOL AGRICULTURAL DEVELOPMENT STRATEGY WORKSHOP
November 25-26, 1986
Bohol Agricultural Promotion Center
Dao, Tagbilaran City

RATIONALE

The first agricultural development strategy workshop held last March provided insights to all participating agricultural personnel throughout the province and a consensus for the adoption of strategies that could best answer the needs of the Boholano farmers.

The workshop has established the importance of such a successful activity so that harmony and continuity in the attainment of our objectives can be efficiently accomplished through the cooperation of every concerned agency.

This coming workshop will be participated by different agricultural sectors: MAF Regional, Provincial and Municipal levels, BES, BAEOS, CVPP, Ubay Stock Farm, BIARS, Soil and Water Conservation and Management Project, APC, and the Provincial Development Office, Ministry of Agrarian Reform and the Bureau of Agricultural Economics.

OBJECTIVES

Involvement and enthusiastic participation of various agency representatives are requested during the discussions and presentation of accomplishment and program reports to enable the group to reach a general consensus in the adoption of strategies.

Specifically, this workshop aims to know the programs identified by various agricultural sectors with the purpose of information exchange and possibly tapping linkages among the sectors.

Through this workshop, the group and Bohol APC will be able to formulate for adoption clear and meaningful methods of augmenting the present condition of Bohol agriculture.

SCHEDULE OF ACTIVITIES

Date	Morning 9:30AM - 12:00NN	Afternoon 1:30PM - 5:00PM	Evening 6:30PM - 9:00PM
Nov. 25, Tuesday	-Registration of Participants - Opening Ceremonies	-Presentation of APC Strategies for Agricultural Development	-Presentation of Strategies by related agencies
Nov. 26, Wednesday	-Discussion	-Wrap-up & Adoption of Agricultural Development Strategies for Bohol -Closing Ceremonies	

APC-JICA SPONSORED SURVEY TOUR TO THE DIFFERENT CASSAVA MILLERS AND PLANTATIONS

Introduction:

At first, cassava was considered a famine reserved crop because it can be left in the ground without harvesting which further serve as a security crop against famine. With this, they would only schedule harvesting when the crop commands a higher price in the market. It is the last crop grown under poor and infertile soils which other crops cannot thrive.

Gradually, everybody have realized the importance of cassava besides being used to supplement rice in our diet. First and foremost, cassava is an excellent source of starch so that the establishment of a starch and glucose factory in our province has gained support and that cassava production lately became popular.

Recently, the profitability of cassava production has been confirmed to augment the income and livelihood of our Boholano farmers.

On November 11 to 18, 1986 the APO-JICA team had sponsored a one-week tour to the different cassava millers and

plantations of the country as a part of the upland research development plan. Such survey tour was made for the following objectives: 1) to compare the cassava production situation in our province to that of the other provinces to be visited; 2) to study the different farming systems, cultural management and soil management programs for its possible adaptation in our province; 3) to be able to compare the different constrains encountered by each of the cassava millers and plantations; and 4) to know the impact between the cassava millers/factory and the farmer tillers.

The selected sites for the survey tour were the following:

Factory	Location
1) Phil Agro Corporation	Maasin, Baungon, Bukidnon
2) Equatorial Starch Corp.	Ormoc City, Leyte
3) Universal Starch Ind. Corp.	Kabankalan, Negros Occ.

Results of the Trip/Discussions

A. Phil Agro Corporation

1. The Factory and the Farm

This is a starch factory located at barangay Maasin, Baungon, Bukidnon. The main office is located at Puntod, Cagayan de Oro City. It was

first established in the year 1978 and began its milling operation last 1981. This 150-tonner capacity plant has a cassava farm potential area of 3,000 hectares. Presently, effective area being covered is only about 600-800 hectares. In addition, the company managed farm has an area of 200 hectares where most of their researches were conducted.

Based on the interview, Phil Agro is operating about 80% of the total milling capacity per day. (120 tons/day). The cassava growing areas are as follows: Imbatog, Lingateng, Malitbog, Baungon, Talacag and Salimbalan in the province of Bukidnon.

The factory is engaged mainly for starch production for local market. They also extend inputs requirement and some technical assistance in cassava culture. The soil analysis they gather per farm would be the basis of their fertilizer recommendation.

Regrading their cultural management program (esp. on Co.-farm), land preparation usually employs

the use of tractor for thorough land preparation. Varieties planted were mostly Java Brown, CIAT varieties and some Hawaiian 5. Planting population ranges from 13,000 to 18,000 plants per hectare. The cuttings are dipped on a cocktail solution before planting. Depending on weed density, cultivations by cow would be one to two times. Methods of weed control could be done through handweeding or by the use of herbicides such as herbadox, paraquat or 2-4-D. By using chemicals on weed control, usually they apply as pre-emergence application. On fertilization aspect, usually they follow the recommendation based on the soil analysis. Sometimes organic farming is adopted using guano, chicken dung or rock phosphate. The company is formulating the so-called "poligua", a combination of potash fertilizer, lime and guano which are also distri uted to their cassava growers. Comtonly attacking pests affecting their areas were termites and white grubs. Termites usually destroy the planting materials or seedpieces planted, thus germination is very poor. White grubs infestation would result to die-back and necrosis. Any readily available insecticides can control these pest affecting the cassava crop.

Harvesting of the contract growers cassava crop is being controlled and scheduled by the company. Yield is claimed to be 10-12 tons per hectare, whereas the company managed farm ranges from 25-30 tons per hectare.

Due to the soil texture which is clay loam to clay, a volcanic soil of origin, harvesting is very easy and cassava roots can be immediately pulled out by hand.

B. Equatorial Starch Corporation

This starch factory located at Ormoc City, Leyte is being run by the Aznar family with their own financial support. This was established in the year 1979 and started its operation in 1980. The total capacity which is 50 tons is being supplied by contract growers and the 100 hectares company managed farm. The starch recovery is about 23-24% (Legaspi, 1986).

Mostly contract growers of Equatorial are located on far areas wherein hauling of tubers during harvest is difficult. Buying price is ₱450/ton delivered to plant site.

As a sort of financial assistance to the cassava growers, the management is extending finances for direct labor, tractor servicing and planting materials and fertilizer for a one-year financing scheme. However, people of Ormoc and the nearby towns are not well convinced of the profitability of cassava in comparison with the sugarcane production.

Cultural management are well taken up. On areas which were previously planted to sugarcane and converted to cassava, they employ first plowing, sub-soiling, 2nd plowing and harrowing. For idle areas or just weedy areas they employ 2 plowings with one harrowing. Varieties planted were: Hawaiian 5, CIAT varieties, Bogor and Java Brown at approximately 0.8 m x 1.8 m distance. Weeding operation is undertaken two times. It takes 20 laborers to accomplish a hectare of land. First weeding is conducted before off-baring cultivation. Usually at fertilization, the first dose of fertilizer is 3 bags 14-14-14, and second dose will be 2 bags 0-0-60 and 2 bags 0-18-0. Sometimes they will follow the recommendation based on soil analysis. So far, they have not experienced the prevalence of pest and diseases.

At harvest time, usually from 10-12 months period of the crop, they employ manual harvesters. Based on

Equatorial record, the highest tonnage they got from contract growers is 28 tons per hectare and the least they got around 10 hectares. Soil texture is loose and friable and easy to harvest manually.

C. Universal Starch Industrial Corporation

This is an affiliate starch factory of Philippine Starch Industrial Corporation located at Kabangkalan, Negros Occidental with the same Chairman and Board of Directors but a difference in staff personnel. This was established in the year 1984 and began its operation in 1985. Unistarch, its code name is a 50-tonner starch factory and with its new machinery operation, they got about 25% starch recovery. Due to lack of tubers delivery, at present milling schedule is from 2 to 3 times a week. Their target area to completely feed the starch factory will be 4,000 to 5,000 hectares.

In Kabangkalan, sugarcane and cassava is not a competitive crop. Cassava crops are grown on hilly areas while sugarcane on falt areas. Farmers were easily convinced to develop cassava plantation because the Unistarch management is helping the marginal cassava growers in terms of financial assistance for cassava production. With the Ministry of Agriculture and Food (MAF)

loan extended, cassava farmers may avail said loan at 15% interest per annum. In cases for those big time cassava growers wherein they can all afford those necessary inputs and cost of labor, the company has not much problem because these farmers are already technically equipped with knowledge on cassava production by just merely basing the sugarcane production in which they are already used to it. Furthermore, the company is offering free-of-charged cassava stalks and to be delivered directly to the farm site for those interested cassava farmers.

The soil condition is good as can be clearly seen on the crops grown & existing. However, there are areas which are stony but then the cassava can still grow well.

Based on the co-managed farm, during land preparation, they make use of tractors. On newly opened areas they are plowing and harrowing twice. Newly harvested area are directly harrowed and followed by furrowing to be ready for planting operation. Usually, planting population is around 15,000 plants per hectare at 1 m x 0.70 m distance. Predominant varieties are the CIAT varieties, Bogor and Golden Yellow. Planting position they usually employ is the diagonal position with the

use of their planting tool called "tama" which they are very much accustomed in sugarcane planting. At cultivation, they usually undertake by using tractors. Weeding operation is usually conducted 2 times with an average cost of ₱300.00 per ha. per operation. At fertilization time, fertilizer application is patterned to what they have experienced in sugarcane farming. They also make use of compost cassava cake meal in corporation with lime, ipil-ipil or cassava leaves (dried), cassava peel, rock phosphate and the application of urea to fertilize the bacteria which hastens decomposition.

After 10 to 12 months, harvesting will be undertaken. The company farm made use of their own hired laborers to do the harvesting. In areas where harvesting is difficult to pull by hands, cassava lifter is used by one operator to loosen the soil. The rest of the laborers will do the pulling. Bogor variety gives the highest yield of 38 tons; CIAT varieties have 30 tons while 25 tons yield was exhibited by Golden Yellow variety. Harvested tubers are picked up by the company trucks. On contract growers side, farmers are using their own trucks in delivering the tubers.

Table 1. - Soil Analysis of the three cassava plantations in comparison with the sample under Bohol soil condition.

Plantations	Total N (%)	Avail. P_2O_5 (ppm)	Exch. K_2O (ppm)	pH (KCl)
1. Phil Agro	0.14	23.25	99.50	6.70
2. Equatorial	0.12	19.70	305.80	4.14
3. UniStarch	0.09	13.25	139.00	3.70
Experimental Area				
1. Carmen, Bohol	0.09	0.80	75.20	3.75

Table 1 shows that percentage Nitrogen content based on the soil analysis is low and not comparatively different with each other.

Regarding Phosphorus content, Bohol soil is very much lower compared to the three aforementioned plantations with only about 0.80 ppm available P_2O_5. Phil Agro's cassava plantation exhibited an average of 23.25 ppm, followed by Equatorial and Unistarch plantations with 19.70 and 13.25 ppm P_2O_5 respectively.

Exchangeable K_2O showed highest at 305.80 ppm on Equatorial company farm at Ormoc, Leyte. Unistarch and Phil Agros's area on the other hand are not comparatively different. Bohol soil sample shows the lowest exchangeable K_2O of only 75.20 ppm.

pH values show no great difference among the four locations. However, Phil Agro (Bukidnon) shows higher pH value of 6.70.

With this result of the soil analysis we could conclude that Bohol's soil condition is very much different with those three mentioned areas wherein any crop could tolerate well and could yield much better than what we have.

Summary and Conclusion

Considering the cassava millers we have visited, the capacity of the factory is quite small with only 50 tons for both the Equatorial and Unistarch and 150 tons for Phil Agro. While mentioning Philstarch, the factory located in our province, is an 800 tonners factory which requires about 15,00 hectares to operate normally. Consequently, Bohol has plenty of idle lands which are left unproductive and now gradually became a vast cassava area.

All of the aforementioned millers have not reached their targeted areas and are not normally functional based on the factory's rated capacity. Phil Agro's problem is the conversion of corn land to cassava area where farmers in Bukidnon and part of Misamis Oriental have been experienced the profitability of corn and other crops. Equatorial also has a problem of converting sugarcane land to cassava while Unistarch is trying to convince those marginal areas for cassava production. While it is by nature true that the soil condition of these provinces are fairly good for any crops to grow how much more to cassava wherein they have already developed technologies which are found promising with the high yielding varieties they have planted. Naturally, cassava production would show no problem. However, the

"wait and see" attitude of farmers could not be erased immediately due to their doubts on the profitability of cassava compared to any other existing crops they used to plant.

Under Bohol condition, it is entirely different because cassava is the only crop that can thrive under the infertile soil which other crops cannot tolerate. In this connection, poor soil condition is one of the factors that brought about our low productivity. Therefore, proper soil management should be taken into consideration to avoid some constraints that may arise later on. Secondly, propagation of new cassava varieties which are high yielding and are found to be more adaptable in the province should be implemented. Said planting materials are to be distributed throughout the cassava growing areas.

There is a great need to increase cassava productivity for the benefit of our farmers. Increase in production means an elevation in the standard of living higher enough for the majority.

It is therefore hope that with the active participation of the government sector, specifically the Ministry of Agriculture and Food (MAF) to strengthen the cassava program, there is no reason why we could not be as competent as the other provinces would be.

(別添 11)

POST TRAINING EXERCISES

These exercises are designed to refresh you on fertilizer and insecticide computations, yield calculations and other computations related to agriculture. Solve these problems at home and send all your answer sheets to APC after one week either thru mail or any other means. Corrected answer sheets will be returned to you together with the correct solutions to problems you missed to solve.

1. In a 20 cm x 20 cm planting distance, determine the number of hills in one square meter area. If 4 seedlings are planted in each hill, how many seedlings are needed?

2. Calculate the number of grains in one kilogram palay, if 1000 grains weigh 25 grams.

3. Determine the amount of seed (rice) required for a 1000-square meter area if the conditions are as follows:

   a) planting distance = 20 cm x 25 cm
   b) no. of seedling per hill = 4
   c) percentage of germination = 85%
   d) 1000-seed weight = 20 grams.

4. Diammonium phosphate (18-46-0) is a compound fertilizer containing 18% nitrogen (N) and 46% phosphorus (P). If you apply 125 kilograms of this fertilizer to your paddy, how many kilograms of nitrogen and phosphorus you have added to the soil?

5. At a fertilizer rate of application of 50-60-30 kgs NPK/ha, calculate the amount of urea (45-0-0), solophos (0-18-0) and muriate of potash (0-0-60) needed for a one hectare field.

6. Determine the amounts of 18-46-0, 45-0-0 and 0-0-60 needed for a 2-hectare field if the rate of application is 117-69-60 kgs NPK/ha.

7. At 63-46-30 kgs NPK/ha, calculate the required amount of 18-46-0, urea (45-0-0) and 0-0-60 needed for a 1,000 m^2 paddy.

8. How many kilograms of 16-20-0, 45-0-0, and 0-0-60 will be applied to a 300-square meter area to satisfy a fertilizer rate of 69-30-15 kgs NPK/ha.

9. A farmer applies 4 bags of 14-14-14 and 1 bag of urea (45-0-0) to his one hectare rice paddy. What is his rate of fertilizer application (kgs. NPK/ha).

10. For a 1500 m^2 field, a farmer applies 150 kgs. at 18-46-0 for basal and 50 kgs of urea for topdressing. With these amounts of fertilizer applied, determine his rate of application in terms of kgs. NPK/ha.

11. Compute for the cost of nitrogen (N) in urea if its price is ₱125.00/bag. Using the cost of nitrogen (N) in urea, calculate the cost of phosphorus (P) in 18-46-0 and 16-20-0 if their prices are ₱250.00 and ₱135.00 per bag, respectively. (Hint: Solve first for the cost of N in 18-46-0 and 16-20-0 using the price of N from urea. Subtract the cost of N to their respective prices before solving for the cost of P.)

12. From the different fertilizer combinations below, select the cheapest combination that would satisfy a recommendation of 60-40-40. (Use area = one hectare)

a) Combination 1
14-14-14
45-0-0

b) Combination 2
18-46-0
21-0-0
0-0-60

c) Combination 3
18-46-0
45-0-0
0-0-60

d) Combination 4
16-20-0
45-0-0
0-0-60

e) Combination 5
45-0-0
0-18-0
0-0-60

(Fertilizer prices: Urea = ₱125/bag; 16-20-0 = ₱185/bag; 21-0-0 = ₱90/bag; 14-14-14 = ₱190/bag; 18-46-0 = ₱250/bag; 0-18-0 = ₱145/bag; 0-0-60 = ₱150/bag)

13. Find the amount of Furadan 3G needed for a 2,500 sq. m. area if the rate of application is 1. kg. a.i./ha.

14. A farmer harvested 100 kgs. of grains out of his 300-square meter paddy. Determine his yield in kgs/ha.

15. If in problem no. 14 the moisture content of harvested grains was 20%, what is the yield if the grains were dried to 14% moisture content?

16. For a crop-cut area of 4 m^2, 2.1 kgs of grains were harvested at 25% moisture content. Calculate the yield in kgs/ha at 14% moisture content.

17. Find the expected yield (kgs/ha) of a one hectare field based from the following yield component data:

a) no. of panicles per hill = 12
b) no. of grains per panicle = 100
c) percentage filled grains = 83.3%
d) 1000-seed weight = 22 grams
e) planting distance = 25cm x 25 cm.

-GOOD LUCK-

Total Liabilities per share	59.89	111.60*	+89.5
Total Long-term Debt per share	43.16	88.76*	+105.6
Total Equity per share	45.30	20.65*	−54.6

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As proposed, the *transaction* makes it "highly improbable" for SMC to recover the purchase price through re-sale of the shares. Sy said smaller blocks of shares cannot command the same premium that the present block, accounting for 31 per cent of outstanding stocks, deserves.

With SMC's financial condition weakened by the proposed transaction and reduced income resulting from carrying charges for "warehousing" the shares, Sy predicted that stock market prices of SMC shares may go down to a level below the proposed purchase price of P100 per share.

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Agriculture department reorganized

All offices and agencies whose functions relate to agriculture and fisheries have been integrated into the reorganized Department of Agriculture under the povisions of Executive Order No. 116.

Nine agencies, including Philippine Coconut Authority and its subsidiaries and Suger Regulatory Administration, were *all attached to the* department. Attached, too, were five councils committees.

Eight tobacco agencies were merged into the National Tobacco Administration, and four line agencies were abolished.

Retained as production groups were Bureau of Animal Industry, Bureau of Plant Industry, Bureau of Fisheries and Aquatic Resources, and Bureau of Soils and Water Management.

An assistant secretary will be in-charge of the (1) production group, (2) research, training and extenalon group, (3) agri-business group, (4) planning and monitoring group and (5) support group.

Other agencies attached to the department are Fertilizer and Pesticide authority, Fiber Industry Development authority, National *Tobacco administration*, Quedan Guarantee Fund Board, Philippine Fisheries Development authority, and Philippine Rice Research Institute.

The Bureau of Agricultural Extension, Philippine Training Center for Rural Development and Philippine Agricultural Training Center for Rural Development and Philippines Agricultural Training Institute. The Technical Board for Agricultural Credit and the Presidential Committee on Agricultural Credit were merged into the Agricultural Credit Policy *council*.

Abolished were the National Meat and Inspection Commission, National Artificial Rain Stimulation Committee, *Farm Systems Develop*ment Corp. and Green Revolution expanded program acting committee.

Marginal deposits lowered

The Monetary Board of the Central Bank has reduced from 100 percent to 50 percent the required reserves against marginal deposits on import letters of credit (LC), Senior Deputy Governor Gabriel C. Singson said yesterday.

With the reduced administrative costs of banks through CB's new policy, the banking system is expected to have an extra P600 million in loanable funds for use of importers and other businessmen, *Singson said*.

The new policy according to Singson, is also expected to also reduce the intermediation costs of banks and enable them to pass on these *savings to importers* in terms of lower charges.

The CB adopted the new policy through *Circular 1136, in line* with the government's import liberalization policy and in response to a request of the Bankers *Association of the*

Pending housing loans released

Housing loans of Pag-IBIG members *submitted to the* National Home Mortgage Finance Corp. *(NHMFC) but whose* take-out payments have been pending because of the suspension of home lending in mid-1986 will soon be released.

In a press statement, NHMFC executive vice president Ramon Albert disclosed that Pag-IBIG will pay for close to P250 million worth of mortgages directly to lending banks under an agreement signed with NHMFC.

These mortgages include those delivered to NHMFC and processed for take-out but with the payment deferred due to the on-going policy revi*sions and reformula*tion of lending guidelines.

Under the agreement, payment of the loan proceeds will be made 30 days after NHMFC's submission to Pag-IBIG of the complete documents and amounts computed according to the old Pag-IBIG mortgage *origination* guidelines, the agreement also provided.

With the elimination of the inventory of overdue takeouts, NHMFC will be fully prepared to embark on the new lending program, Albert added.

JICA