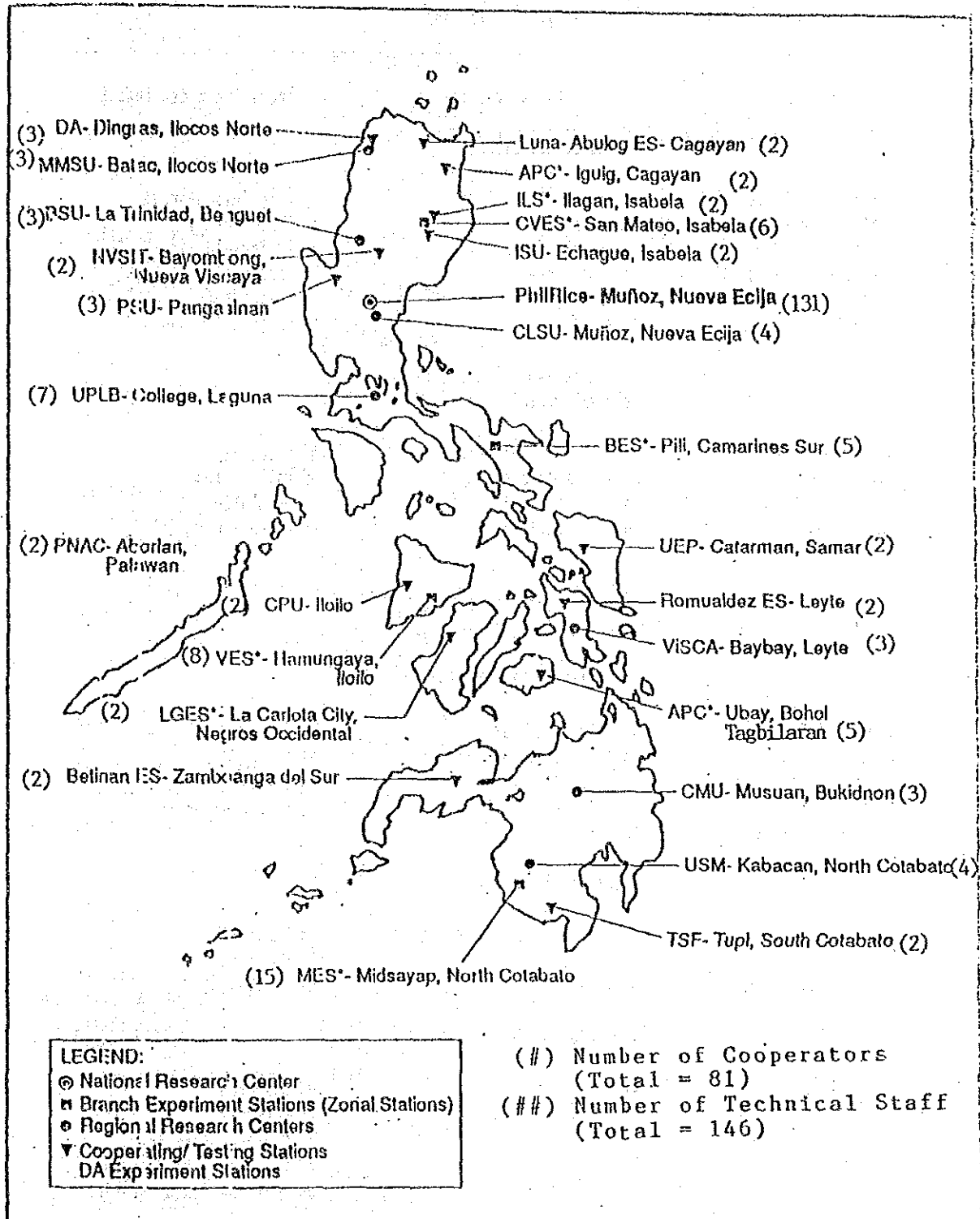


PHILRICE R&D NETWORK



Note: Some of the cooperators are trainers and radio broadcaster for technology transfer

PHILIPPINE RICE RESEARCH INSTITUTE

PROFILE OF PERSONNEL

Name	Position Title	Educational Attainment
I. OFFICE OF THE DIRECTOR		
Santiago R. Obien	Director	:Ph D in Soil Science
Bonilo A. Beronio	Deputy Director	:MS Ag Economics
Vicente C. Rodriguez	Department Manager II	:MS Ag Engineering
Manuel K. Vergara, Jr.	Private Secretary II	:BS Commerce
Noel A. Beronio	Private Secretary I	:BS Criminology
Lucia Lusanea	Clerk II	:AB Political Science
PLANNING AND COLLABORATIVE PROGRAM OFFICE		
Leocadio S. Sebastian	Sr. Sci Res Specialist	:MS Genetics
James W. Macasieb	Mngt & Audit Analyst II	:MS Mathematics
Teodora D. Lacsa	Sci Res. Specialist II	:BS Statistics
Ms. Cielo J. Tibayan	Sci Res. Assistant	:BS Agriculture
II. GENERAL ADMINISTRATIVE AND SUPPORT SERVICES DEPARTMENT		
A. ADMINISTRATIVE DIVISION		
Eleanor L. Retales	Division Chief III	:BS Commerce
Ma Irene P. Dungca	Administrative Officer, II	:BS Management
Edgar C. Decena	Clerk II (Los Banos)	:BS Computer Science
Raquel Cuatrix	Guesthouse Caretaker	:BS Home Management
Gerardo G. Grospe	Utility Worker I	:
1) Personnel Section		
Luz Belen C. Prollamante	Hum Res & Mngt Officer III	:AB Economics
Glenda S. dela Cruz	Clerk III	:BS Commerce
Jennifer Manalili	Clerk II	:BS Management
2) Supply and Property Section		
Lorenzo S. Alvaran	Supply Officer III	:BS Commerce
Belinda K. Gonzalvo	Clerk III (Los Banos)	:BS Forestry
Rosario U. Olivares	Clerk III	:BS Commerce (3rd Yr)
Vivian O. Macaroy	Clerk II	:BS Computer Data Processing
Julius G. Olo	Buyer/Canvasser	:BS Business Administration
3) Records Section		
Amelia C. Hidalgo	Records Officer II	:BS Education
Carmelito C. Jao-jao	Messenger	:3rd Yr High School

Name	Position Title	Educational Attainment
	4) Budget Section	
Carlito U. Catala	Budget Officer III	:BS Commerce
Adelaida Benito	Budget Specialist I	:BS Commerce
	5) Security Services Section	
Emilio B. Dacayo	Security Guard II	:Diesel Mechanic
Rogelio S. Padero	Security Guard II	:High School
Valentino Tolentino	Security Guard II	:High School
	B. FINANCE DIVISION	
Nestor C. Martin	Chief Accountant	:BS Commerce
	1) Accounting Section	
Klena Domingo	Bookkeeper	:BS Elem Educ-3rd Yr
Fe R. Gonzales	Clerk II	:BS Business Ad
Beatriz M. Abdala	Clerk II	:BS Commerce/Agriculture
Aurea M. Cabana	Clerk II	:BS Commerce
Ma. Cristina Lacson	Clerk II (Los Banos)	:BS Commerce
Amihan S. Lontok	Clerk II (Los Banos)	:BS Commerce
	2) Cash Section	
Gloria S. Evangelista	Cashier III	:BS Commerce
Krlinda T. Duquesa	Cashier II	:BS Business Ad
Ma. Carmela B. Merin	Clerk IV (Los Banos)	:AB Economics
Nenita F. Dona	Clerk III	:BSA-2nd Yr
Rebecca D. Cataag	Clerk II (Los Banos)	:AB English
	C. PHYSICAL PLANT DIVISION	
	1) Infrastructure Unit	
Rodolfo G. Domingo	Supervising Sci Res Spec	:BS Ag. Engineering
Renato B. Bajit	Mngt & Audit Analyst III	:BS Architecture
Manuel Abaoag	Engineer II	:BS Civil Engineering
Louie Bangunan	Engineering Aide	:BS Civil Engineering
Generoso Matison B. Ramos	Draftsman II	:BS Architecture
	2) Motor Pool Section	
Rodolfo O. Torres	Mechanic II	:Vocational-Mechanic
Ireneo M. Gonzales	Mechanic II	:Diesel Engine Mech
Anacleto Signo	Mechanic I	:Farm Mechanic
June B. Advincula	Driver II (Los Banos)	:Vocational (R-TV Electronics)
Severo J. Gatan	Driver II	:High School
Greyson A. Sotoya	Driver I (Los Banos)	:BS Civil Eng - 3rd Yr
Apolonio Castillo	Driver I (Los Banos)	:College-Undergrad

Name	Position Title	Educational Attainment
Wilfredo Dereglá	Driver I	
Leticia Basubas	Clerk II	:BS Agriculture
	3) Buildings & Grounds Section	
Restituto B. Calora	Utility Worker II (Los Banos)	:High School
Domingo Duquesa	Utility Worker I	:High School-1st Yr
Alejandro Sinense	Utility Worker I	
:II. RESEARCH DEPARTMENT		

: A. PLANT BREEDING DEPARTMENT		

Hilario C. dela Cruz	Sr Sci Res Specialist & Head	:MS Plant Breeding (30 units)
	Plant Breeding Section	

Blanquita Garcia ***	Supervising Sci Res Specialist	:PhD Plant Breeding (On-going)
Philbert S. Bonilla *	Sr Sci Res Specialist	:PhD Plant Breeding (On-going)
Haul J. Lara **	Sr Sci Res Specialist (Los Banos)	:MS Agronomy
Edilberto Redona ***	Sr Sci Res Specialist	:MS Plant Breeding
Artemio M. Galvez	Sr Sci Res Specialist	:MS Plant Breeding
Renando Solis	Sci Res Specialist II (Los Banos)	:BS Agriculture
Virgilio C. Andaya **	Sci Res Specialist II	:BS Agriculture
Edwin J. Quintana	Sci Res Specialist I (Los Banos)	:BS Agriculture
Minda M. Vila	Sci Res Specialist I (Los Banos)	:BS Agriculture
Thelma F. Padolina	Sci Res Specialist I	:Ms Crop Science (On-going)
Benito P. Gamiao	Sci Res Specialist I	:Bs Agriculture
Leo Y. Sta. Ines	Sci Res Specialist I (Los Banos)	:Bs Agriculture
Emily R. Corpuz	Sci Res Analyst	:MS Crop Science (On-going)
Yolanda A. Dimaano	Sci Res Analyst	:BS Agriculture
Teresita G. Alvaran	Sci Res Analyst	:BS Education
Imelda A. dela Cruz	Sci Res Analyst	:BS Agriculture
Marie Estella Ablaza	Sci Res Assistant	:BS Agriculture
Francisco Ticman	Science Aide	:BS Gen Engineering
Wilfredo Ablaza	Science Aide	:BS Animal Science (On-going)
Virgilio Alata	Science Aide	:BS Agriculture
Thelma Alegado	Science Aide	:BS Agriculture
Gloria E. Magdangal	Science Aide	:BS Agriculture
Lolita E. Magdangal	Science Aide	:BS Agriculture
	Biotechnology Section	

Lina Torrizo ***	Sr Sci Res Specialist	:MS Plant Physiology
Loida C. Malijan	Sr Sci Res Specialist (Los Banos)	:MS Horticulture
Gabriel O. Romero *	Sr Sci Res Specialist	:PhD Plant Breeding (On-going)
Ma. Theresa B. Peralta	Sci Res Specialist II (Los Banos)	:MS Agronomy

Name	Position Title	Educational Attainment
B. AGRONOMY AND SOILS DEPARTMENT		
Teodula Metra	Supervising Sci Res Spec & Head Agronomy Section	PhD in Soil Science (On-going)
Rhodora Aldemita ***	Sr Sci Res Specialist	MS Plant Physiology
Rolando O. Retales	Sr Sci Res Specialist	MS Crop Science
Telesforo D. Anglaser	Sci Res Specialist II	BS Gen Chemistry
Pablo R. Casayuran	Sci Res Specialist II	MS Agronomy
Concepcion U. Toledo	Sci Res Specialist II (Los Banos)	MS Horticulture (12 units)
Arnel B. Rala	Sci Res Specialist II	BS Agriculture
Vilma A. Cristobal	Sci Res Specialist I	BS Agriculture
Letecia Nicolas	Science Aide	2nd Yr BSRED
Soils Section		
Ernesto T. Vidal	Sr Sci Res Specialist	MS Botany
Ma. Andrea R. de Macale	Sci Res Specialist II	BS Agriculture
Jocelyn Bajita	Sci Res Specialist II	BS Agriculture
Jovino L. de Dios	Sci Res Specialist I	BS Agriculture
Fernando D. Garcia	Sci Res Analyst	BS Agriculture
Jose Orcino	Sci Res Assistant	BS Agriculture
Wilfredo Collado	Sci Res Assistant	BS Agriculture
Anicia C. Bergantinos	Science Aide	BS Agri (3rd Yr)
Rosalinda P. Legaspi	Science Aide	BS Agriculture (4th Yr)
C. CROP PROTECTION DEPARTMENT		
Jose R. Medina ***	Division Chief III	PhD in Entomology
Florentino Olivares	Supvg Sci Res Specialist & Head	MS Pathology
Entomology Section		
Alejandra T. Burdeos	Sr Sci Res Specialist	MS Entomology
Manuel B. Rondon	Sci Res Spec II	BS Agriculture
Gilely A. dela Cruz	Sci Res Spec II	MS Entomology (25 units)
Genaro S. Rillon *	Sci Res Spec I	MS Entomology (On-going)
Virgilio G. Sagun	Sci Res Analyst	MS Entomology (On-going)
Mario S. dela Cruz	Sci Res Assistant	BS Agriculture (4th Yr)
Pathology Section		
Rosendo Cortado	Sr Sci Res Specialist	MS Pathology
Arthur Baria	Sci Res Spec II	BS Agriculture
Aurelia A. dela Cruz	Sci Res Spec I	BS Agriculture
Dante L. Adorada	Sci Res Specialist I (Los Banos)	BS Agriculture
Julieta Flores	Sci Res Assistant	BS Agriculture
Mary Joserie Mansit	Sci Res Assistant (Los Banos)	BS Agriculture
Cynthia Juanillo	Sci Res Assistant (Los Banos)	BS Agriculture

Name	Position Title	Educational Attainment
Weed Science Section		
Hilario C. Cabanilla	Sci Res Spec II	:MS Agronomy
Antonio R. Martin	Science Aide	:BS Agriculture (1st Yr)
Adoracion C. Oliapo	Science Aide	:BS Commercial Educ
Romeo S. Mariano	Science Aide (Los Banos)	:High School
Maximo K. Wayet	Science Aide (Los Banos)	:High School
D. RICE ENGINEERING AND MECHANIZATION		
Felinar M. Torriazo	Supvg Sci Res Specialist & Head	MS Ag. Engineering
Leonides S. Halos **	Sr Sci Res Specialist	:MS Ag. Engineering
Romeo A. de Guzman	Sr Sci Res Specialist	:MS Ag. Eng'g (Passed Compre)
Evangeline B. Sibayan	Sci Res Specialist II	:MS Ag. Eng'g (On-going)
Manuel Jose C. Regalado *	Sci Res Specialist II	:MS Ag. Eng'g (On-going)
Bernardo D. Yadeo *	Sci Res Specialist II	:MS Ag. Eng'g (On-going)
Joselito A. Damian	Sci Res Specialist II	:BS Mechanical Engg
Eden C. Gagelonia	Sci Res Specialist II	:MS Ag. Eng'g (On-going)
E. RICE CHEMISTRY AND FOOD SCIENCE		
Leslie J. Togado	Sci Res Specialist II & Head (LR)	:MS Chemistry (On-going)
Analytical Laboratory Section		
Jean Medina ***	Sr Sci Res Specialist (Los Banos)	:MS Soil Chemistry
Evangeline Punzalan	Science Aide (Los Banos)	:BS Chem Engineering
Alvaro Agarin	Lab Aide I (Los Banos)	:Vocational
Rice Chemistry Section		
Lourdes D. Dimaranan	Sci Res Specialist II (Los Banos)	:BS Food Technology
Marita M. Malabanan	Sci Research Assistant (Los Banos)	:Vocational
Food Science Section		
Adelaida Gonzales	Sci Res Specialist I (Los Banos)	:BS Ag Engineering
Criselda C. Ma	Sci Res Specialist I (Los Banos)	:BS Sugar Technology
Jane Agnes Olivares	Sci Research Assistant (Los Banos)	:BS Food Technology
Xfren T. Cerrudo	Science Aide (Los Banos)	:BS Aircraft Technology
Jose S. Robles	Science Aide (Los Banos)	:BS Ag Engineering (Undergrad)
Oscar G. de Mesa	Science Aide (Los Banos)	:BS Commerce
F. SOCIAL SCIENCE AND POLICY RESEARCH		
Gaspar B. Bimbao	Supvg Sci Res Specialist & Head	:MS Resource Economics
Policy Research Section		
Sergio R. Francisco	Sr Sci Res Specialist	:PhD Statistics
Jocelyn Y. Quintana *	Sr Sci Res Specialist	:MS Agri Economics (On-going)

Name	Position Title	Educational Attainment
Imelda M. Revilla *	Sci Res Specialist II	:MS Agri Economics (On-going)
Ronaldo Sison	Sci Res Specialist I	:BS Ag Economics
Guadalupe Redondo	Sci Res Analyst	:BS Agri Extension
	Social Science Research Section	
Carlos B. Carlos	Sci Res Specialist II	:MS Rural Sociology (On-going)
Girlie Mora A. Abrigo	Sci Res Specialist II	:AB Sociology
Mina K. Torreta	Sci Res Specialist II	:AB Sociology
Irene R. Tanzo	Sci Res Specialist I	:AB Sociology
Ma Isabel Zinia T. Azanza	Sci Res Specialist I	:BS Statistics
Ma. Ana Casupang	Sci Res Analyst	:AB Economics
Lydia Perez	Sci Res Spec III (Los Banos)	:MS Rural Sociology
	SEED PRODUCTION, PROCESSING AND HEALTH UNIT	
Rogelio Limuaco	Sr Sci Res Specialit	:BS Agriculture/Public Ad (12 u
Gonzalo R. Coloma	Sci Res Spec II	:BS Agriculture
Mryna U. dela Cruz	Sci Res Analyst	:BS Agriculture
Conrado N. Domingo	Heavy Eqpt. Operator II	:High School (3rd Yr)
Artemio A. Corpus	Science Aide	:BS Agriculture
Crispulo C. Valdez	Science Aide	:High School (2nd Yr)
Cesaria K. Constantino	Science Aide	:BS Agriculture
	FARM OPERATIONS UNIT	
Sesinando Constantino	Sci Res Analyst	:MS Ag. Eng'g (On-going)
Luis A. Hidalgo	Heavy Eqpt. Operator I	:BS Ag Engineering (Undergrad)
Bibiana C. Paglinawan	Science Aide	:BS Agri Tech.
	III. TECHNOLOGY TRANSFER	
Rex L. Navarro ***	Department Manager II	:PhD in Public Ad
Teodorica Imelda Banez	Secretary I (Los Banos)	:BS Commerce
	A. ON-FARM TECHNOLOGY DEVELOPMENT	
Conrado M. Siota	Sr Sci Res Specialist & Head	:MS Agricultural Studies
Gerardo F. Estoy	Sci Res Specialist II	:MS Entomology (12 units)
Nemesio U. Trillana	Sci Res Specialist I	:MS Agronomy
Evangelina D. Ilagan *	Sci Research Analyst	:MS Family Res Mngt (On-going)
Ma. Vina Alvaran	Science Aide	:BS Statistics
Fernando P. Micoso	Science Aide	:Architec. Drafting
	B. TRAINING AND HUMAN RESOURCK DEVELOPMENT	
Constante T. Briones	Sr Sci Res Specialist & Head	:AB Mass Comm
Diego Ramos *	Sci Res Specialist II	:MS Agri Educ (On-going)

Name	Position Title	Educational Attainment
Zyla Macasieb	Sci Res Specialist II	:MS Ext Educ
Wilfredo Libunao	Sci Res Specialist II	:MS Crop Science (25 units)
Eufino Z. Tamayao	Sci Res Specialist I (Los Banos)	:BS Agriculture
Matilde P. Adiviso	Sci Res Analyst	:BS Business Ad
Paula E. Bauzon	Clerk II	:BS Agriculture
: C. COMMUNICATION AND PUBLICATION : DIVISION		
Roger F. Barroga *	Sr Sci Res Specialist	:MS Dev Comm (On-going)
Karen Eloisa R. Tanzo *	Sci Res Specialist II	:MS Dev Comm (On-going)
Arleen Robert E. Baclit	Sci Res Specialist II	:BS Dev Comm
Geraidine P. Aquino	Sci Res Specialist II	:BS Dev Comm
Eduard D. Magallona	Sci Res Specialist II (Los Banos)	:Pre-Vet. Medicine
Lourdes E. Baclit	Creative Arts Spec I	:BS Architecture
Edilberto Leano	Artist-Illustrator I	:Drafting Course (2 Yrs)
Lea del Rosario	Sci Res Specialist II	:BS Dev Comm
:MIDSAYAP EXPERIMENT STATION		
George Z. Castro	Supvg Sci Res Specialist & Head	:BS Agriculture
Eliseo H. Batay-an	Sr Sci Res Specialist	:MS Entomology
Remedios B. Panaguiton	Sr Sci Res Specialist	:BS Agriculture
Rodrigo M. Casco	Sr Sci Res Specialist	:BS Agriculture
Evelyn Tabelin	Sci Res Specialist II	:MS Agronomy
Teresita G. Labio	Sci Research Analyst	:BS Agriculture
Albino Malitan	Sci Research Analyst	:MS Crop Prod'n (On-going)
Alberto Pajarito	Sci Research Analyst	:BS Agri Technology
Felicidad V. Malitan	Sci Research Analyst	:BS Agriculture
Teresita G. Flores	Sci Research Analyst	:BS Agriculture
Vicente S. dela Pena	Science Aide	:BS Commerce (2nd Yr)
Estela G. Mendoza	Clerk III	:Vocational-Bookkeeping
Inocencio L. Ayudan	Clerk III	:BS Commerce
Ernesto P. dela Vina	Driver II	:High School (2nd Yr)
Claudio S. Dumaboc	Driver II	:High School Graduate
Angel G. Dante	Driver II	:Vocational-Auto Mechanic
Jose N. Ragonton	Security Guard I	:High School Graduate
Innocencio B. Dumile	Security Guard I	:High School (2nd Yr)

* On Study Leave

** Training Abroad/Local

*** Will be joining PhilRice within 1990

PHILIPPINE RICE RESEARCH INSTITUTE
BUDGET OF REVENUES AND EXPENDITURES
CY 1989 - 1995
(In P 000)

PARTICULARS	1989 ACTUAL	1990 ESTIMATE	P R O J E C T E D				
			1991	1992	1993	1994	1995
REVENUES							
a) National Govt. Subsidy	16,708	45,950	93,811	98,000	110,000	125,000	145,000
b) Sales Income	3,216	3,650	4,000	4,300	4,500	5,100	5,400
c) Interest Income	570	850	1,000	1,100	1,300	1,500	1,600
d) Trust Receipts	18,589	29,956	4,300	5,400	5,500	6,500	8,500
Total Revenues	39,083	80,406	103,111	108,800	121,300	138,100	160,700
EXPENDITURES							
I. PERSONAL SERVICES							
Salaries- Itemized Positions	4,708	14,351	19,205	24,006	27,607	31,748	38,098
Casual/Emergency Laborers	3,091	7,736	3,600	4,500	5,175	5,951	7,142
Consultants	1,176	1,176	1,822	2,278	2,819	3,012	3,614
Contractuals	789	789	803	1,004	1,154	1,327	1,593
Honoraria (80T per EO 1061)	288	288	288	360	414	476	571
RATA	391	394	780	975	1,121	1,289	1,547
Other Remunerations	3,999	2,869	3,728	4,660	5,359	6,163	7,395
Total Personal Services	14,442	27,603	30,226	37,783	43,450	49,967	59,361
II. MAINTENANCE AND OTHER OPERATING EXPENSES							
Travelling Expenses	1,312	3,129	6,872	8,590	9,879	11,360	13,632
Communication	93	1,920	3,574	4,468	5,138	5,908	7,090
Repairs- Govt. Facilities	532	2,016	3,555	4,444	5,110	5,877	7,052
Transportation Services	14	1,858	2,380	2,975	3,421	3,934	4,721
Other Services	3,874	6,250	7,145	8,931	10,271	11,812	14,174
Supplies and Materials	4,061	5,850	10,953	13,691	15,745	18,107	21,728
Grants, Subsidies and Cont.	1,431	1,413	2,750	3,438	3,953	4,546	5,455
Auditing Services	89	440	967	1,209	1,390	1,589	1,918
Maintenance- Motor Vehicles	1,449	2,200	3,712	4,640	5,336	6,136	7,364
Discretionary Expenses	45	350	768	960	1,104	1,270	1,524
Representation Expenses	119	2,300	3,050	3,813	4,384	5,042	6,050
Extraordinary/Emergency/ Contingency Expenses		589	1,064	1,330	1,530	1,759	2,111
Total Maintenance and Other Operating Expenses	13,019	28,315	46,790	58,488	67,261	77,350	92,820
III. CAPITAL OUTLAY							
Equipment Outlay	6,593			3,500	2,500	2,800	3,500
Land and Land Improvements	537	7,533	5,630	6,500			
Buildings and Structures	160		11,185				
Investment Outlay	418		3,500				
Total Capital Outlay	7,708	7,533	20,295	10,000	2,500	2,800	3,500
Total Expenditures	35,169	63,451	97,311	106,270	113,211	130,117	156,280
Expected Annual Savings	3,914	16,955	5,800	2,530	8,090	7,983	4,420

Note 1. The Expected Annual Savings from Operations is used for liquidating maturing obligations, e.g., suppliers, contractors, etc.

PHILIPPINE RICE RESEARCH INSTITUTE
 ORGANIZATIONAL BUDGET OF EXPENDITURES
 CY 1989 - 1995
 (In P 000)

DEPARTMENT/ DIVISION	OBJECT OF EXPENDITURE	P R O J E C T E D						
		1989 ACTUAL	1990 ESTIMATE	1991	1992	1993	1994	1995
Plant Breeding	100	1,330	5,797	3,325	4,156	4,780	5,496	6,596
	200	1,604	5,946	5,147	6,434	7,399	8,509	10,210
	300	1,557			350		280	
	Sub-Total	4,491	11,743	8,472	10,940	12,178	14,285	16,806
Agronomy and Soils	100	703	5,797	3,627	4,534	5,214	5,996	7,195
	200	1,444	5,946	5,615	7,019	8,071	9,282	11,138
	300	1,255		385				
	Sub-Total	3,403	11,743	9,242	11,938	13,285	15,278	18,334
Crop Protection	100	705	2,760	3,325	4,156	4,780	5,496	6,596
	200	748	2,832	5,147	6,434	7,399	8,509	10,210
	300					250		
	Sub-Total	1,453	5,592	8,472	10,590	12,428	14,005	16,806
Engineering and Mechanization	100	837	2,484	2,720	3,400	3,911	4,497	5,396
	200	1,136	2,548	4,211	5,264	6,053	6,962	8,354
	300	1,185		525				
	Sub-Total	3,156	5,033	6,931	9,189	9,964	11,459	13,750

PHILIPPINE RICE RESEARCH INSTITUTE
 ORGANIZATIONAL BUDGET OF EXPENDITURES
 CY 1989 - 1995
 (In P 000)

DEPARTMENT/ DIVISION	OBJECT OF EXPENDITURE	P R O J E C T E D						
		1989 ACTUAL	1990 ESTIMATE	1991	1992	1993	1994	1995
Chemistry and Food Science	100	1,219	1,932	2,418	3,023	3,476	3,997	4,797
	200	722	1,982	3,743	4,679	5,381	6,188	7,426
	300	750			350			
	Sub-Total	2,691	3,914	6,161	8,052	8,857	10,185	12,222
Social Science and Policy Res.	100	660	1,932	2,418	3,023	3,476	3,997	4,797
	200	619	1,982	3,743	4,679	5,381	6,188	7,426
	300	133						
	Sub-Total	1,412	3,914	6,161	7,702	8,857	10,185	12,222
Technology Transfer	100	1,075	3,588	5,138	6,423	7,387	8,494	10,193
	200	3,818	3,681	7,954	9,943	11,434	13,150	15,779
	300	643					672	
	Sub-Total	5,535	7,269	13,093	16,366	18,821	22,316	25,973

PHILIPPINE RICE RESEARCH INSTITUTE
 ORGANIZATIONAL BUDGET OF EXPENDITURES
 CY 1989 - 1995
 (In P 000)

DEPARTMENT/ DIVISION	OBJECT OF EXPENDITURE	P R O J E C T E D						
		1989 ACTUAL	1990 ESTIMATE	1991	1992	1993	1994	1995
Administration and Finance	100	7,913	3,312	7,254	9,068	10,428	11,992	14,390
	200	2,929	3,398	11,230	14,036	16,143	18,564	22,277
	300	2,186	7,533	20,295	8,390	2,250	1,848	3,500
Sub-Total		13,028	14,243	38,779	31,494	28,821	32,404	40,166
GRAND TOTAL		35,169	63,451	97,311	106,270	113,211	130,117	156,280

II.5 ACTIVITIES IMPLEMENTED UP TO THIS TIME

(SUMMARY OF ON-GOING PROJECTS AND STUDIES)

PROGRAMS	:PROJECTS	:STUDIES
Rice Varietal Improvement: Program (RVIP)	15	63
Planting and Fertilizer Management (PFM)	8	28
Integrated Pest Management (IPM)	15	12
Rice-Based Farming Systems (RBFS)	4	11
Rice Engineering and Mechanization (REMP)	8	30
Rice Chemistry and Food Science (RCFS)	8	12
Social Science and Policy: Research (SSPR)	6	17
Technology Transfer -On-Farm (TTP-OF)	5	18
TOTAL	69	191

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
=====	
RICE VARIETAL IMPROVEMENT PROGRAM	
GERMPLASM COLLECTION, EVALUATION, CONSERVATION AND DOCUMENTATION	L.M. ENGLE, T.H. BORROMEO
Collection & Preservation of Rice Germplasm	T.H. Borromeo, E.J. Quintana
Evaluation, Documentation & Utilization of Rice Germplasm	T.H. Borromeo, E.J. Quintana T.A. Alegado
UPLAND RICE IMPROVEMENT	P.B. ESCURO, H.C. DELA CRUZ
Observation Nursery of Miscellaneous Upland Rice Collection	M. Vila, P. Bonilla, V.C. Andaya
Upland Rice Hybridization and Progeny Selection	M. Vila, P. Bonilla V.C. Andaya
Upland Rice Preliminary Test	M. Vila, P. Bonilla V.C. Andaya
RAINFED LOWLAND RICE IMPROVEMENT (DRY-SEEDED)	P.B. ESCURO, H.C. DELA CRUZ
Observation Nursery of Miscellaneous Rainfed Lowland Rice Collections	V.C. Andaya, P. Bonilla
Rainfed Lowland Rice Hybridization and Progeny Selection	V.C. Andaya, P. Bonilla
Rainfed Lowland Rice Preliminary Performance Test	V.C. Andaya, P. Bonilla
DEVELOPMENT OF RICE CULTIVARS FOR IRRIGATED LOWLAND	J.E. HERNANDEZ, H.C. DELA CRUZ, JR.
a. Observation Nursery of Irrigated Lowland Rice Cultivars	T.F. Padolina, E.R. Corpuz T.H. Borromeo, R. Solis
b. Advanced Observation Nursery of Irrigated Lowland Rice Cultivars	M.A. Dimaano, J.A. Orcino
Rice Hybridization and Selection of Segregating Generations	B.P. Gamiao, L.E. Magdangal, V.M. Atata T.H. Borromeo, D.J. Lalican, R. Solis, E.B. Cayaban, E.L. Javier, S.H. Escamos
Preliminary Yield Trial of Irrigated Lowland Rice Cultivars	
a. Transplanted	
a.1. Preliminary yield trial	Y.A. Dimaano, J. Orcino
a.2. Preliminary yield trial using low input and optimum technology	T.F. Padolina, E.R. Corpuz E.B. Cayaban, R. Solis, S.H. Escamos
a.3. Preliminary yield trial using high input technology	T.F. Padolina, G.E. Magdangal
b. Direct-seeded	T.F. Padolina, E.R. Corpuz
DEVELOPMENT OF RAINFED LOWLAND RICE CULTIVARS	E.L. JAVIER, N.M. TEPORA

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
ADAPTED FOR DROUGHT-PRONE &/OR FLOOD PRONE AREAS	
Observation Nursery of Rainfed Lowland Rice Cultivar for Drought-Prone and/or Flood-Prone Conditions	T.G. Alvaran D.J. Latican
Rice Hybridization and Selection in Segregating Generations	T.G. Alvaran D.J. Latican, E.B. Cayaban
Rice Preliminary Performance test	T.G. Alvaran S.H. Escanos
DEVELOPMENT OF RICE CULTIVARS ADAPTED TO ADVERSE (SALINE) SOIL CONDITIONS	
Rice Observation Nursery	B.P. Gamiao, L.E. Magdangal
Rice Hybridization and Selection in Segregating Generations	B.P. Gamiao, L.E. Magdangal
Rice Preliminary Performance test	B.P. Gamiao, L.E. Magdangal
RICE VARIETAL IMPROVEMENT FOR COOL ELEVATED AREAS	
Rice Observation Nursery	V.C. Andaya/Cordillera Counterpart
Rice Hybridization and Selection in Segregating Generations	V.C. Andaya/Cordillera Counterpart
DEVELOPMENT AND UTILIZATION OF NON-CONVENTIONAL TECHNOLOGIES FOR RICE IMPROVEMENT	
Tissue Culture	E.L. Javier, D.B. Lapis, L.C. Malijan,
In Vitro Rice Selection for Stress (Salt, Diseases)	M. Peralta, T. Borromeo, E. Lapis
Anther Culture	
Wide Hybridization	E.L. Javier, T.H. Borromeo
a. Evaluation of hybrids	
b. Interspecific hybridization	
c. Embryo culture vs. conventionally derived homozygous lines	
Induction of Mutations	E.L. Javier, L.C. Malijan, N.B. Peralta
a. Seed irradiation and selection of mutants	I.S. Santos, A.B. Asencion,
b. Crossing of mutants	A.C. Barrida, E.L. Borromeo
c. Induction of mutants in cultured rice cells	
SCREENING RICE LINES/VARIETIES FOR INSECT RESISTANCE	
Screening of Rice for Green Leafhopper Resistance	A.T. Burdeos, M. dela Cruz F.D. Alzona, E.C. Atienza
Screening of Rice for Brown Planthopper Resistance	A.T. Burdeos, M. dela Cruz F.D. Alzona, E.C. Atienza
Screening of Rice for Stemborer Resistance	A.T. Burdeos, M. dela Cruz F.D. Alzona, E.C. Atienza
SCREENING RICE LINES/VARIETIES FOR DISEASE RESISTANCE	
	D.B. LAPIS, F.M. OLIVARES

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
Field Screening and Evaluation of Rice	A. Baria, A. dela Cruz, V. Sagun
- Shuttling of breeding materials to hot spots (pests and diseases)	A. Sinohin, D. Adorada S.C. Mancao, E. Batayan, T.F. Padolina, E.R. Corpuz
Induced Method of Screening and Evaluation	J. Fernandez, R. Escobar A. Baria, A. dela Cruz, V. Sagun
Modified Method of Screening & Evaluation	A. Sinohin, T.U. Dalisay A. Baria, A. dela Cruz, V. Sagun A. Sinohin, T.U. Dalisay
GRAIN QUALITY TEST OF RICE LINES/VARIETIES	
Milling Potential and Physical Attributes of Rice Entries in Field Performance Test	A.M. Borja, L. Dimaranan
Physico-chemical Properties of Rice Entries in the Field Performance Test	E. Lapis, L.J. Togado
Cooking Parameter of Rice Entries in the Field Performance Test and Sensory Evaluation of All Promising Entries	A.M. Borja, L. Dimaranan, A.Dr. Felix
NATIONAL RICE COOPERATIVE TESTING PROJECT	
NATIONAL COOPERATIVE RICE PERFORMANCE TEST (UPLAND RICE)	
Field Performance Test of Rice	A. GALVEZ
Screening of Rice for Disease Resistance	P.B. ESCURO
Screening of Rice for Insect Resistance	M. Vila Q. Asuncion G. Vargas N. Franje A.P. Sorilla
Rice Grain Quality Test	D.B. Lapis, A. Sinohin & T.U. Dalisay F.M. Olivares Jr, A. Baria, A. dela Cruz, V. Sagun
On-Farm Adaptation Trial	C.B. Adalla, F.D. Alzona, E.C. Atienza F.M. Olivares Jr, A.T. Burdeos, M. dela Cruz A.M. del Mundo, E. Lapis, A.Dr. Felix, A.M. Borja, L. Togado, L. Dimaranan L. Crisostomo, A. Cahanap D.P. Callo, G. Estoy
NATIONAL COOPERATIVE RICE PERFORMANCE TEST (DRY SEEDED RAINFED LOWLAND)	
Field Performance Test of Rice	P.B. ESCURO
Screening of Rice for Disease Resistance	V.C. Andaya Q. Asuncion T. Paranpan, E. Labores T.G. Labio D.B. Lapis, A. Sinohin & T.U. Dalisay

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
Screening of Rice for Insect Resistance	F. Olivares Jr, A. Baria, A. dela Cruz, V. Sagun C.B. Adalla, F.D. Alzona, E.C. Atienza F.M. Olivares Jr, A.T. Burdeos, M. dela Cruz
Rice Grain Quality Test	A.M. del Mundo, E. Lapis, A. Dr. Felix, A.M. Borja, L. Togado, L. Dimaranan
On-Farm Adaptation Trial	L. Crisostomo, A. Cahanap D.P. Callo, G. Estoy
NATIONAL COOPERATIVE RICE PERFORMANCE TEST (IRRIGATED RICE)	J.E. HERNANDEZ
Field Performance Test of Rice	V.L. Lopena T.F. Padolina, E.R. Corpuz E.B. Tabalin H. Jose Y.P. Sosa C.N. Agbigay T. Paranpan E. Famoso J. Escarlos C. Clarete
Screening of Rice for Disease Resistance	D.B. Lapis, A. Sinchin & T.U. Dalisay F. Olivares Jr, A. Baria, A. dela Cruz, V. Sagun S.C. Mancao J. Fernandez B. Zaragosa C.Arroyo
Screening of Rice for Insect Resistance	R.A. Paningbatan C.B. Adalla, F.D. Alzona, E.C. Atienza F.M. Olivares Jr, A.T. Burdeos, M. dela Cruz E.N. Batay-an H. Pasicolan A. Mutya E.D. Llabeos P. Patindol
Rice Grain Quality Test	A.M. del Mundo, E. Lapis, A. Dr. Felix, A. Borja, L. Togado, L. Dimaranan
On-Farm Adaptation Trial	L. Crisostomo, A. Cahanap D.P. Callo, G. Estoy
NATIONAL COOPERATIVE RICE PERFORMANCE TEST (DROUGHT-PRONE, TRANSPLANTED RICE/WET-SEEDED RICE)	E.L. JAVIER
Field Performance Test of Rice	V.L. Lopena T.G. Alvaran T.G. Labio

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
	J. Fernandez, R. Escobar G. Abuncion G. Sadidong
Screening of Rice for Disease Resistance	D.B. Lapis, A. Sinohin, T.U. Dalisay F. Olivares Jr, A. Baria, A. dela Cruz, V. Sagun S.C. Mancao C.A. Arroyo
Screening of Rice for Insect Resistance	C.B. Adalla, F.D. Alzona, E.C. Atienza F. Olivares Jr, A. Burdeos, M. dela Cruz E.H. Batay-an E.D. Lladores
Rice Grain Quality Test	A.M. del Mundo, E. Lapis, A. Dr. Felix, A. Borja, L. Togado, L. Dimaranan L. Crisostomo, A. Cahanap D.P. Callo, G. Estoy
On-Farm Adaptation Trial	
BASIC SEED PRODUCTION OF RECOMMENDED/POPULAR RICE VARIETIES	H.C. DELA CRUZ, JR.
Basic Seed Production of Recommended/Popular Rice Varieties	D.J. Lalican F.S. Ticman T.G. Labio D. Blanco D. Banaylo C.N. Agbigay A.M. Villamor
Further Seed Increase of Seed Board Approved Popular Rice Varieties and Promising Selections	M. Villegas, W. Ablaza E.B. Tabelin, T.G. Labio D. Blanco D. Banaylo C.N. Agbigay N.M. TEPORA
GLUTINOUS AND FANCY RICE VARIETAL IMPROVEMENT	
Observation Nursery of Glutinous and Fancy Rice Cultivars	L.G. Mateo
Rice Hybridization and Selection in Segregating Generations	L.G. Mateo
Preliminary Yield Trial of Glutinous and Fancy Rice Cultivars	L.G. Mateo
HYBRID RICE	
Development of Parental Lines	H.C. DELA CRUZ, R.J. LARA
Effects of Different Components (Individual and Combinations) of Hybrid Seed Production Practices on Outcrossing and Seed Yield of IR62829 and	I.A. dela Cruz, SM.F. Ablaza I.A. dela Cruz, SM.F. Ablaza

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
IR58025 of Various Locations of the Philippines Performance of F1 Rice Hybrids	I.A. dela Cruz, SM.F. Abiaza
Pollen and Spikelet Sterility Evaluation of CMS Line	
Effect of Vegetative Propagation on the Performance and Behavior of A, B Lines and F1 Hybrids Estimation of Vertical and Horizontal Distance to Which Pollen Can Travel Economics of Seed Production	

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
PLANTING AND FERTILIZER MANAGEMENT PROGRAM	
CHARACTERIZATION & CLASSIFICATION OF THE RICE GROWING ENVIRONMENTS	G.O. SAN VALENTIN
Identification of Production Constraints in Lowland Rice	A.R. de Macale, W. Collado
Characterization of Zinc-deficient Soils Planted to Rice	A.R. de Macale, J.L. de Dios Y.P. Sosa A. Lactaden
Site Characterization of USG Trials	A.R. de Macale, F. Garcia
Field Development & Testing for Suitability to Specific RBFS Components	A.R. de Macale
IMPROVEMENT OF UPLAND RICE CROP MANAGEMENT IN DEGRADED SOILS	G.O. SAN VALENTIN
Improvement of Package of Technology (POT) for Upland Rice in Acid Soils	J. Bajita
Varietal Selection for Tolerance to Acid Soil Fertility	W. Collado
Varietal Evaluation for Tolerance to Drought	E. Vidal
INTEGRATED NUTRIENT MANAGEMENT FOR RICE UNDER IRRIGATED/RAINFED CONDITIONS	G.O. SAN VALENTIN
Soil and Fertilizer Management for a Sustainable Rice Production	A.R. de Macale, A. Bergantinos R. Panaguiton R. Mercado Y.P. Sosa C.A. Arroyo
Evaluation of Selected Green Manures for Lowland Rice Production	J.L. de Dios
Screening and Evaluation of Lowland Rice Varieties to Intensive Cropping	A. Bergantinos R. Mercado V. Mangasar
Yield Response of Selected Lowland Rice Varieties to Fertilization Under Different Agro-climatic Conditions	A. Bergantinos, F. Garcia R. Panaguiton R. Mercado C. Clarete N. Sodusta Y. Sosa H. Aragon V. Mangasar
Climatic Requirements of Promising Rice Varieties	N.V. Hguu

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
IMPROVEMENT IN CROP ESTABLISHMENT FOR BETTER STAND AND YIELD OF RAINFED RICE	G.O. SAN VALENTIN
Pre-planting Management for Over-aged Seedlings	J. Bajita
Improvement of Dry-Seeding Practices in Bunded Rainfed Areas	E.T. Vidal V. Agreda
Delayed Transplanting in Lowland Rice	E.T. Vidal R.B. Panaguiton E. Imperial E. Llambres R. Mercado
IMPROVEMENT OF CULTURAL PRACTICES FOR IRRIGATED RICE	N.V. NGUU
Effect of Planting Density and Spacing on Rice Yield	P. Casayuran
Development of Methods of Nurserybeds for Transplanted Rice	T. Anglacer
HIGH YIELDING TECHNOLOGY FOR IRRIGATED RICE	N.V. NGUU
Identification and Characterization of Farming Conditions and Practices at Project Sites	With SSPR Group
Identification, Characterization, and Classification of Currently Promising Production Techniques	With SSPR Group
Determination of Requirements of Seed Board Varieties	
a. Climatic	P. Casayuran, T. Anglacer R. Panaguiton, E. Tabalin D. Barlan E. Imperial
b. Nutrient	Y. Sosa P. Casayuran, T. Anglacer R. Panaguiton, E. Tabalin
Testing and Improvement of Production Techniques	P. Casayuran C.C. Cardenas
UREA SUPER GRANULES	P. ONGKINGCO
Utilization of Urea Supergranules for Irrigated Lowland Rice	F. Garcia
Field Trial on the Effectiveness of N-K (17-0-17) as Topdressing Fertilizer for Rice	F. Garcia
Field Trial on Effectiveness of Nevirol 20 WP as Fruitsetter for Rice	F. Garcia
Effect of Hokoizin as Plant Growth Promoter on the	F. Garcia

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
Yield of Lowland Rice	A. Pajarito
PHILRICE-IRRI PROJECT	
Crop Dynamics in Relation to Stand Establishment and Nitrogen Management in Flooded Rice	Study Leaders: Dr. G.O. San Valentin (PhilRice) Dr. H. Dingkuhn (IRRI) Researchers : PhilRice : F. Garcia , A. de Macale IRRI : C. Mole, M. Angat
Crop Establishment Methods and Nitrogen Management in Lowland Rice	Study Leaders: Dr. G.O. San Valentin (PhilRice) Dr. S.K. De Datta (IRRI) Researchers : PhilRice : P. Casayuran IRRI : C. Mole, M. Angat
Long Term Fertility Trial	A. Bergantinos (PhilRice) J. Descalsota (IRRI)

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
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INTEGRATED PEST MANAGEMENT PROGRAM	
EFFECT OF COMMONLY USED INSECTICIDES AGAINST NATURAL ENEMIES OF RICE INSECTS	J. R. MEDINA N. Saavedra
EFFECT OF SYNTHETIC PYRETHROID INSECTICIDES ON GREEN LEAFHOPPER (GLH) AND RICE TUNGRO VIRUS (RTV)	E.H. Batay-an, S.C. Mancao
HERBICIDE SCREENING IN IRRIGATED AND RAINFED DIRECT-SEEDED FLOODED RICE	H.C. CABANILLA, R. Legaspi
UTILIZATION OF PROMISING NATURAL ENEMIES IN THE CONTROL OF RICE STEMBORERS	J. R. MEDINA
Field Evaluation of <i>Trichogramma japonicum</i> for the Control of Rice Stemborer in Lowland Rice	V.P. Justo A.T. Burdeos, V.S. Sagun
BACILLUS THURINGIENSIS FOR THE CONTROL OF SOME IMPORTANT LEPIDOPTEROUS PESTS OF RICE	L. PADUA
SCREENING OF PRRI LINES/SELECTIONS FOR RESISTANCE AGAINST COMMON INSECT PESTS OF RICE	F.M. OLIVARES M.S. dela Cruz, G.A. dela Cruz, A.T. Burdeos
SCREENING OF PRRI LINES/SELECTIONS FOR RESISTANCE AGAINST RICE DISEASES	F.M. OLIVARES A.A. dela Cruz, V.G. Sagun A.R. Baria
POPULATION DYNAMICS OF STEMBORER AND ITS NATURAL ENEMIES IN HIGHLY SUSCEPTIBLE AND RESISTANT VARIETIES	C.B. ADALLA
Varietal Characteristics Affecting Pest/Natural Enemy Fluctuation	G.A. dela Cruz
Seasonal Fluctuation of Stemborer and Natural Enemy Fluctuation	G.A. dela Cruz
PARTICIPATORY VERIFICATION AND ADAPTATION OF COMPONENT TECHNOLOGY FOR IPM IN LOWLAND RICE IN SPECIFIC REGIONS	C.B. ADALLA, G.A. dela Cruz
Verification of Nationally Packaged Economic Threshold Levels for Insect Pests in Five Production Regions	C. Rodriguez (Region 2) A. Tenorio (Region 3) D. Centeno (Region 5) M. Bayoneta (Region 6) R. Embajador (Region 12)
Evaluation of Sequential vs Random Sampling in Assessing ETL	C. Rodriguez, A. Tenorio, D. Centeno, H. Bayoneta, R. Embajador

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
Evaluating the Efficacy of Two Categories of Field Scouts	C. Rodriguez, A. Tenorio, D. Centeno, M. Bayoneta, R. Embajador
Establishment of Appropriate Location-Specific Threshold for Stem-borers and Leaf-folders	C. Rodriguez, A. Tenorio, D. Centeno, M. Bayoneta, R. Embajador
Training of Pest Monitoring Scouts	C. Rodriguez, A. Tenorio, D. Centeno, M. Bayoneta, R. Embajador
Socio-economics of Rice IPM Technology	A.C. Rola
Development of Location Specific Rodent Pest Management	M.M. Hoque
MANUAL OF LOWLAND RICE WEEDS IN THE PHILIPPINES	J.V. PANCHO
INTEGRATED PEST MANAGEMENT IN TRANSPLANTED, IRRIGATED RICE	E.C. PALLER, J.P. SUMANGIL <u>Management Staff</u> Diseases Management Aspect: D.B. Lapis (NCPC/UPLB) F.M. Olivares (PhilRice) Insect Pest Management C.B. Adalla (PhilRice/UPLB) N. Saavedra (NCPC) Weed Management: G. L. Magasino (NCPC) Golden Snail Management: M. Rondon (PhilRice) D.P. Callo (NCPC/PhilRice) Rodent Pest Management: M.M. Hoque (NCPC) <u>Study Leaders:</u> O. Lorenzana (RCPC-BPI)- Nueva Vizcaya A. Tenorio (RCPC-BPI) - Nueva Ecija E. Villegas (RCPC-BPI) - Laguna <u>Project Staff:</u> V. Perdido (RCPC-BPI)- Nueva Vizcaya C. Bayuca (RCPC-BPI)- Nueva Vizcaya M. Aquino (RCPC-BPI)- Nueva Vizcaya R. Lizarondo (RCPC-BPI)- Nueva Ecija R. San Gabriel (RCPC-BPI)- Nueva Ecija R. Vigilia (RCPC-BPI)- Nueva Ecija A. Caguicla (RCPC-BPI) - Laguna L. Agbagala (RCPC-BPI) - Laguna C. Manzanilla (RCPC-BPI) - Laguna
DIVERSITY OF NATURAL ENEMIES OF RICE STEM-BORERS UNDER LOWLAND CONDITIONS	V. GAPUD
EFFICIENCY OF ENTOMOPATHOGENIC FUNGI IN THE CONTROL OF RICE BUG IN TRANSPLANTED RICE	J.R. MEDINA A.T. Burdeoa, D. Santiago

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
BIOLOGICAL CONTROL OF SHEATH BLIGHT OF UPLAND AND LOWLAND RICE	D.B. LAPIS
SAPOGENIC PLANT MATERIALS FOR GOLDEN SNAIL (Pomacea spp.) CONTROL	B.M. REJESUS
Screening and Chemical Investigation of Selected Plant Materials for Molluscidal Activity	P.N. Maini
Laboratory Bioassay of Crude Plant Extracts and Semipurified Fractions Compounds for Molluscidal Activity	B.M. Rejesus

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
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RICE-BASED FARMING SYSTEMS PROGRAM	
SUSTAINABLE AGRICULTURAL PRODUCTIVITY IN UPLAND RICE-BASED FARMING SYSTEMS (CAVITE)	R.V. LABIOS
Alley Cropping in Sloping Upland Areas	J.G. Montebur, P. Mendoza, M.C.U. Toledo, A.B. Rala
SUSTAINABLE AGRICULTURAL PRODUCTIVITY IN UPLAND RICE-BASED FARMING SYSTEMS (LOS BANOS)	A.G. GARCIA
Crop Residue Management in Various Upland Rice-Based Cropping systems	R.O. Retales, M.C.U. Toledo, A.B. Rala
Comparative Effects of Bio-Fertilizer, Organic, and Inorganic Fertilizer Application in Upland Rice Farming Systems	R.O. Retales, M.C.U. Toledo, A.B. Rala
Dynamics of Pests Populations in Various Rice-Based Cropping Systems	R.O. Retales, M.C.U. Toledo, A.B. Rala
SUSTAINABLE AGRICULTURAL PRODUCTIVITY IN LOWLAND RICE-BASED FARMING SYSTEMS	R.O. RETALES
Crop Residue Incorporation in Rainfed Lowland Rice-Based Farming Systems	M.C.U. Toledo, A.B. Rala
Comparative Effects of Bio, Organic and Inorganic Fertilizer Application in Rainfed Lowland Rice-Based Farming Systems	M.C.U. Toledo, A.B. Rala
Dynamics of Pest Populations in Various Rice-Cropping Systems	M.C.U. Toledo, A.B. Rala
Crop Establishment of Legumes and Soil Characterization in Lowland Rainfed Rice Areas	M.C.U. Toledo, A.B. Rala
Utilization of Dikes for Upland Crops Production	M.C.U. Toledo, A.B. Rala
CROP ANIMAL-INTEGRATION IN UPLAND RICE FARMING SYSTEMS	C.C. SEVILLA
Rice and Cowpea/Cassava Production of After Rice as Sources of Protein and Energy in Swine Prod'n	IAS Researcher, M.C.U. Toledo
Improving the Performance of Native Chickens by Feeding Rice-by-Products, Cowpea, Cassava and Other Farm Products	E. Collido M.C.U. Toledo

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE PROJECT LEADER/S AND RESEARCHER/S

RICE ENGINEERING AND MECHANIZATION PROGRAM

I. PROGRAM FOR RICE MECHANIZATION PROGRAM (PRIME)

COMPREHENSIVE EVALUATION OF RICE MACHINERY AND EQUIPMENT

Concept/Working Paper on Postharvest, Irrigation & Drainage, and Production Equipment	L.S. Halos, R.A. de Guzman, F.M. Torrizo
Survey on Rice Mechanization Status in the Phil.	E.C. Gagelonia, A.D. Labrador
Brochures on Rice Machinery and Equipment	F.M. Torrizo
Directory of Agricultural Machine and Equipment Manufacturers in the Philippines	L.S. Halos

DEVELOPMENT AND IMPROVEMENT OF RICE MACHINERY AND EQUIPMENT

<i>Design and Development of Rice Machinery & Equipment</i>	
1. Upland Planter	F.M. Torrizo
2. Equip't for Wetland to Upland Conversion Sys.	V.C. Rodriguez
Development and Improvement of Deep Placement Fertilizer Applicator	F.M. Torrizo
Design and Development of Paddy Pre-dryer	L.S. Halos
Design and Development of Early Warning Device for Insect Control	F.M. Torrizo
Design & Dev't of Multi-purpose Floating Tiller	J.A. Damian
Design, Development and Testing of Gas Producer as fuel for Internal Combustion Engine (ICE)	
Preliminary Study on Rodent Traps	F.M. Torrizo
Design and Development of Rice Straw Paper Making Device	L.S. Halos, E.C. Gagelonia
<u>UPLB Drying Project</u>	
Technical and Socio-Economic Evaluation of an Integrated Postharvest Facilities	

RICE MACHINERY AND EQUIPMENT TECHNICAL VERIFICATION AND ASSESSMENT

Rice Production Machinery and Equipment	F.M. Torrizo
Rice Postproduction Machinery and Equipment	L.S. Halos

ON-FARM ADAPTATION OF RICE MACHINERY AND EQUIPMENT

On-Farm Adoption of Rice Seeder/Transplanter	E.C. Gagelonia, V.F. Muyet
On-Farm Adoption of Rice Reaper	E.C. Gagelonia, V.F. Muyet
On-Farm Adoption of Improved Village Rice Mill	L.S. Halos, V.F. Muyet
On-Farm Adoption of Mechanical Rice Dryers	L.S. Halos, V.F. Muyet

SPECIAL STUDIES ON RICE MACHINERY AND MECHANIZATION

Comparative Study on the Use of Different Land	F.M. Torrizo, E.B. Sibayan
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PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
Preparation Equipment Effect of Drying Techniques in the Viability of Palay Seeds	L.S. Halos
COLLABORATIVE PROJECTS ON RICE MECHANIZATION	
Coordinating CPRIME in the Philippines Regular Training Courses Promotion and Popularization of Agricultural Rice Machineries	F.H. Torrizo
II. PROGRAM FOR RICE IRRIGATION AND DRAINAGE (PRIDE)	
DEVELOPMENT AND MANAGEMENT OF SMALL WATER IMPOUNDING PROJECTS FOR RAINFED AND UPLAND AREAS	
Residual Moisture Utilization of Crops After Lowland Rice	R.A. de Guzman, E.B. Sibayan
Effects of tillage and irrigation amount on the Growth and Yield of Mungbean in a Previously Puddled Rice Soil	
Design and Development of Small Water Individual Farm Reservoir for Rainfed and Upland Areas	R.A. de Guzman, E.B. Sibayan
UNDERGROUND WATER SOURCING AND MANAGEMENT	
Underground Water Sourcing of Potential Rice Areas in the Philippines	R.A. de Guzman, E.B. Sibayan
Operation, Management, and Economics of Underground Water Utilization	R.A. de Guzman, E.B. Sibayan

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE PROJECT LEADER/S AND RESEARCHER/S

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RICE CHEMISTRY AND FOOD SCIENCE PROGRAM

RICE GRAIN QUALITY IMPROVEMENT RESEARCH IN SUPPORT OF THE VARIETAL IMPROVEMENT PROGRAM A.M. DEL MUNDO

Quality Evaluation of Traditional and New Rice Varieties L. Dimaranan, L. Togado, H. Malabanan, O. de Mesa

Sensory Evaluation of Traditional and New Rice Varieties using a Trained Laboratory Panel 1 RA to be hired

RICE FOOD PRODUCT DEVELOPMENT R.R. DEL ROSARIO

Improvement of Bihon Quality C.E. Em, E.T. Cerrudo
Development of Spaghetti Using Rice C.E. Em, E.T. Cerrudo

IMPROVEMENT OF DESIGN & TESTING OF PROCESSING EQUIPMENT FOR RICE & RICE-BASED FOOD PRODUCTS E.V. CARPIO

Survey & Documentation of Traditional Processing Equipment of Rice Products N. Aco, A. Gonzales, J. Robles

Evaluation, Testing & Improvement of Traditional Processing Equipment Part I: Flour Mill N. Aco, A. Gonzales, J. Robles

PUBLICATION OF PHILIPPINE POPULAR TRADITIONAL RICE FOOD PRODUCTS A.M. DEL MUNDO

MODERN RICE VARIETIES FOR TRADITIONAL FOOD PRODUCTS: FROM HOUSEHOLD TO ECONOMY A.M. DEL MUNDO

Characterization of Regional Popular/Traditional Rice Food Products
Standardization of Laboratory and Selected Regional Rice Food Products for Household & Industry
Production and Marketing of Rice Rice Food Products

IMPROVEMENT OF THE SHELF-LIFE OF TRADITIONAL RICE FOOD PRODUCTS R.R. DEL ROSARIO

Storage Improvement of the Traditional Dry-Based Food Products
Preservation and Storage of Intermediate-Moisture Products
Improvement of the Shelf-Life of High-Moisture Food Products

PACKAGING AND STORAGE EVALUATION OF PUFFED RICE E.V. CARPIO

INTERNATIONAL COLLABORATION WITH JAPAN AND THAILAND C.M. PAULE

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
ON THE USE OF BIOTECHNOLOGY ON THE IMPROVEMENT OF RICE GRAIN QUALITY	

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
DOCUMENTATION OF RICE-BASED LIVELIHOOD PROJECTS	V.PB. SAMONTE
Socio-economic Analyses of Rice-Based Food & Recycled Rice-Waste	C. Carlos, I. Tanzo
Socio-Economic Analyses of Rice-Fish Culture Units	C. Carlos, I. Tanzo

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
=====	
SOCIAL SCIENCE AND POLICY RESEARCH PROGRAM	
REGULAR MONITORING OF RICE FARMING HOUSEHOLD DURING THE DRY SEASON & WET SEASON	A.C. ROLA
Socio-Economic Survey/Analyses of Rice Farm Households	J. Quintana, I.M. Revilla, MZI, Azanza
Survey/Analyses of Rice Farmers' Conditions and Rice Production during Wet season	J. Quintana, I.M. Revilla, MZI, Azanza
Survey/Analyses of Rice Farmers' Conditions and Rice Production during Dry season	J. Quintana, I.M. Revilla, MZI, Azanza
SOCIAL TAXONOMY OF RICE FARMERS	V. PB. SAMONTE
Socio-Cultural Characteristics of Rice Farmer Clientele	G. Abrigo, N. Torreta, C. Carlos I. Tanzo, G. Redondo
Social Organization of Farm Units	G. Abrigo, N. Torreta, C. Carlos I. Tanzo, G. Redondo
Technological Levels of the Farms	G. Abrigo, N. Torreta, C. Carlos I. Tanzo, G. Redondo
Social Area Deliniation of the Farms	G. Abrigo, N. Torreta, C. Carlos I. Tanzo, G. Redondo
BIBLIOGRAPHY OF SOCIAL SCIENCE RESEARCH RELATED TO RICE AND HANDBOOK ON THE PHILIPPINE RICE STATISTICS	A.C. ROLA, V.PB. SAMONTE
Abstracts on Social Science Literature on Rice Farming	V.Pb. Samonte, L. Perez, G. Redondo
Inventory of Economic Researches on Rice	A.C. Rola, A. Quimbo, A. Casupang
Social Statistics on Rice Farming	V.Pb. Samonte, L. Perez, G. Redondo
Handbook on the Philippine Rice Statistics	A.C. Rola, A. Quimbo, A. Casupang
SOCIO-ECONOMIC EVALUATION OF VARIOUS RICE TECHNOLOGIES (COLLABORATIVE PROJECT WITH TECHNICAL TEAMS OF PHILRICE)	A.C. ROLA, V.PB. SAMONTE
Documentation of Current Crop-Animal Integration Practices of Farmers in Rainfed Lowland and Upland Rice-Based Farming Systems	I.M. Revilla, MZI, Azanza, G. Abrigo, N. Torreta, C. Carlos, I. Tanzo, G. Redondo
Socio-Economics of Integrated Pest Management in Lowland Rice-Based Cropping systems	- do -
Study on the Farmers of the Integrated Peoples Livelihood Project (TIPLP)	C. Carlos
BUFFER STOCK ANALYSIS	A.C. ROLA
Phase 1: A Regional Trend Analysis of Rice Production, Marketing & Consumption	R.A. Beronio, G. Bimbao
Phase 2: A Study of the Philippine Rice Buffer Stock Policy in a Regional Context	R.A. Beronio, G. Bimbao

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
=====	
TECHNOLOGY TRANSFER PROGRAM (ON-FARM)	
ON-FARM RICE VARIETY ADAPTATION TRIALS (OFVAT)	D.P. CALLO
A. OFVAT UNDER FAVORABLE RICE ENVIRONMENTS	A. GALVEZ
OFVAT of Promising RVIG's Very Early and Early Maturing Selections (VEM/EM)	F. Tagalog G. Estoy, R. Aseron, R. Salcedo,
OFVAT of Promising RVIG's Medium Early and Medium Maturing Selections (ME/MM)	R. Salcedo G. Estoy, R. Aseron, F. Tagalog
OFVAT for Promising RVIG's Upland Rice Selections Under Favorable Upland Conditions	R. Aseron G. Estoy, R. Salcedo, F. Tagalog
B. OFVAT UNDER UNFAVORABLE RICE ENVIRONMENTS	D.P. CALLO
OFVAT of Promising Salt-Tolerant Rice Selections	S. Salguero, N. Trillana, R. Aseron
OFVAT of Promising Upland Rice Selections Under Acid Upland Conditions	R. Salcedo C. Siota, R. Aseron, F. Tagalog
OFVAT of Promising Zinc Tolerant Rice Selections for Zinc-Deficient Areas	N. Trillana R. Aseron, R. Salcedo
OFVAT of Promising Rice Black Bug Tolerant Rice Selections/Line in Palawan	G. Estoy R. Aseron, I. Domingo
OFVAT of Promising Cold Tolerant Rice Selections in High Altitude Low Temperature Areas of the Mountain Provinces of Northern Luzon	C. Siota R. Aseron, E. Erguiza, V. Alvaran, E. Ilagan
ON-FARM FERTILIZERS & FERTILIZER MANAGEMENT ADAPTATION TRIALS FOR RICE (OFFMAT)	S. SALGUERO
A. FAVORABLE ENVIRONMENT IRRIGATED LOWLAND	N. TRILLANA
Nostoc commune as Biofertilizers for Lowland Rice Levels of Nitrogen and Potassium Fertilizer Adaptability Tests in Palawan	N. Trillana, R. Salcedo, R. Aseron R. Aseron, N. Trillana, C. Siota, G. Estoy, R. Salcedo
B. UNFAVORABLE ENVIRONMENT	C. SIOTA, J. LAPITAN
On-Farm Fertilizer Management Trials for Acid Upland Areas	F. Tagalog N. Trillana, R. Salcedo, R. Aseron
On-Farm Trial of Promising Fertilizer Management for Saline Soil Areas	S. Salguero, N. Trillana, R. Aseron, R. Salcedo, V. Alvaran, E. Ilagan
On-Farm Adaptation Trials of Promising Fertilizer Management for Lowland Temperature Areas	R. Salcedo, N. Trillana, C. Siota, G. Estoy, R. Aseron, F. Tagalog
ON-FARM VERIFICATION TRIAL OF PROMISING RICE AND RICE-BASED TECHNOLOGIES (OFVT-RRT)	D.P. CALLO
A. SEED PRODUCTION AND VERIFICATION TRIAL FOR SMALL FARMERS	C. SIOTA

PHILRICE RESEARCH ON-GOING PROJECTS AND STUDIES

PROJECT TITLE / STUDY TITLE	PROJECT LEADER/S AND RESEARCHER/S
Seed Production and Verification Trial of Rice Black Bug Tolerant Varieties in Palawan	G. Estoy, N. Trillana, C. Siota, R. Aseron, R. Salcedo, F. Tagalog, I. Domingo, E. Ilagan
Seed Production and Verification Trial of Cold Tolerant Selections for Small Farmers of the Cordilleras	C. Siota, R. Salcedo, R. Aseron, N. Trillana, V. Alvaran, E. Ilagan
B. CROP PROTECTION VERIFICATION TRIALS FOR IRRIGATED LOWLAND AREAS	J. SUMANGIL
On-farm Verification of IPM Technology for Golden Kuhol in Lowland Rice	G. Estoy, M. Rondon
QFV of Variety and Natural Enemy Interaction in Lowland Rice	G. Estoy, M. Rondon A. Burdeos, V. Alvaran
PILOT TESTING OF PROMISING RICE PRODUCTION TECHNOLOGIES	C. SIOTA
Pilot Testing of Promising Cropping Patterns for Acid Upland Areas of Zamboanga del Sur	C. Siota, R. Aseron, V. Alvaran
PHILRICE TTP DEMONSTRATION FARM	N. Trillana, A. Galvez, R. Tamayao

II.6 PHILRICE LINKAGES

PhilRice linkages may be divided into four categories. These are (a) the Central Experiment Station at Maligaya, Muñoz, Nueva Ecija; (b) five branch stations which will be under the administrative management and supervision of PhilRice; (c) regional research centers which have broad research activities and are the seat of PCARRD's consortia network; and (d) cooperating/testing stations which shall conduct verification, adoption, and demonstration activities.

Central Experiment Station. PhilRice at Maligaya shall conduct basic and applied researches, development studies, training and communication projects.

Branch Stations. Branch stations represent the five rice growing zones in the country. These stations shall conduct varietal improvement, planting and fertilizer management, and integrated pest management. Their involvement in other program thrusts will be minimal in the next five years but may increase with the addition of better facilities.

Regional Research Centers. Regional research centers shall conduct a broad range of research and development studies applicable to regional needs. These are state colleges and universities which have the capability to undertake research and technology transfer activities. They are also the hosts of PCARRD's research network. They do not include the Regional Crop Protection Centers (RCPCs) which undertake Integrated Pest Management in the regions.

Cooperating Stations. These stations shall conduct verification, adoption and pilot/demonstration projects.

PhilRice and IRRI. PhilRice and IRRI will actively collaborate on research, training and technology transfer activities on rice and rice-based farming systems. IRRI will also assist PhilRice in the massive training and re-training of Filipino rice scientists and extensionists to update them on the latest technologies on rice research and development. Likewise, IRRI will make available seed materials and expand the mailing list of publications to Filipino rice scientists and researchers. Its library facilities will also be made available to PhilRice scientists. These are all embodied in a memorandum of understanding between PhilRice and IRRI signed on 29 May 1987.

Moreover, IRRI will continue to implement its programs and maintain its leadership in rice research at the international level. However, its activities which are considered national in scope will be carried on in collaboration with and eventually transferred to PhilRice. PhilRice will then assume the leadership.

DETAILED DEFINITION OF FUNCTIONS AND ACTIVITIES BETWEEN
PHILRICE AND OTHER ORGANIZATION

1. PHILIPPINE RICE RESEARCH INSTITUTE (PHILRICE)

a. Functions:

- 1) To serve as the coordinating center of a national network of rice research stations located in the different agro-ecological regions of the country;
- 2) To plan and carry out research and development activities, specifically in the areas of varietal improvement, planting and fertilizer management, integrated pest management, farm mechanization and post harvest engineering, farming systems, training and technology transfer, and social science and policy research;
- 3) To verify, package and transfer economically viable technologies, giving emphasis on the local engineering aspects necessary for group endeavor;
- 4) To provide data base or policy formulation that will stimulate and sustain rice production, marketing and consumption;
- 5) To organize and develop strong training programs for rice scientist, research managers and extension workers;
- 6) To publish and disseminate research findings and recommendations.

b. Activities:

- 1) Varietal Improvement - improving and establishing yields of important agro-ecological types of rice through breeding and facilitating production of basic seeds from released varieties;
- 2) Planting and Fertilizer Management - improving and sustaining productivity of soils planted to rice with low-cost inputs and develop efficient planting methods;
- 3) Integrated Pest Management - developing and adapting pest management approaches that will increase and sustain rice yields but maintain the stability of the agro-ecosystems through location-specific recommendations;

- 4) Rice-Based Farming Systems - identifying and developing profitable cropping patterns suited to specific environments, and packaging low-cost management practices for promising cropping patterns, and crop/livestock/fish systems;
- 5) Rice Engineering - promoting farm mechanization, better uses of land and water resources and developing postharvest technologies for rice and rice by-products;
- 6) Rice Chemistry and Food Science - establishing grain qualities preferred by various consumers and maximising the use of rice and rice by-products;
- 7) Social Science and Policy Research - hastening and increasing the effectiveness of technology development and adoption process, strengthen institutional support for rice production, and improving policy environment of rice farmers;
- 8) Technology Transfer - adapting, verifying and packaging location-specific rice and rice-based technologies, training the rice industry's manpower, and communicating technologies from research centers to the farms.

2. THE INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI)

The following are IRRI's official position on the establishment of the Philippine Rice Research Institute.

- 1) Although the Philippines profited much from the presence of IRRI at Los Banos, the Philippines cannot and should not rely fully on IRRI to solve its national problems on rice. IRRI has global responsibilities. It is mandated to help solve problems of different rice-growing countries of the world particularly those of the Asian countries where yields are low.
- 2) IRRI is not in a position to support researches in all the agro-climatic regions of the Philippines. It therefore welcomes the creation of PhilRice.
- 3) The adaption and utilization of the technologies developed by IRRI depend to a large extent on the ability of the national research system (PhilRice for the Philippines) to make multilocation trials and determine the suitability of these technologies to different agroecological conditions of the country.
- 4) The breeding and development of different rice varieties suitable for upland and rainfed lowland conditions in the future will be undertaken by PhilRice with IRRI providing all the breeding materials and technical support.

Based on the document entitled, "IRRI Toward 2000 and Beyond" IRRI's strategy is stated as follows:

'To increase rice production efficiency and sustainability in all rice growing environments through interdisciplinary research and to ensure the relevance of IRRI research and the complementarity of international and national research efforts through close collaboration with national programs.'

Based on the same document, IRRI's position on priorities is stated as follows:

'We will orient IRRI's programs according to major rice ecosystems and to the farming communities and consumers dependent on them. Collaborative research on the less environmental enhancement and sustainability, efforts will be directed toward securing yield potentials in all ecosystems. Our research efforts will move upstream, to more strategic research in collaboration with other advance institutions.'

We are committed to helping strengthen national programs. Over time, we will shift from support of to collaboration with national programs and will increase the proportion of resources devoted to collaborative research and to sharing knowledge with all our partners in a mutually supportive global rice research system.

While IRRI continues to focus on Asia, fulfillment of our systemwide responsibilities will cover all regions. Reflecting IRRI's mandate and comparative advantage, we will contribute to research and to strengthening national programs in Africa, Latin America in the context of the activities of other IARCS and of donor support.'

Thus, based on the above, IRRI complements the work of the Philippine Rice Research Institute, in the Philippines. PhilRice appropriately fills in the gap between what IRRI cannot do for the Philippines.

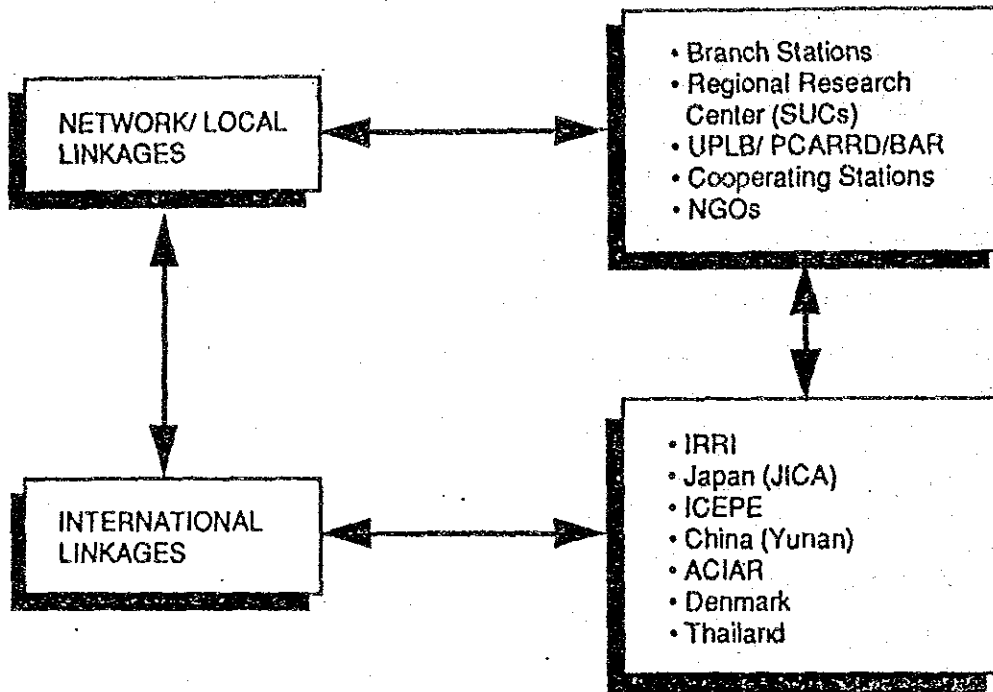
3. RELATIONSHIP OF PHILRICE WITH OTHER RESEARCH INSTITUTIONS

The relationship of PhilRice with other institutions involved in research is mandated in the charter creating the Institute. Thus, as far as rice research and development in the Philippines is concerned, PhilRice is the leader. This relationship, however, does not come automatically. They have to be formalized through memorandum of agreements(MOA). The MOA defines the actual roles of each institution in carrying out rice research and development activities. The research institutions in the Philippines being coordinated by

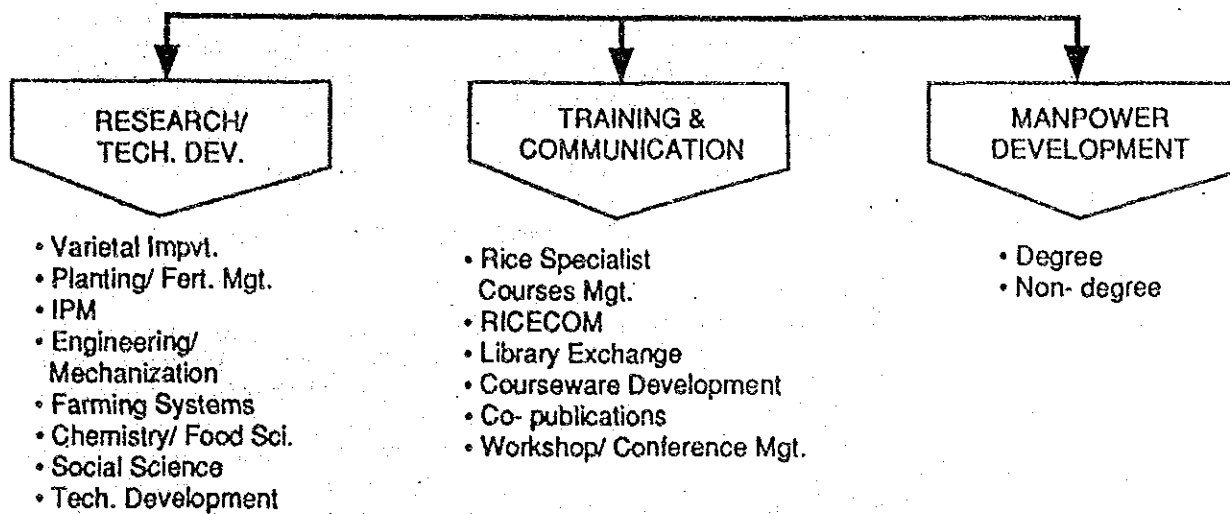
PhilRice for rice research and development can be classified in the following categories and each category's relationship with PhilRice is broadly defined as follows:

- 1) Branch Stations - Conduct varietal improvement, planting and fertilizer management, and integrated pest management. These are composed of the following:
 - a) Cagayan Valley Experiment Station in San Mateo, Isabela;
 - b) Bicol Experiment Station in San Agustin, Pili, Camarines Sur;
 - c) Visayas Rice Experiment Station in Hamungaya, Jaro, Iloilo City;
 - d) Mindanao Experiment Station in Midsayap, North Cotabato.
- 2) Regional Research Centers - conduct a broad range of research and development studies including technology transfer applicable to regional needs:
 - a) University of the Philippines at Los Banos;
 - b) Mariano Marcos State University in Batac, Ilocos Norte;
 - c) Benguet State University (for cold tolerant varieties only) in La Trinidad, Benguet;
 - d) Central Luzon State University in Munoz, Nueva Ecija;
 - e) Visayas State College of Agriculture in Baybay, Leyte;
 - f) Central Mindanao University in Musuan, Bukidnon;
 - g) University of Southern Mindanao in Kabacan, North Cotabato.
- 3) Cooperating Stations - conduct verification, adoption, and pilot demonstration projects. These are composed of experiments stations of the Department of Agriculture, located all over the country.

INSTITUTIONAL LINKAGE MECHANISMS



AREAS OF PHILRICE-IRRI COLLABORATION



II. 7. Present Circumstances and Plans Cooperated with Other Countries or International Organizations in Rice Research and Development.

In addition to the strong rice research and development collaboration between PhilRice and IRRI (as explained in Item II.6), PhilRice has also established linkages with the following international research institutions:

1. Dian-Type Hybrid Rice Research Center, Yunan, People's Republic of China

A Memorandum of Understanding between the Dian-Type Hybrid Rice Research Center and PhilRice was signed on October 31, 1989 for a collaborative research and training on hybrid rice. A workplan has been prepared for the initial implementation of the Memorandum of Understanding. Both parties have agreed to put major emphasis on the promotion of suitable hybrid rice technology, introduction/adaptability tests of Yunan rice varieties and other complementary technologies designed to improve and sustain soil fertility and proper utilization of rice by-products under the Philippine condition.

Last October 1989, three (3) rice scientists from Yunan, PROC visited and discussed with PhilRice scientists the various collaborative research and training projects to be undertaken. For 1990, PhilRice is invited to attend a four-month international training course on rice seed production to be held in Guangzhou, China.

2. International Centre of Physiology and Ecology (ICIPE), Kenya

The scientific and technical cooperation in research and training on insect physiology and ecology between PhilRice and ICIPE was formalized through the signing of the Memorandum of Understanding last January 20, 1988.

One of the major activities undertaken is the study on Trichogramma and other microbial agents as biological control for major rice pests in the Philippines. This has been done in coordination with the IRRI-based ICIPE staff. PhilRice has also been invited to participate in the ICIPE's 20th Annual Research Conference which will be held in Nairobi, Kenya on May 2-4, 1990.

3. Rockefeller Foundation

PhilRice is a recipient of a Rockefeller grant of US\$13,600 for the project on "International Collaboration with Japan and Thailand on the use of Biotechnology in the Improvement of Grain Quality".

In support to PhilRice Manpower Development Program, the Rockefeller Foundation (Agricultural Sciences Division) has recommended fellowship grants to some of PhilRice staff to pursue graduate studies in plant breeding and genetics in the United States.

At present, PhilRice has one staff who is pursuing his masteral program leading to Ph.D. degree in plant breeding at the Cambridge University, England.

4. Asian Institute of Technology (AIT), Bangkok, Thailand

PhilRice staff has availed of scholarship grants from AIT for graduate program in Engineering and Machinery. The AIT has also approved the participation of PhilRice senior staff in the deliberation of the design and improvement of rotary tiller proposed by PhilRice scholar.

5. International Crops Research Institute for Semi-Arid Tropics (ICRISAT), India

Research linkages with ICRISAT are on exchange of research information and as coordinator of adaptability tests of varieties of wheat and other cereals in the Philippines.

6. United States Agency for International Development (USAID) and the United States Information Service

PhilRice regularly receives information, bulletins, newsletters, and other reference materials on agriculture and related sciences.

7. Food and Agriculture Organizations of the United Nations (FAO)

PhilRice, through the approval of the Department of Agriculture, participates in the conferences, sessions and meetings relating to rice and other cereals.

8. International Institute of Tropical Agriculture (IITA)

One of our staff has been offered a consultancy work for two months to assist IITA in setting-up an instrumentation system for their test and evaluation of post harvest facilities.

PROPOSED PROJECT-TYPE TECHNICAL COOPERATION
FOR THE
PHILIPPINE RICE RESEARCH INSTITUTE (PHILRICE)

EXECUTIVE SUMMARY

1. The Philippine Rice Research Institute (PhilRice), an agency attached to the Department of Agriculture (DA), was established on November 5, 1985 to undertake rice research and development for the Filipino farmers. In recognition of the importance of PHilRice in national development, the government of Japan through the Japan International Cooperation Agency (JICA), extended in December 1989, a grant-aid in support of the Institute's infrastructure development program.
2. To further hasten its growth and development, Philrice requests a Project-Type Technical Cooperation in support of its research and development programs, in upgrading its manpower capability, and in the full utilization of the facilities under the grant-aid assistance. It is anticipated that a strong technical collaboration between the Philippines and Japan will significantly strengthen the exchange of technical information and in fostering cultural understanding between the two countries.
3. The components of the technical cooperation are the following:
 - a) Dispatch of Japanese experts who will collaborate with their Filipino counterparts on specific fields related to the program thrusts of PhilRice;
 - b) Training of Filipino scientists and technicians in Japan on specific scientific fields as well as in the utilization and maintenance of the various research equipment to be provided by JICA; and
 - c) Provision of equipment and materials needed by the Japanese experts and their Filipino counterparts in the pursuit of their research and development activities.

PROJECT : PROJECT-TYPE TECHNICAL COOPERATION
FOR THE PHILIPPINE RICE RESEARCH
INSTITUTE (PHILRICE)

PROJECT PROPONENT/
IMPLEMENTING AGENCY : PHILIPPINE RICE RESEARCH INSTITUTE
DEPARTMENT OF AGRICULTURE

LOCATION : MALIGAYA, MUNOZ, NUEVA ECIJA,
PHILIPPINES

PROPOSED SOURCE OF
ASSISTANCE : JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA), THE GOVERNMENT OF JAPAN

RATIONALE

The Philippine Rice Research Institute (PhilRice) was established by virtue of Executive Order No. 1061 on November 5, 1985 and amended by Executive Order No. 60 on November 7, 1986. It was attached to the Department of Agriculture by virtue of Executive Order No. 116 dated January 28, 1987. It is mandated to develop and implement a national rice research and development program to attain the following objectives:

1. Sustain and expand the gains made in rice production in the country;
2. Increase the income of small farmers;
3. Expand employment opportunities and stimulate economic growth in the rural areas through rice farming; and
4. Promote the general welfare of the people through self-sufficiency in rice production.

In order to realize its objectives, PhilRice is pursuing eight major program thrusts, as follows:

1. Varietal Improvement --- improving and stabilizing yields of important agro-ecological types of rice through conventional and non-conventional breeding techniques, and facilitate production of basic seeds from released or recommended varieties.
2. Planting and Fertilizer Management --- improving and sustaining productivity of soils planted to rice with low-cost inputs and develop efficient planting methods.

3. Integrated Pest Management --- developing and adopting pest management approaches that will improve and sustain rice yields and maintain the stability of the environment.
4. Rice-based Farming Systems --- identifying yield constraints and discovering opportunities in the improvement of rice farming systems, generating technologies for profitable cropping patterns suited to specific environments, and packaging low-cost management practices for promising cropping patterns and crop-livestock/fish systems.
5. Rice Engineering and Mechanization --- promoting farm mechanization, better uses of land and water resources, and developing postharvest technologies for rice and rice by-products.
6. Rice Chemistry and Food Science --- establishing grain qualities preferred by various consumers and maximizing the use of rice and rice by-products.
7. Social Science and Policy Research --- hastening and increasing the effectiveness of technology development and adoption process, strengthening institutional support for rice production, and improve policy environment of rice farmers.
8. Technology Transfer --- adapting, verifying, and packaging location-specific rice and rice-based technologies, train the rice industry's manpower, and communicating technologies from research centers to the farms.

PhilRice has its Central Experiment Station at Maligaya, Muñoz, Nueva Ecija. It technically supervises 4 branch stations, and coordinates the rice research and development work of 7 regional research centers and 20 cooperating/testing stations.

The infrastructure project of PhilRice under the Japan International Cooperation Agency (JICA) grant-aid program consists of research laboratories and administration/support services buildings, greenhouses, machinery and equipment, and other support facilities.

In support of the mandate of PhilRice and the infrastructure project, a second JICA assistance in the form of a Project-Type Technical Cooperation is being requested. The proposed project shall have the following components, namely:

- a) Dispatch of Japanese experts who will collaborate with their Filipino counterparts on specific fields related to the program thrusts of PhilRice;
- b) Training of Filipino scientists and technicians in Japan on specific scientific fields as well as in the utilization and maintenance of the various research equipment to be provided by JICA; and
- c) Provision of equipment and materials needed by the Japanese experts and their Filipino counterparts in the pursuit of their research and development activities.

GOAL

The goal of the Project is to support the attainment of the mandate of the PhilRice through technical collaboration among Japanese and Filipino scientists.

OBJECTIVES

- 1. To provide viable and acceptable technology on various fields related to the rice R & D thrusts; and
- 2. To improve the manpower capabilities of PhilRice in rice R & D

SCOPE

The Technical Cooperation shall cover the following areas of concern:

1. Varietal Improvement

- a) Development of high yielding rice cultivars (7 to 10 t/ha) with excellent grain quality, resistant to pests and diseases (wide resistance), and suitable maturity for specific agro-climatic conditions in the country.
- b) Development of rice cultivars suitable for elevated areas which are high yielding with excellent grain quality, resistant to shattering and to major pests and diseases, and responsive to low levels of fertilizer.

(Through conventional and non-conventional breeding methods)

2. Plant and Fertilizer Management

- a) Development of models that will predict responses of rice yields in different agro-climatic conditions with different levels of fertilizer application.
- b) Establishment of fertilizer recommendations for various agro-climatic conditions in rice growing areas.
- c) Evaluation of the transferability of fertilizer management technology in the various regions of the country.

3. Integrated Pest Management

- a) Utilization of entomophagous insects (e.g. Trichogramma, Cyrtorhinus, Telenomus and Tetrastichus) in controlling the major insect pests of rice.
- b) Monitoring of the effect of insecticide applications on beneficial insects based on economic threshold levels.
- c) Utilization of entomopathogens in controlling rice insect pests.
- d) Production of tungro virus antisera for serological tests in diagnosis and disease assessment, epidemiology, and tungro-resistance evaluation.

4. Post-harvest Mechanization

- a) Design, development and improvement of harvesting and drying machinery/implements.
- b) Determination of viable post-harvest systems to promote adoption of post-harvest technology and minimize post-harvest losses.

5. Learning System Design and Computer Programming

- a) Design and development of multi-user learning system packages in support of the national rice training program.
- b) Design and development of software packages for research and training programs.

6. Farming Systems Research

- a) Development of simulation models for predicting and determining the productivity and profitability of rainfed rice and other rice-based farming systems.
- b) Evaluation of various simulation models for application to specific locations.

7. Inter-regional Trade and Marketing Studies

- a) Models for inter-regional trade.
- b) Formulation of solutions for easing the regional marketing bottlenecks to crop diversification

EXPERTS

Japanese experts to be dispatched on a long term basis (5 years) shall be in the fields of:

1. Varietal improvement,
2. Planting and fertilizer management,
3. Integrated pest management,
4. Post-harvest mechanization, and
5. Learning systems design and programming.

The number of Japanese experts for 5-yr assignment, with their corresponding Filipino counterparts, is shown in Table 1-A.

The other experts will be dispatched on a short term basis for 1 year or less. The short term experts that are necessary in the attainment of the different areas of cooperation and the smooth implementation of the project are listed in Table 1-B.

Other short-term experts will be requested when necessity arises as mutually agreed upon by the Japanese team leader and the PhilRice Executive Director.

Experts shall be well-qualified in their respective fields, with at least 10 years working experience, and an adequate command of the English language. They will do their work in close collaboration with their Filipino counterparts.

Research activities of the experts and their counterparts shall be focused on current problems in rice production consistent with the policies of the Philippine government and projects approved by the PhilRice Board of Trustees. Each expert, in collaboration with the Filipino counterpart, shall draw up a work plan that will serve as a guide in the entire duration of the project.

The experts may be assigned either at the Central Experiment Station in Muñoz, Nueva Ecija, or PhilRice Los Baños, or at the branch stations and regional research centers, based on mutual arrangement by PhilRice and JICA management.

MANPOWER DEVELOPMENT

Filipino scientists and staff serving as counterparts to the Japanese experts will be sent to Japan for non-degree training on various disciplines of rice science and technology, and to observe the operation and maintenance of various equipment and instruments provided by the JICA grant on infrastructure development. Qualified staff members will also be sent for post graduate studies in various fields as may be deemed necessary.

The areas of training proposed for the counterpart staff is shown in Table 2.

All this shall be done as may be mutually agreed upon between the PhilRice Executive Director and Japanese Team Leader.

LIST OF EQUIPMENT

1. Equipment, machinery, instruments, tools and spare parts necessary for the implementation of the 7 areas of technical cooperation.
2. Books and journals relevant to the R&D thrust of PhilRice.
3. Vehicles for experts.

Table 1. Japanese experts and their Filipino counterparts for the JICA Project-Type Technical Cooperation.

Area of Expertise	Japanese	Filipino	Priority
<u>A. For 5-yr assignment</u>			
1. Plant Breeder	1	2	1
2. Plant and Fertilizer Management	1	2	2
3. Biological Control & Crop Protection Management	1	2	3
4. Post-harvest Mechanization and Instrumentation	1	2	4
5. Learning System Design	1	2	5
Sub-Total	5	10	
<u>B. For 1 yr or less assignment</u>			
1. Tissue Culture	2	2	1
2. Climate & Plant Type	2	2	2
3. RTV Anti-sera Production (Serologists)	1	1	3
4. Entomopathogen	2	2	4
5. Computer Systems Design & Programming	3	4	5
6. Crop Modeling (& Biometrician)	2	4	6
7. Inter-regional Trade (& Econometrician)	1	2	7
Sub-Total	13	17	
Grand Total	18	27	

Table 2. Areas of training for Filipino counterparts of Japanese experts under the JICA Project-Type Technical Cooperation.

Field of Study	Slots
1. Rice Breeding	2
2. Rice Biotechnology	2
3. Crop Protection and Pest Mgt.	2
4. Soil Physical Mgt.	2
5. Post-harvest Mechanization	2
6. Educational Video Technology	2
8. Computer Management & Systems Design	2
10. Crop Modeling	2
11. Econometrics	2
12. other trainings (to be determined later)	5
Total	25

PROPOSED PROJECT-TYPE TECHNICAL COOPERATION
FOR THE
PHILIPPINE RICE RESEARCH INSTITUTE (PHILRICE)

JUSTIFICATION FOR EXPERTS

1. Type of Expert: Plant Breeder

Background of Project

The Philippine has made substantial progress in increasing rice production. However, at present, the yields are leveling off at about 5 t/ha. Furthermore, divergent ecosystems have also become a constraint in increasing rice yields. The tungro epidemic in different parts of the country, the outbreak of black bug in Palawan and different soil problems are also being encountered in rice varietal improvement. Thus, many lines that have performed well in some locations cannot be recommended because of poor performance in other locations.

Due to the forgoing, PhilRice is now embarking on developing varieties that are not only high yielding, with good grain quality, and resistant to pest and diseases but are also suited to specific agro-climatic conditions in the country. Although, IRRI has made tremendous advances in rice varietal improvement, the development of location-specific varieties for the Philippines is beyond its mandate. PhilRice therefore, aims to fill this gap by coming-up with regional varietal recommendations.

Under this scheme, the PhilRice central experiment station will produce different breeding materials through conventional and non-conventional breeding methods. The materials will then be sent to different PhilRice branches and cooperating stations where selection for location-specific lines/varieties will be conducted. PhilRice plant breeders will supervise regional activities.

Scope of Cooperation

- a) Development of rice cultivars that are high yielding (7 to 10 t/ha) with excellent grain quality, resistant to pests and diseases (wide resistance), and suitable maturity for specific agro-climatic conditions in the country.
- b) Development of rice cultivars suitable for elevated areas which are high yielding with excellent grain quality, resistant to shattering, and to major pests and diseases, and responsive to low levels of fertilizer.

2. Type of Expert: Plant and Fertilizer Management Expert

Background of Project

Rice yield responses vary with different agro-climatic conditions. As such, current national recommendations for fertilizer management have proved to be inadequate for most areas. In view of this situation, the scope of transferability of proven fertilizer management technology should be determined.

A solution to this problem is the development of models for predicting appropriate requirements for different agro-climatic conditions. To come-up with such models, it will be necessary to have detailed characterization of the environment and the responses of each rice cultivars in each agro-ecosystem.

Scope of Cooperation

- a) Development of models that will predict responses of rice yields in different agro-climatic conditions with specific levels of fertilizer application.
- b) Establishment of fertilizer recommendations for different specific agro-climatic conditions in rice growing environments.
- c) Evaluation of the transferability of fertilizer management technology to similar environments.

3. Type of Expert: Biological Control and Crop Protection Management Expert

Background of the Project:

The use of biological control agents against insect pests has recently been given considerable attention as a critical component of integrated pest management in the Philippines.

The International Rice Research Institute and some universities have already identified various biological agents of rice insect pests. Similarly, ecological studies such as population dynamics, behavior, seasonal occurrence, biology and host range of the biological agents are now being studied. However, the utilization of these biological control agents (i.e. Trichogramma as egg parasitoids of rice stemborers, Entomophthora, Metavibizium, and Beauveria) as integral control measures for IPM under farmers' fields, especially the effect of pesticides and other environmental factors needs more study.

Scope of Cooperation

- a) Utilization of entomophagous insects (e.g. Trichogramma, Cyrtorhinus, Telenomus and Tetrastichus) for the control of major insect pests of rice.
- b) Monitoring of the effects of insecticide applications on beneficial insects based on the economic threshold levels.

4. Type of Expert: Post-harvest Mechanization and Instrumentation Expert

Background of the Project:

During the late sixties and early seventies several R & D institutions embarked on farm mechanization and post-harvest technology. As a consequence, several machines and processes were developed in laboratories. Notably IRRI, UPLB and other colleges and universities came up with their prototypes and designs.

However, even up to the present these developed technologies have not been fully adopted by end users, especially farmers, processors and entrepreneurs. Generally, farmers and processors are still using the traditional tools, equipment and techniques.

Thus, post-harvest engineering is still far from satisfactory. Labor related problems and high post-harvest losses are still occurring. Resource utilization are not optimized. The cost of production is still high and rice farmers are still suffering from low income.

Scope of Cooperation:

- a) Design, development and improvement of harvesting and drying machinery/implements for small farm operations.
- b) Determination of viable post-harvest systems and schemes to promote adoption of postharvest technology and minimize post-harvest losses.

5. Type of Expert: Learning System Design Expert

Background of the Project:

The advent of electronic communication media has revolutionized approaches in instructional technology. In the Philippines, video is increasingly becoming popular not only as an entertainment but as an educational medium as well. Moreover, other electronic media such as soundslides and audio cassettes are gaining popularity especially in teaching rice technology to farmers and extensionists. IRRI has pioneered in the development of audio tutorials on rice technology through the soundslide medium. However, it has not yet explored educational video quite extensively as a component of its instructional technology.

To standardize training content and methodology for each level of training client, PhilRice needs to develop learning systems design essentially involving the systematic organization of training content (e.g. rice technology) including the strategies of teaching these to the learner. The training and communication equipment to be provided by the grant-aid project will be maximized if these will be utilized in the development of educational communication materials which will form part of the various learning system packages supporting PhilRice training programs across the national rice R & D network.

Scope of Cooperation

- a) Design and development of multi-user learning system packages in support of the national rice training program.
- b) Design and development of educational communication media as integral components of the learning system packages.

6. Type of Expert: Crop Modeling Expert

Background of Project:

Essentially, higher crop productivity could readily be attained if the crop, its biophysical environment and related factors like technical competence, socio-political and economic support services are always compatible and predictable. In reality such a harmonious and balanced system seldom exists. However, a very promising approach has been developed in progressive countries to predict the outcome of events based on experimental data.

Models have been developed and found to be very useful in the integration of valuable information in predicting performance of crop productivity. These models are valuable in integrating research results, directing research efforts and providing basis for sound decision making for policy makers and end-users as well.

Scope of Cooperation:

- a) Development of simulation models for predicting and determining the productivity and profitability of rainfed rice and other rice-based farming systems.
- b) Evaluation of various simulation models for application to specific locations.

7. Type of Expert: Econometrician

Background of the Project:

Rice trade studies conducted in the Philippines are numerous. However, most of them deal with the intra-regional or in country trade and marketing as their focal point. In fact, agricultural economists suggest the setting-up of a reference market (central market) as a way of minimizing price variations as changes in central market rice prices are transmitted to other local markets. Nevertheless, this has not been supported by empirical evidence.

In the inter-regional trade study, the thrust will not only be product flow but also on the institutional and infrastructural factors affecting intra- and inter-regional rice trade in the Philippines. The major outputs of this area of technical collaboration will be the development of simulation models indicating product flows, demand and supply functions, post-harvest and infrastructure facilities, reference markets, and buffer stock requirements.

Scope of Cooperation:

- a) Development of models for inter-regional trade
- b) Formulation of solutions for easing regional marketing bottlenecks to crop diversification.

フィルライスとIRRIとの覚書

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE PHILIPPINE RICE RESEARCH INSTITUTE
DEPARTMENT OF AGRICULTURE, REPUBLIC OF THE PHILIPPINES
AND
THE INTERNATIONAL RICE RESEARCH INSTITUTE
FOR SCIENTIFIC AND TECHNICAL COLLABORATION IN
RESEARCH AND TRAINING ON RICE AND RICE-BASED FARMING SYSTEMS

KNOW ALL MEN BY THESE PRESENTS:

This Memorandum of Understanding is entered into and executed this Twenty-ninth Day of May, 1987 at the Department of Agriculture, Diliman, Quezon City, Philippines, by and between:

The PHILIPPINE RICE RESEARCH INSTITUTE, of the Department of Agriculture, Republic of the Philippines, with its principal office at College, Laguna, Philippines, represented in this Memorandum of Understanding by its Director, Dr. Santiago R. Obien, and hereinafter referred to as PHILRICE;

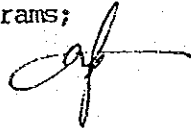
- and -

The INTERNATIONAL RICE RESEARCH INSTITUTE, with its principal office at College, Laguna, Philippines, represented in this Memorandum of Understanding by its Director-General, Dr. M. S. Swaminathan, and hereinafter referred to as IRRI.

WITNESSETH:

WHEREAS, PHILRICE, was established to develop a national rice research and development program so as to sustain and further improve the gains already made in rice production, improve the income and economic condition of small rice farmers, expand employment opportunities in the rural areas, and ultimately promote the general welfare of the Filipino people through self-sufficiency in rice production;

WHEREAS, IRRI, a non-profit international organization supported by the Consultative Group on International Agricultural Research, has likewise its primary goal of increasing the quantity and quality of rice produced through research and training on all aspects of rice including rice-based farming systems and through scientific and technical collaboration with national programs;



Ans. L. P. D.

Sheldin

N. C. Smith

NOW THEREFORE, PHILRICE and IRRI, inspired by their common objectives to promote and accelerate research on rice and rice-based farming systems and strengthen national and regional rice research and production programs, wish to enter into an agreement on research and training collaboration on rice and rice-based farming systems. The two parties have reached a mutual understanding as set forth in the following paragraphs:

ARTICLE I

1. The collaboration on rice research and training will be decided on the basis of joint planning between PHILRICE and IRRI. Annual work plans will be developed to supplement this agreement.

2. It is mutually agreed that IRRI's collaboration with PHILRICE will generally aim at enhancing the national capability in research and training on rice and rice-based farming systems in the Philippines. High priority will be given to the seven program thrusts of PHILRICE, namely: 1) varietal improvement, 2) planting and fertilizer management, 3) integrated pest management, 4) rice farming systems, 5) farm mechanization and post-harvest engineering, 6) technology transfer, and 7) social science and policy.

3. The scale of collaborative research and training activities between the PHILRICE and IRRI will be determined by a joint evaluation, from time to time, of PHILRICE's needs and IRRI's capacity for undertaking collaborative activities, and by the level of financial resources available for this purpose.

ARTICLE II

Subject to personnel and budgetary limitations, and as mutually agreed upon, IRRI will:

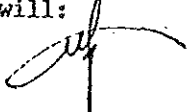
1. Assist PHILRICE scientists and researchers to receive degree and non-degree training;

2. Invite PHILRICE scientists and researchers, to attend international research conferences, symposia and workshops, and to join in monitoring international network activities of interest to them;

3. Make available seed materials, publications, and library facilities to PHILRICE scientists and researchers in support of the national rice research and development program.

ARTICLE III

In order to facilitate the implementation of collaborative activities with IRRI, PHILRICE, in accordance with the existing laws and regulations in force in the Philippines, will:



1. Initiate annual review and planning meetings at which IRRI scientists will be invited to participate.

2. Designate scientists who will work on specific collaborative projects with IRRI.

3. Coordinate and facilitate participation of Filipino scientists in conferences, workshops, training programs, and collaborative research.

ARTICLE IV

Both parties agree that:

1. Results of collaborative research will be published in the public interest as mutually agreed upon;

2. Although in most cases the results of collaborative research will be published jointly by scientists working for the two organizations, each party may publish the results separately if so determined after mutual consultation in specific cases. Either party publishing any research findings will give credit to the other party's contributions but would at the same time be entirely responsible for the conclusions and interpretations reported;

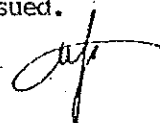
3. Breeding materials and germplasm will be freely exchanged between PHILRICE and IRRI with due recognition for the sources of the seed material. Either party may use such materials but will give full credit to its source of origin.

ARTICLE V

1. The parties to this Memorandum of Understanding may, by mutual consent, add, modify, amend or delete any words, phrases, sentences, or articles in this Memorandum of Understanding;

2. The Memorandum of Understanding shall be effective on the date of signature by both parties;

3. Either party may at any time give notice to the other party of its intention to terminate the validity of the Memorandum of Understanding, in which case the Memorandum of Understanding will terminate six months after such notice has been issued.



Handwritten notes:
D. S. Ramirez
G. S. ...
C. S. ...

IN WITNESS WHEREOF, the parties have affixed their signatures this Twenty-ninth Day of May 1987 at the Department of Agriculture, Diliman, Quezon City, Philippines.

FOR THE PHILIPPINE RICE RESEARCH INSTITUTE

FOR THE INTERNATIONAL RICE RESEARCH INSTITUTE

By:

Santiago R. Obien

DR. SANTIAGO R. OBIEN
Director

By:

M. S. Swaminathan

DR. M. S. SWAMINATHAN
Director-General

SIGNED IN THE PRESENCE OF:

Carlos G. Dominguez

CARLOS G. DOMINGUEZ
SECRETARY
DEPT. OF AGRICULTURE

Cristina C. David

DR. CRISTINA C. DAVID

REPUBLIC OF THE PHILIPPINES)
MUNICIPALITY OF LOS BAÑOS) S.S.
PROVINCE OF LAGUNA)

ACKNOWLEDGMENT

BEFORE ME, a Notary Public for and in the Province of Laguna, personally appeared Dr. M. S. Swaminathan with Res. Cert. No. 1468569F issued at Los Baños, Laguna on Feb. 13, 1987 and Dr. Santiago R. Obien with Res. Cert. No. 1411780-D issued on Jan. 8, 1987 at Batac, Ilocos Norte, both known to me and to me known to be the same persons who executed the foregoing instrument and they acknowledged to me that the same is their own free act and voluntary deed and the free act and voluntary deed of the Institutes they represent.

This instrument is a Memorandum of Understanding consisting of four (4) pages including this page wherein this acknowledgment is written duly signed by the parties and their instrumental witnesses on each and every page hereof.

WITNESS MY HAND AND SEAL this 3rd day of June 1987.

Manuel S. Bartolome

MANUEL S. BARTOLOME

Notary Public

Until December 31, 1988

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