ASSESSMENT OF SOIL PRODUCTIVITY DECLINE (1996-1999)

Manuel Sta. Ana, A. Latoza
and J. Bura

Research Objective

To assess soil erosion induced in productivity.

Brief Methodology

The study was conducted at National Soil and Water Research and Development Center, Cuyambay, Tanay, Rizal.

Productivity decline of soil caused by soil erosion was assessed in relation to the chemical and physical degradation of soil.

Four (4) erosion plots measuring 4 x 8 meters with an average slope of 10% was used in the study. Assessment was made by means of soil surface removal (desurfacing) at a depth of nil(0), 2.5 cms., 5 cms. and 7.5 cms (Photo 4). to simulate four degrees of erosion. After simulating degrees of erosion, each plot was cropped or planted to rice and peanut for the first cropping (wet) followed by peanut for the next cropping season (dry). Cropping was done without fertilization or application of any amendment to effectively determine the erosion induced loss in productivity. Photo # 4, 5 & 6.

Research Status

The next experiment is newly established and still waiting for the crop maturity.

Photo 4. Mr. Reyes' group removing soil surface at a certain depth to simulate degree of erosion

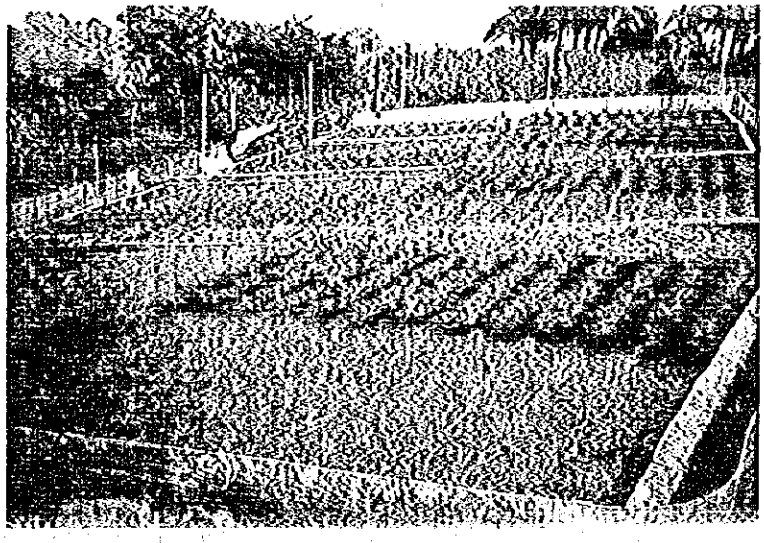


Photo 5. General view of four(4) erosion plots with different simulated degrees of erosion by desurfacing(at a depth of 0, 2.5cm, 5cm & 7.5cm)

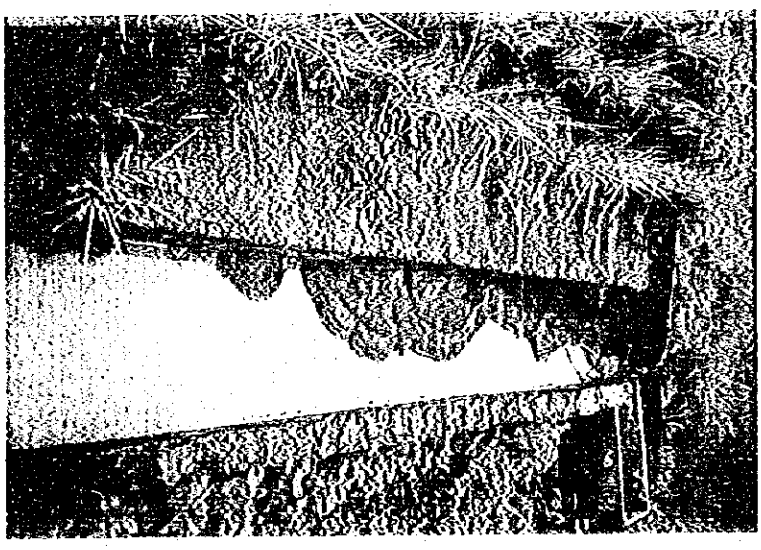


Photo 6. Sediment trap

ASSESSMENT OF ABILITY OF VARIOUS TROPICAL PLANTS ON EROSION CONTROL AND FERTILITY (1995-1998) *

A. Castillo and I. B. Ramat

Research Objective

To evaluate the agronomic performance of the different Leucaena accessions.

Brief Methology

The experiment was conducted at National Soil and Water Research and Development Center, Cuyambay, Tanay, Rizal.

Twenty four (24) Leucaena species and hybrids were tested in the study. It was laid-out in a randomized complete block design (RCBD) with two (2) replications.

Strips with one (1) meter at 3-5 meters interval depending on topography were established and then cultivated thoroughly in 15 May 1997. Lime was applied evenly on the designated areas. Twelve (12) seedlings of each variety were planted as treatment plots using the middle eight (8) plants as sample.

Research Highlights

Plant heights was generally higher on the limed treatment as compared to the unlimed treatment (Table 1). This may be attributed to the increased ion soil pH from 3.9 to 4.9 after liming.

Growth of stem was likewise poor in all species both in the limed and unlimed plots. The result is generally identical to that of the plant height (Table 1).

* *BAI/BSWM Project*

Table 1. Plant height (cm) and stem diameter (mm) at 12 MAT of 24 Leucaena species and 3 hybrids grown in Tanay, Rizal

SPECIES/SUBSPECIES AND ACCESSION NUMBER	Height +L	Height -L	Diameter +L	Diameter -L
L. collinsi 52/88	95.88	49.81	7.80	4.00
L. collinsii zacapana 56/88	109.40	69.01	7.80	3.59
L. diversifolia diversifolia 82/92	93.65	42.81	7.91	4.17
L. diversifolia 4/91	100.58	72.27	7.43	6.30
L. diversifolia diversifolia 83/92	120.81	45.50	9.46	4.25
L. diversifolia stenocarpa 53/88	112.73	72.77	9.18	5.94
L. esculenta esculenta 17/87	56.50	41.41	5.90	4.19
L. esculenta paniculata 52/87	116.08	80.80	11.67	7.80
L. esculenta paniculata 72/92	88.14	41.59	8.67	3.92
L. involucrata 87/92	31.29	31.75	3.59	2.95
L. lanceolata lanceolata 43/85	53.57	38.20	6.19	3.20
L. macrophylla nelsonii 47/85	133.50	37.25	11.10	3.00
L. pulverulenta 83/87	38.77	20.00	4.45	1.50
L. salvadorensis 36/89	86.40	48.33	7.14	5.00
L. shannonii magnifica 19/81	108.83	48.51	10.25	4.17
L. trichodes 61/88	72.17	56.42	6.17	5.13
L. leococephala K636	55.00	46.00	9.00	6.58
L. leococephala Cunningham UQ8	41.17	30.46	5.42	4.42
L. leuc x L. pall KX2F5 hybrid	59.25	46.29	7.50	5.51
L. leuc x L. div KX3 hybrid UQ5	44.20	59.08	6.40	6.95
L. leuc x pall KX2F1 hybrid	159.20	59.08	11.79	6.25
L. diversifolia K156 UQ1	141.25	43.60	10.81	4.20
L. leococephala Alabang (Peru)	59.25	37.31	8.67	5.92
L. pallida CSIRO composite	121.17	-	9.75	-
LSD (P<0.05)	69.21	NS	4.19	NS

Note: + L = Limit plots
- L = Unlimited plots
All values are means of replications

Table 1. Plant height (cm) and stem diameter (mm) at 12 MAT of 24 Leucaena species and hybrids grown in Tanay, Rizal

SPECIES/SUB-SPECIES AND ACCESSION NUMBER	Height +L	Height -L	Diameter +L	Diameter -L
L. collinsi 52/88	95.88	49.81	7.80	4.00
L. collinsii zacapana 56 88	109.40	69.01	7.80	3.59
L. diversifolia diversifolia 82/92	93.65	42.81	7.91	4.17
L. diversifolia 4/91	100.58	72.27	7.43	6.30
L. diversifolia diversifolia 83/92	120.81	45.50	9.46	4.25
L. diversifolia stenocarpa 53/88	112.73	72.77	9.18	5.91
L. esculenta esculenta 17/87	56.50	41.41	5.90	4.19
L. esculenta paniculata 52/87	116.08	80.80	11.67	7.80
L. esculenta paniculata 72/92	88.11	41.59	8.67	3.92
L. involucrata 87/92	31.29	31.75	3.59	2.95
L. lanceolata lanceolata 43 85	53.57	38.20	6.19	3.20
L. macrophylla nelsonii 17/85	133.50	37.25	11.10	3.00
L. pulverulenta 83/87	38.77	20.00	4.45	1.50
L. salvadorensis 36/89	86.40	48.33	7.11	5.00
L. shannonii magnifica 19/84	108.83	48.51	10.25	4.17
L. trichodes 61/88	72.17	56.42	6.17	5.13
L. leococephala K636	55.00	46.00	9.00	6.58
L. leococephala Cunningham UQ8	41.17	30.46	5.42	4.42
L. leuc x L. pall KX2F5 hybrid	59.25	46.29	7.50	5.51
L. leuc x L. div KX3 hybrid UQ5	41.20	59.08	6.40	6.95
L. leuc x pall KX2F1 hybrid	159.20	59.08	11.79	6.25
L. diversifolia K156 UQ1	141.25	43.60	10.84	4.20
L. leococephala Alabang (Peru)	59.25	37.31	8.67	5.92
L. pallida CSIRO composite	121.17	-	9.75	-
LSD (P<0.05)	69.21	NS	4.19	NS

Note: + L. = Limit plots
- L. = Unlimited plots
All values are means of replications

IMPROVEMENT OF EROSION CONTROL FARMING PRACTICES (1996-1999)

This study attempts to evaluate the effectiveness of different conservation management to improve soil, control erosion and rehabilitate degraded lands. Practices and farming systems being evaluated include tillage and plant residue management, alley or intercropping and sub-soiling/deep cultivation.

"On-going" research studies undertaken under this project are:

Improvement of Erosion Control Practices Under Various Land Uses on Sloping Land: A case study

R.P. Creencia, Z. Balading, R. Creencia
and A. San Andres

Research Objectives

To develop strategies on soil conservation measures acceptable to hilly land farmers.

Brief Methodology

The experiment was conducted at National Soil and Water Research and Development Center, Cuyambay, Tanay, Rizal. Eight (8) erosion plots measuring 100 sq.m. each were set-up in conducting the study. These were:

EP#1	Tea (Photo 7) with mulch (32% slope)
EP#2	Cash crop (Soybean in between Gliricidia (Photo 8) hedgerows, (32% slope)
EP#3	Cash crop (Soybean) in between Rose (Photo 9), Black pepper and Grape hedgerows (32% slope)
EP#4	Asparagus (Photo 10) at 39% slope
EP#5	Cash crop (Soybean) in between Pineapple (Photo 13) as vegetative barrier (23% slope)

IMPROVEMENT OF EROSION CONTROL FARMING PRACTICES (1996-1999)

This study attempts to evaluate the effectiveness of different conservation management to improve soil, control erosion and rehabilitate degraded lands. Practices and farming systems being evaluated include tillage and plant residue management, alley or intercropping and sub-soiling/deep cultivation.

"On-going" research studies undertaken under this project are:

Improvement of Erosion Control Practices Under Various Land-Uses on Sloping Land: A case study

R.P. Creencia, Z. Balading, R. Creencia
and A. San Andres

Research Objectives

To develop strategies on soil conservation measures acceptable to hilly land farmers.

Brief Methodology

The experiment was conducted at National Soil and Water Research and Development Center, Cuyambay, Tanay, Rizal. Eight (8) erosion plots measuring 100 sq.m. each were set-up in conducting the study. These were:

EP#1	Tea (Photo 7) with mulch (32% slope)
EP#2	Cash crop (Soybean in between Gliricidia (Photo 8) hedgerows, (32% slope)
EP#3	Cash crop (Soybean) in between Rose (Photo 9), Black pepper and Grape hedgerows (32% slope)
EP#4	Asparagus (Photo 10) at 39% slope
EP#5	Cash crop (Soybean) in between Pineapple (Photo 13) as vegetative barrier (23% slope)

EP#6	Citrus with Evergreen (Photo 11) cover crops (39% slope)
EP#7	Citrus stylo santhes (Photo 12) cover crops (38% slope)
EP#8	Cash crop (Soybean) in between Guava (Photo 14) hedgerows (21% slope)

Conservation techniques such as alley cropping, mulching, contour farming and sub-soiling were used in each plot to come up and/or develop conservation practices acceptable to hilly land farmers.

Research Status

The experiment is newly established and data gathered is still in process.

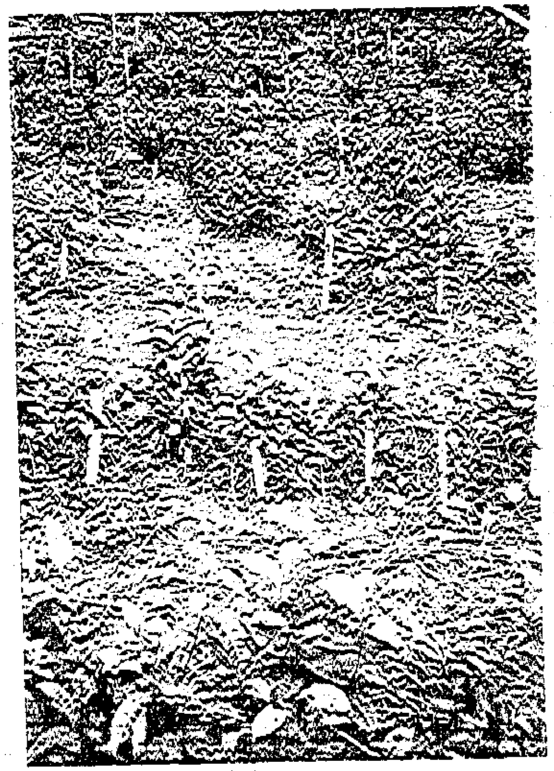


Photo 7. Tea plants with mulch planted along the contour

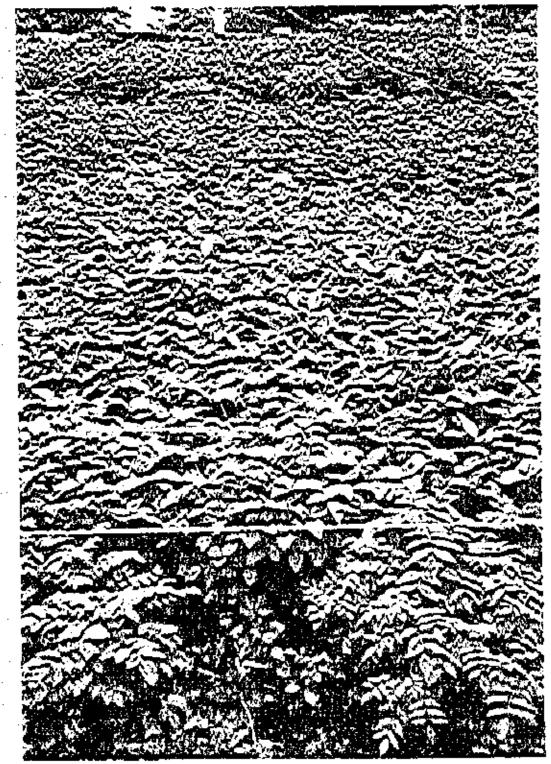


Photo 8. Soybeans at flowering stage planted between Gliricidia hedgerows


Photo 9. Soybeans at flowering stage planted between Rose hedgerows

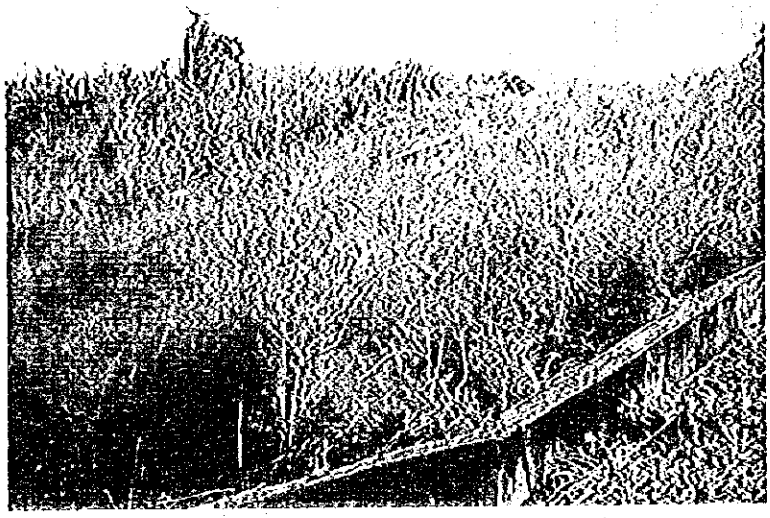


Photo 10. Asparagus planted at maximum level of management(ie. sub-soiling)

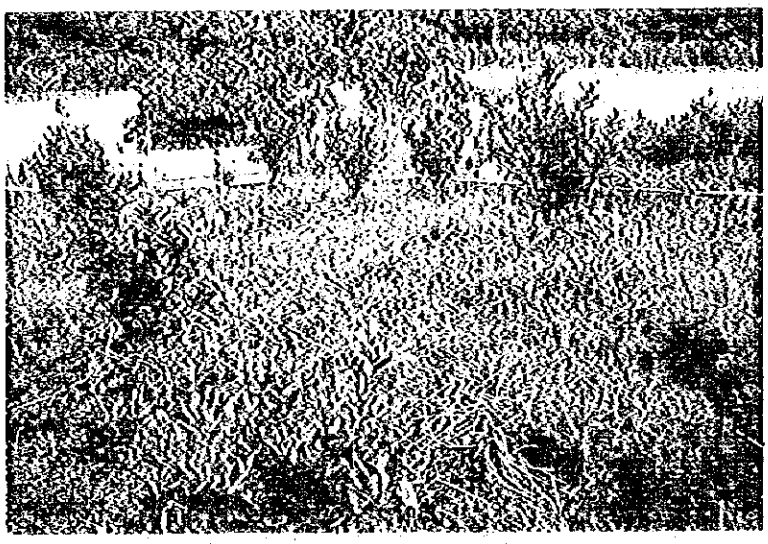


Photo 11. Citrus with Stylo santhes covercrops

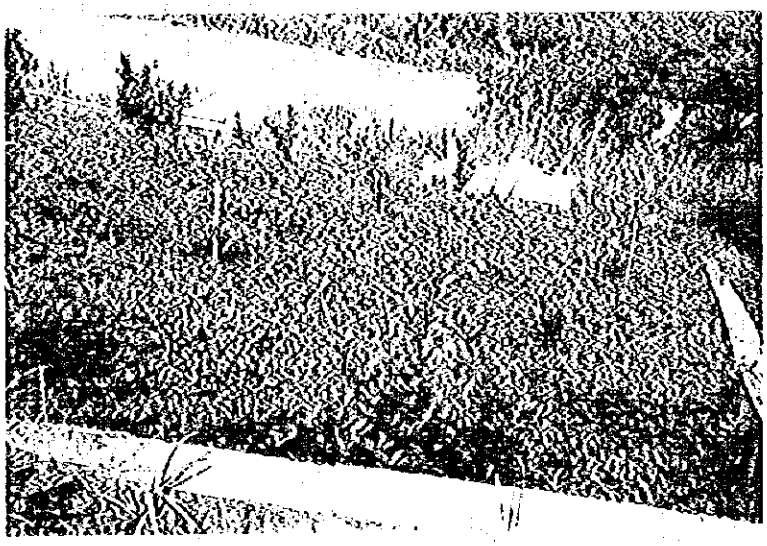


Photo 12. Citrus with Wedelia trilobata covercrop

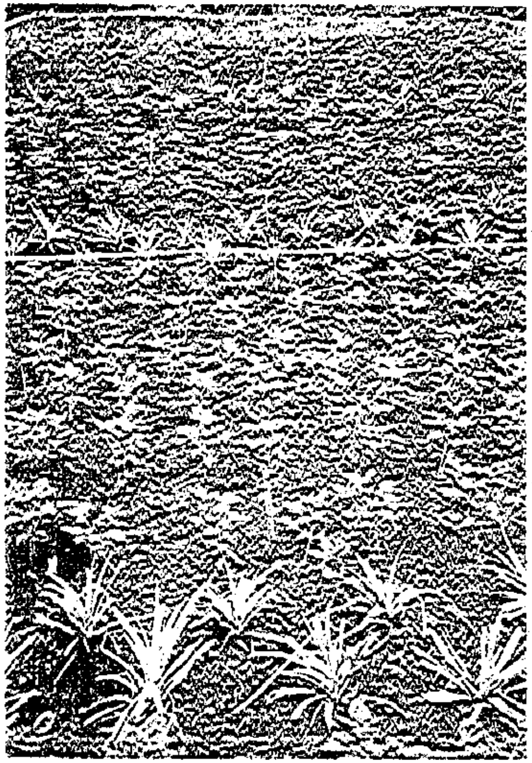


Photo 13. Soybeans at early vegetative stage planted between pineapple vegetative barriers

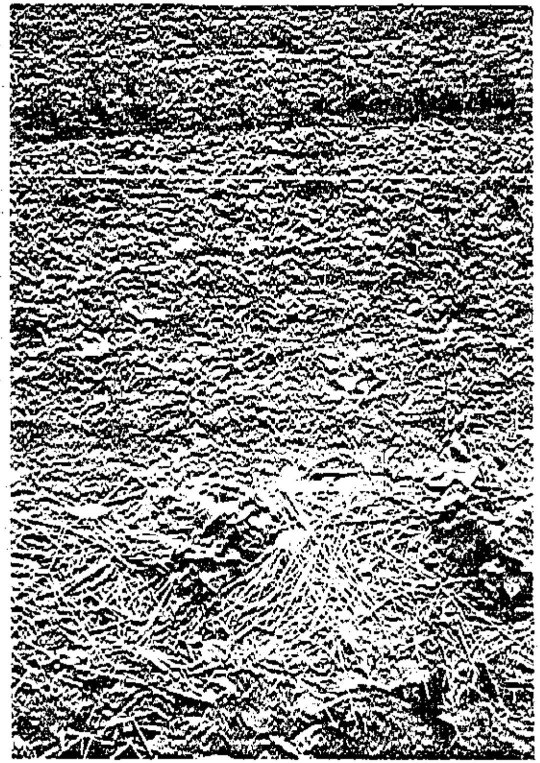


Photo 14. Soybeans at early vegetative stage planted between S. potato & Guava hedgerows

Photo 15. Mr. Creencia collecting sediment sample

Effect of Tillage and Plant Residue Management on Soil Properties, Crop Yield and Erosion

J.B. Rojales, P. Montalla and F. Agustin

Research Objective

To develop soil conservation management for sustainable agricultural production in marginal hilly land without causing degradation.

Brief Methodology

T1 - NTO (Minimum tillage without plant residue)
T2 - NTMR (Minimum tillage mulch with plant residue)
T3 - XTO (Maximum tillage without plant residue or the farmers practice)
T4 - XTMR (Maximum tillage mulch with plant residue)
T5 - XTIR (Maximum tillage and incorporation of plant residue)
T6 - Bare plot (No vegetation)

Due to insufficient fund, only six (6) run-off plots were established and was assigned to replication #3 to monitor soil loss (Photo 15). Each erosion plots was equipped with tipping bucket and mechanical counts to monitor water run-off. Plants stubbles of last year crops were returned either by mulch or by incorporation in each assigned treatment plots. After returning plant residues, all plots were planted to upland rice (C-22 var.) as test crop for first cropping season.

Monitoring soil loss and run-off commenced after planting and will be continued throughout the cropping season.(See Photo 16)

Research Status

Due to unfavorable weather condition, only one (1) cropping was done, thus hampering the collection of necessary data needed in the study. However, soil loss data were gathered for the said cropping season and is in the process of consolidation. This data will be further evaluated and included in this year result.

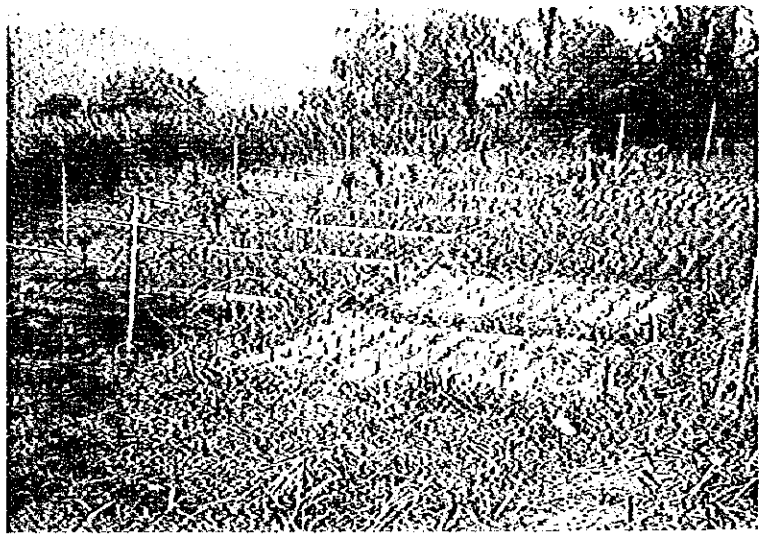


Photo 16. General view of Tillage and Plant Residue Management experiment 25 days after planting test crop(upland rice)

Photo 17. Mr. Rojales and Mr. Semana collecting sediment and monitoring run-off water

Evaluation of Some High Value Crops/ Tree Crops as Contour Hedgerows and/or Vegetative Barriers in Controlling Soil Erosion

E.R. Reyes, F. Ventigan, M. Marges
and L. Semana

Research Objective

To assess the economics of using hedgerows or vegetative barriers in controlling erosion.

Brief Methodology

The experiment was conducted at National Soil and Water Research and Development Center, Cuyambay, Tanay, Rizal.

Seven (7) erosion plots, each measuring 2 m x 2 m with an average slope of 30% were used in evaluating and assessing the economics of using hedgerows or vegetative barriers in controlling erosion. Five (5) crops/tree crops namely: black pepper (Photo 18), asparagus, guava, pineapple and pigeon pea were used as barriers and intercropped with upland rice. The said treatments were then com pare to farmers practice (without barriers). One bare plot was also established to evaluate its effectiveness in controlling erosion as well as profitability of such systems. (See Photo 19 & 20).

Research Status

The experiment is newly established and still on-going.

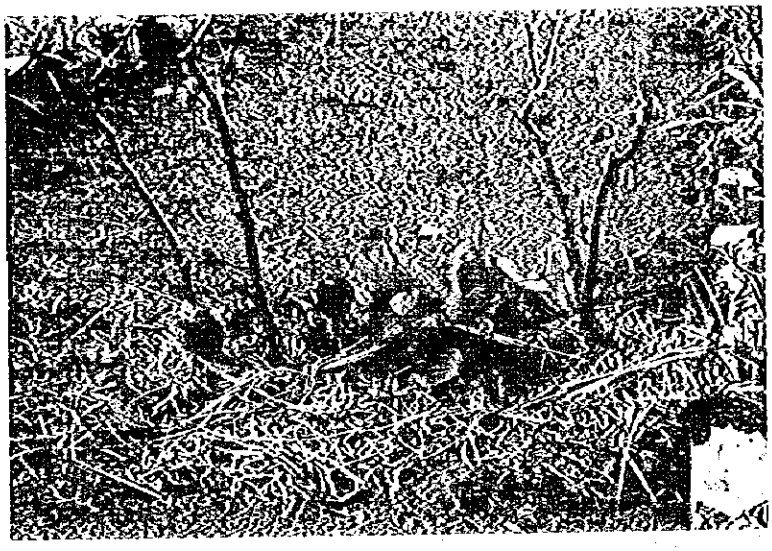


Photo 18. A feature of black pepper and gliricidia hedgerows

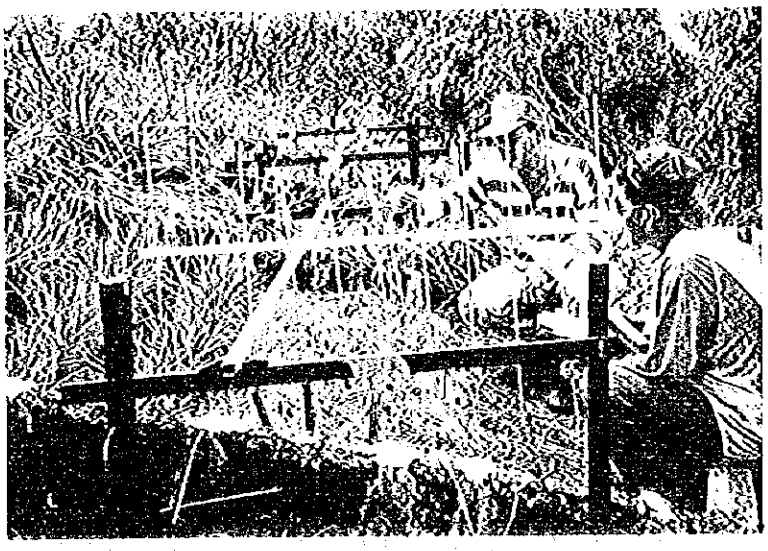


Photo 19. Mr. Reyes and Mr. Rojales measuring erosion depths

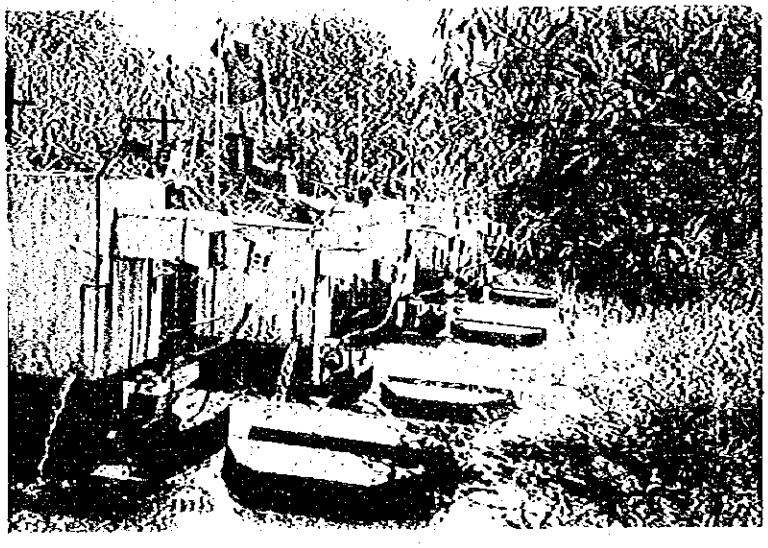


Photo 20. Mr. Creencia and Mr. San Juan collecting sediment sample

Soil Loss Quantification and Economics of High Density Planting of Mango: A case study

A.B. Gesite, P.M. Montalla, F.C. Agustin
and J. Bura

Research Objective

To develop innovative approaches for soil conservation management and evaluation of the extent of soil erosion, crop performance and the economics of mango enterprise in a marginal watershed by adopting maximum level of management.

Brief Methodology

The experiment was conducted at National Soil and Water Research and Development Center, Cuyambay, Tanay, Rizal.

This study will be provided by drip irrigation system while farmers practice will be rainfall dependent.

In the high density planting, holes will be dug at 0.7 meter depth by 0.4 meter wide by 16 meters long where fertilizers, lime and compost materials will be incorporated Photo 21). The distance of planting is 2 by 4 meters and will be planted along the contour lines (Photo 22 & 23). Farmers practice will be planted at distance of 8 by 8 meters and holes will be dug at 8 inches in diameter and 12 inches deep where fertilizer will be applied base on the recommendation by the laboratory analysis.

Research Status

The experiment is newly established.

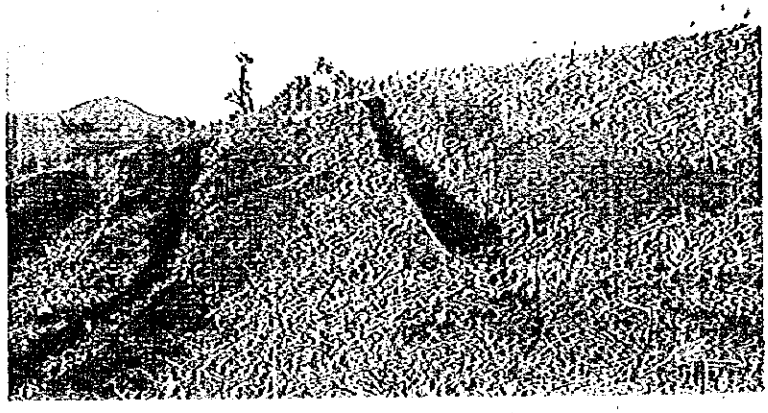


Photo 21. General view of experimental field showing deep trenches to be planted with mango

Photo 22. Engr. Montaña and Mr. Agustin doing ocular observation on their experiment

Photo 23. Researchers planting sweet potato between mango strips

Photo 24. General view of Soil Consevation Demo-Farm at Romero water shed

Highlights of the Improvement of Erosion Control Farming Practices

Farming Practices and Soil Loss

Exp. Site: *Tanay NSWRDC* Exp. Plot Area: *8-100 sq.m.* Slope: *10-39%*

Farming Practices (Soil Management)	Soil Loss t/ha/yr	Soil Loss mm/yr	Evaluation *
Bare (no crop, no grass)	50-300	5-30	Severe
Annual Crops (Upland rice, Soybean, Peanut, etc.) without hedgerow	40 - 50	4 - 5	Moderate
Annual Crop with Hedgerow (Hedgerow crop: Gliricidia, Pigeon pea, Pineapple, etc.)	10 - 20	1 - 2	Slight
Annual Crop with Deep Plowed (40 cm W, 40-70 cm D) Hedgerow (Hedgerow crop: Asparagus, Guava, Black pepper, Rose, Grape, Mango, etc.)	2 - 5	0.2 - 0.5	None
Annual Crop with Mulching (air dried grass 5 t/ha, x 2 times/yr)	0	0	None
Tree Crop (Tea, Citrus, etc.) with Mulching (air dried grass 5 t/ha, x 2 times/yr)	0	0	None
Asparagus with Deep Plowing (40 cm W, 40 cm D) and Mulching (air dried grass 5 t/ha/yr)	0	0	None
Fruit tree (Citrus. Mango, etc) with cover plant (Stailo santes, hamata, Wedelia spp, etc.)	5 - 30	0.5 - 3	Slight

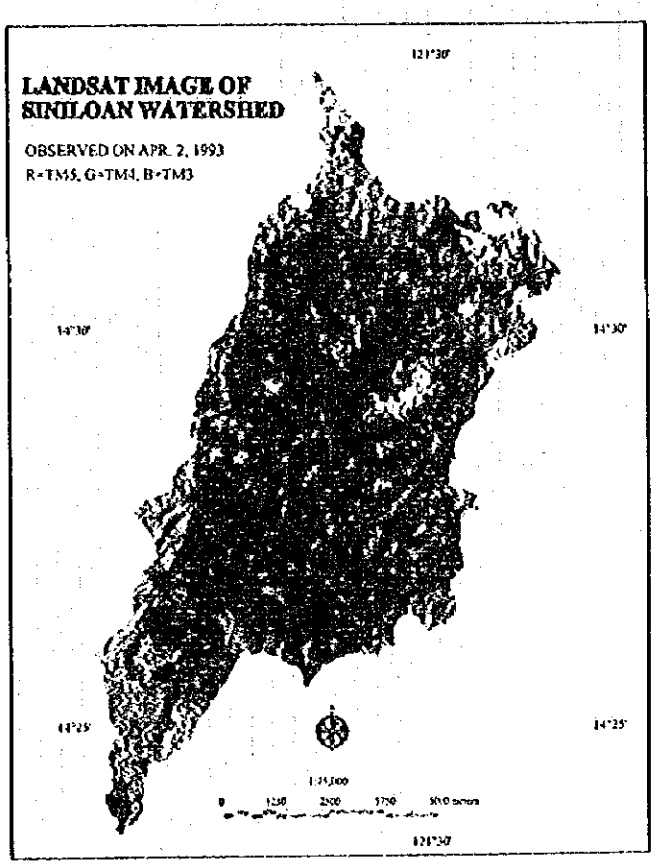
* Evaluation; None : less than 10 t/ha/yr ..... less than 1 mm/yr
Slight : 10-30 t/ha/yr ..... 1-3 mm/yr
Moderate : 30-100 t/ha/yr ..... 3-10 mm/yr
Severe : more than 100 t/ha/yr ... more than 10mm/yr

LIST OF PHOTOGRAPHS

Photo 1. Soil Conservation Group installing rainfall simulator.
Photo 2. Dr. Banzai and Engr. Montalla testing rainfall simulator and disdrometer.
Photo 3. JICA Experts and Filipino counterparts doing soil investigation and collecting soil sample for Cessium analysis.
Photo 4. M. Reyes' group removing soil surface at a certain depth to simulate degree of erosion.
Photo 5. General view of four (4) erosion plots with different simulated degrees of erosion by desurfacing (at a depth of 0, 2.5 cm, 5 cm and 7.5 cm.
Photo 6. Sediment trap.
Photo 7. Tea plants with mulch planted along the contour.
Photo 8. Soybeans at flowering stage planted between Glinicidia hedgerows.
Photo 9. Soybeans at flowering stage planted between Rose hedgerows.
Photo 10. Asparagus planted at maximum levelof management (ie. sub-soiling).
Photo 11. Citrus with Stylo santes cover crops.
Photo 12. Citrus with Wedelia trilobata cover crop.
Photo 13. Soybeans at early vegetative stage planted between pineapple vegetative barriers.
Photo 14. Soybeans at early vegetative stage planted between Sweet potato & Guava hedgerows.
Photo 15. Mr. Creencia collecting sediment sample.
Photo 16. General view of Tillage and Plant Residue Management experiment 25 days after planting test crop (Upland rice).
Photo 17. Mr. Rojales and Mr. Semana collecting sediment and monitoring runoff water.
Photo 18. A feature of Black pepper & Glinicidia hedgerows.
Photo 19. Mr. Reyes and Mr. Rojales measuring erosion depths.
Photo 20. Mr. Creencia and Mr. San Juan collecting sediment sample.
Photo 21. General view of experimental field showing deep trenches to be planted with Mango.
Photo 22. Engr. Montalla and Mr. Agustin doing ocular observation on their experiment.
Photo 23. Researchers planting Sweet potato between mango strips.
Photo 24. General view of Soil Conservation Demo-Farm at Romero watershed.

Soil Productivity Capability Classification Service

STATUS OF ACCOMPLISHMENT



SRDC-JICA Technical Cooperation
Phase II

Overview of Accomplishment in Soil Productivity Capability Classification Service

Establishing a comprehensive soil resource evaluation system is urgent and important issue for sustaining staple food production and environment conservation. Soil Productivity Capability Classification, SPCC, which is one of three major activity components of Soil Research and Development Center Project Phase II (SRDC II), aims to develop a standard soil resource evaluation method for Philippines soils.

There are three main subjects set in Tentative Schedule of Implementation (TSI): 1 Development of method for basic land classification, 2 Development method for soil productivity capability classification, 3 Development method for soil management in classified units. Item 1 consists of setting up natural factors to prepare basic land classification map. Item 2 consists of setting up SPCC criteria and class to prepare SPCC map. Item 3 consists of conducting field experiment and preparing soil management guidelines. Our supposed output is namely maps and manuals. However, to prepare quality and useful map requires a capability to process vast soil data and systematic data interpretation. We summarize our past activities in chronological order as follows.

1995 accomplishment review

In 1995, the first year of SRDC II, we organized Core Group (CG) and Subject Matter Specialist (SMS) Task Force (Annex 1). The former drafted a plan for research activity along the TSI, the latter conducted field survey, data collection and processing, and map preparation. Both CG and SMSs participated in the periodical technical meetings and seminars, which aimed at setting up natural factors zoning, criteria, and class. SPCC Service member presented a lot of technical papers in the technical seminars and meetings. With enthusiastic technical support of JICA short-term expert, Dr. Yoshitake Kato, we selected Kapatalan-Siniloan micro-watershed as a pilot area to apply SPCC system. We started conducting detailed soil survey, zoning natural factors in the area. We prepared a conceptual framework, initial criteria and class, which were edited and published in SPCC Note, our technical bulletin. The published contents appeared in SPCC Note were enlisted in annex 5.

Annex 2 shows the summarized accomplishments in 1995.

1996 accomplishment review

We submitted the first proposed SPCC system in early 1996. SMSs in ALMED and Soil Survey Division continued collecting field data and preparing several base maps in coordination with the Soil Conservation Service (SC) in the said micro-watershed. To enhance our capability to recognize soil fertility, we conducted two training courses, primary mineral analysis and clay mineral analysis, which consisted of laboratory training and lecture. Relating to mineralogical assessment

into pedological interpretation. 1995 (JFY) SPCC JICA Trainee, Mr. Virgilio Castaneda, studied soil micromorphology in National Institute of Agro Environmental Sciences (NIAES), Tsukuba, Japan. The summarized technical paper was submitted in SPCC Note. Mr. Castaneda also experienced paddy soil survey with his trainer, Dr. Tadao Hamazaki of NIAES. They compiled a soil survey manual for paddy soils. It was published as SRDC Technical Information Series No. 1.

Initial rating of soil mapping units (SMUs) in the said micro-watershed was also released. To respond to strong demand for lager map scale coverage of SPCC, we set regional scale pilot area in Region II. GIS in Soil Survey Division processed regional soil map of Region II. Since geological data was not available in the said micro-watershed, we conducted several surface geology surveys. The result of this survey was helpful to identify parent material of soils during JICA short term expert, Dr. Tadao Hamazaki, conducted detailed soil survey with SMSs in Soil Survey Division. Dr. Hamazaki also helped us to modify SPCC system. The definitions of criteria and class, the method of computation were compiled into SRDC Technical Information Series No.3.

Two other SRDC Technical Information Series were published, which titled " Preparation of Soil Monolith" as No.2, and " Urban Soil Quality Monitoring" as No.4, respectively.

Annex 3 shows the summarized accomplishments in 1996.

1997 status of accomplishment

As of September 1997, SPCC accomplishment is summarized as follows.

The TSI items, 1 and 2, almost had been implemented as scheduled. We sent two (2) SMSs to study in Japan this year. Ms. Cleotilde Nicolas from ALMED studied in Agricultural Landscape Laboratory of NIAES, Ms. Cristy Perlado from ALMED studied in Environmental Land Evaluation Laboratory in NIAES, respectively. Ms. Nicolas studied the digital map preparation procedure and the operation process of database in NIAES. Ms. Perlado studied the satellite image analysis and preparation of individual natural factor maps. Their contributions will be presented at SRDC during the Joint Coordinating Committee Meeting.

The TSI item 3 determines the reliability and accuracy of SPCC evaluation for crop production and soil management. The restriction of conducting field experiment in our service alone was recognized at the early stage of the project, since our task force was mainly from Soil Survey Division and ALMED whose expertise are conducting soil survey and land evaluation, respectively. There was an inter-service agreement that Soils and Fertilizer (SF) and SC Services would provide the results of crop experiment study in Tanay and Bulacan Research Stations, and in the micro-watershed. We would also provide SPCC evaluation results to prepare the soil management guidelines as a compilation of SRDC II. The results of crop experiment study are being collected. The SPCC evaluation with those results would be processed within this year using the yet to be installed SPCC data base management system.

Aside from those experiment study sources, we decided to collaborate with Xavier University, which requested BSWM to give technical support to apply SPCC system into their project site in Valencia, Bukidonon. We focused on applying SPCC evaluation for paddy soils there. Maps preparation and soil sample analysis is on going. We also started interacting with BSWM that launched the Balanced Fertilization Strategy (BSF) program under Guintong Ani by Department of Agriculture to expand our opportunity to blush up SPCC system. Mr. Rodelio Carating, member of SPCC CG from ALMED, coordinated on site technical seminar in Davao City, Region XI.

Annex 4 shows the summarized accomplishments as of September 1997.

Annex 1 List of Core Group and Subject Matter Specialist

Unit	Name	Assignment /Division
Core Group	Dr. Nora Inciong	Chairman/Laboratory
	Dr. Jose Rondal	Vice Chairman/ALMED
	Mr. Wilfredo Cabezon	Member/ALMED
	Mr. Nestor Ticzon	Member/ALMED
	Ms. Edna Samar	Member/ALMED
	Mr. Ignidio Lapis	Member/Research
	Mr. Rodelio Carating	Member/ALMED
	Dr. Toshiaki Ohkura	JICA Expert for SPCC
Subject Matter Specialist	Ms. Magdalene Favis	Soil Survey
	Mr. Querubin Navero	Soil Survey
	Mr. Virgilio Castaneda	Soil Survey
	Mr. Mario Vinluan	Soil Survey
	Mr. Leo Retamar	Soil Survey
	Mr. Nestor Merjilla	Soil Survey
	Mr. Oscar Costero	Soil Survey
	Ms. Cleotilde Nicolas	ALMED
	Ms. Cristy Perlado	ALMED
	Ms. Natividad Salonga	ALMED
	Ms. Josefina Diloy	ALMED
	Ms. Julieta Espineli	ALMED
	Mr. Bertolio Arellano	ALMED
	Mr. Emiliano Sibolboro	ALMED
	Ms. Cecille Orlanes	Laboratory

Annex 2 Summary of SPCC Accomplishment in 1995

Activity	Contents	Status, Type of Circulation	Referred TSI No.
Reviewing existing soil evaluation system.	In-house seminar presentation of FAO, USBR, and Japanese soil evaluation systems.	Completed, abstract was distributed to the participants.	2- 1
Setting up a pilot micro- watershed for applying SPCC system.	Conducting field survey, identifying the boundary of the proposed micro-watershed.	Completed, field survey report was submitted.	1- 1,2,3,4,5 2- 1,2,3,4
Establishing conceptual framework of SPCC system.	Reviewing of proposed framework prepared by core group, and introducing computer assisted expert system by JICA short-term expert.	Completed, the proposed and introduced conceptual frameworks were reported in SPCC Note.	1- 5 2- 1,2,3
Setting up evaluation criteria of SPCC system.	Feedback application of proposed criteria in the pilot micro-watershed.	On-going, initial evaluation result and feedback discussions were reported in SPCC Note. First approximation was also reported in SPCC Note.	1- 1,2,3,4,5 2- 1,2,3,4 3- 2
Field data collection of the pilot micro-watershed.	Detailed soil survey, socio-economic data collection, agro-climatic data collection.	Detailed soil survey, socio-economic data collection completed in 1996. Agro-met. Data collection is on going. Detailed soil map and socio-economic analyzing report were submitted.	1- 1,2,3,4,5 2- 4
Technical seminar for upgrading SPCC data interpretation.	Primary mineral analysis for interpretation of potential soil productivity. Laboratory analysis and lecture.	Lecture note was reported in SPCC Note.	2- 1
Editing and publishing SPCC Note. *	Technical papers, articles, activity report, book review, and announcement.	Published monthly in 1995.	3- 2

*: See annex 5

Technical seminar held at Lecture Room in SRDC

Annex 3 Summary of SPCC Accomplishment In 1996

Activity	Contents	Status, Type of Circulation	Referred TSI No.
Setting up SPCC evaluation units.	Core Group discussions, In-house seminar to establish the evaluation components.	Completed, First Approximation was published in SPCC Note.	2- 1, 2
Preparation of base maps in the pilot area.	Conducting field survey to collect soils, geology, climate, and landuse data.	Partly completed, digitalization is on going. Using aerial Photo is not materialized.	1- 1,2,3,4,5 2- 4
Setting up Regional scale pilot area and base map preparation.	Selecting a pilot Region to apply SPCC evaluation and to Prepare Regional scale SPCC Map.	Completed, Region II was selected as a pilot Region. Base maps were prepared.	1- 1,2,3,4,5 2- 4
Conducting Clay Mineralogy Training Courses.	Laboratory training and lecture to enhance the capability of soil data interpretation.	Completed, the future – course will be conducted on-demand base.	2- 1,2 3- 2
Staff training in Japan.	Dispatching SPCC staff for training in Japan to accelerate the project progress. Mr. Virgilio Castaneda was dispatched NIAES to study soil micromorphology.	Completed, the technical paper was submitted in SPCC Note. Paddy soil survey manual was published.	1- 4 2- 1
Developing a detailed soil survey technique and fine tuning SPCC system.	Detailed soil mapping with field survey and feedback evaluation in the micro watershed with short term JICA expert, Dr. Tadao Hamazaki.	Completed, the detailed soil map was prepared and SPCC system was modified as 2nd approximation.	1-4 2-1,2
Publishing SRDC Technical Information Series	Technical manual of paddy soil survey, preparation of soil monolith, urban soil quality monitoring, and SPCC evaluation procedure.	Completed compilation of the four titles. Waiting for official printing by BSWM.	1- 4 2- 2,2,3 3- 2
Editing and publishing SPCC Note. *	Technical papers, articles, activity report, book review, and announcement.	Published quarterly in 1996.	3- 2

*: See annex 5.

Annex 4 Summary of SPCC Accomplishment in 1997

Activity	Contents	Status, Type of Circulation	Referred TSI No.
Assessing of selected soils with SPCC.	SPCC evaluation of selected SMU in the pilot area.	On going, manual calculation has been done. The evaluation results were reported in SPCC Note.	2- 3,4
Formatting datasheet for SPCC evaluation with computer assisted database.	Setting up the evaluation components and database format.	Defining the evaluation components was completed. Initial design of datasheet format was completed.	1-5 2- 1,2,3,4 3-1
Collecting data from field experiments of main crops.	Assessing the soil productivity capability of selected SMU in main crop production.	Scheduled to start the field experiment data collection in the 3rd quarter.	3-1,2
Enhancing the digital map preparation and database operation capability.	On-the-job training in NIAES, Tsukuba, Japan. Ms. Cleotilde Nicolas studied the procedure of digital map processing and database operation with Dr. Yoshitake Kato and his staff.	Completed, base map information of the pilot province, Isabera, Region II, was digitized and printed out. The abstract of the technical report will be presented at the Joint Coordination Committee Meeting.	1- 1,2,3,4,5 2- 1,2,3,4 3-2
Enhancing the operation capability of GIS for SPCC evaluation of the pilot micro watershed.	On-the-job training in NIAES, Tsukuba, Japan. Ms. Cristy Perlado studied the GIS usage to analyze soil information and to prepare digitized base map with Dr. Toshiaki Imagawa and his staff.	Completed, GIS processed base maps and soil map were prepared. The abstract of the technical report will be presented at the Joint Coordination Committee Meeting.	1- 1,2,3,4,5 2- 1,2,3,4
Editing and publishing SPCC Note. *	Technical papers, articles, activity report, book review, and announcement.	Published quarterly in 1997.	3- 2

* See Annex 5.

Annex 5 List of Contents of SPCC Note

Volume, Number /Year	Title	Authors/Editors
1,1/May, 1995	• Notes from the Editor. • Fertility Capability Classification – Modified Japanese Evaluation System. - Comments by Dr. Masanori Mitsuchi - Comments by Dr. Jose Rondall • Scientist Profile: Dr. Toshiaki Ohkura - JICA Expert on SPCC.	• R. Carating • R. Carating • R. Carating
1,2/June, 1995	• Notes from the Editor • Soil Survey Report Review: The Soils of Laguna Part 2. • Historical Review on the Establishment of Soil Productivity Capability Classification in Japan - Chapter 1. • Reflection of a Booth Host in the Agri-Aqua Fair • More Comments on the Modified Japanese Fertility Capability Classification. • Notes on Soil Data Interpretation.	• R. Carating • R. Carating. • T. Ohkura • R. Carating • E. Samar, T. Ohkura, and R. Carating • R. Carating
1,3/July , 1995	• Notes from the Editor • The USBR Land Classification System • Soil Biological Research Opportunities in SPCC • Notes on Soil Data Interpretation • Comparison of Criteria for Soil Fertility Capability Classification of Three Systems. • Reactions on Phase II Workshop. • Some Notes on Soil/Land Productivity. • JAPSIS - Computerized Soil Information System for Arable Land in Japan.	• R. Carating • E. Sibolboro/ E. Samar • R. Carating • R. Carating • M. Mitsuchi • R. Carating • J/ Rondal • Y. Kato
1,4/August, 1995	• Notes from the Editor • Scientific Paper Review: Development of Watershed Management Strategies using GIS and Remote Sensing: A Case Study. • Notes on Soil Data Interpretation • Historical Review on the Establishment of Soil Productivity Capability Classification in Japan. • Pollution and Nutrient Loading in Laguna Lake: Is Agriculture a Major Culprit? • Some Important Site Characteristics of Romero River Watershed, Famy-Siniloan, Laguna. • Activity Report: Present State and Suggested Framework for SPCC System in SRDC.	• R. Carating • J. Rondal, Ma. A. Evagelista, and M. Yoshida/ R. Carating • R. Carating • T. Ohkura • J. Rondal • Soil Survey Staff • Y. Kato
1,5/September, 1995	• Notes from the Editor • Proposed Conceptual Framework for Soil Productivity Capability Classification. • Notes on SPCC Criteria: Effective Soil Depth • Romero River Watershed: Constraints and Potentials • Book Review: Factors of Soil Formation, SSSA Special Publication No. 33 • Notes on Soil Data Interpretation.	• R. Carating • R. Carating and SPCC Technical Committee • R. Carating • J. Rondal • R. Carating • R. Carating
1, 6/October, 1995	• Notes from the Editor • Proposed Conceptual Framework for Soil Productivity Capability Classification Part 2.	• R. Carating • R. Carating and SPCC Technical Committee

Annex 5 Continued

	• Nitrogen Analysis Interpretation for SPCC • Information about Ecological Summit 96 Conference	• R. Carating
1,7/November, 1995	• Notes from the Editor • Paper Excerpts and Review: Soil Testing: Prospects for Improving Nutrient Recommendations, SSSA Special Publication No. 40. • Relevance of Network Consultation on Problem Soils on SPCC Framework Development. • SPCC Work Program Updates.	• R. Carating • R. Carating • R. Carating • R. Carating
1,8/December, 1995	• Notes from the Editor • Newsbrief: BSWM-CSA Undertakes Flood Risk Assessment in Central Luzon. • Primary Mineral Identification and Interpretation – Notes from Lecture of Dr. Toshiaki Ohkura.	• R. Carating • R. Carating • T. Ohkura and R. Carating
2,1/January-March, 1996	• Notes from the Editor • SPCC Activities: - Year End Review AND Planning Workshop - SMU-LMU Correlation Workshop for Romero River Watershed - SPCC First Technical Seminar - Castaneda Leaves for JICA Training on SPCC in Tsukuba • SPCC Concept Papers - The Evaluation of Soil Fertility in SPCC - The Soil Fertility Capability Classification of Snchez & Buol - Assessment of Purity of Soil Mapping Units • SPCC Data Base - Travel Report: Romero River Watershed - Geomorphic nit Concept in the Inabaga River Watershed - Socio-Econimic Profile of LMU 09 in the Romero River Watershed - Soil Series Concepts in the Lowland of Romero River Watershed • SPCC Ratings & Soil Management Guidelines - Cropping Systems Design for Irrigated Watershed Management, FAO Soil Bul. - Notes from SC and SF Services • Book Review - Poverty, Institutions, and the Environmental Resource Base, World Bank Environment Paper No. 9.	• R. Carating • R. Carating • R. Carating • I. Lapis, R. Creencia, and M. Recel • C. Bacatio • T. Ohkura • C. Bacatio • B. Samar • M. Vinluan • R. Carating • R. Carating
2,2/April-June, 1996	• Notes from the Editor • BSWM 45th Anniversary Articles - Alcasid – Assured Niche in the Annals of Soil Science in the Philippines - BSWM – A Historical Profile - The Soils Research Development Center – In Perspective • SPCC Activities - SPCC Core Group Discusses Soil Fertility Criteria - Clay Mineralogy Course Conducted - Japanese Remote Sensing Experts Arrive for Pinatubo Studies • SPCC Concept Papers - Proposed Rating System for SPCC	• R. Carating • R. Carating • R. Carating • I. Lapis

(Continued to following page)

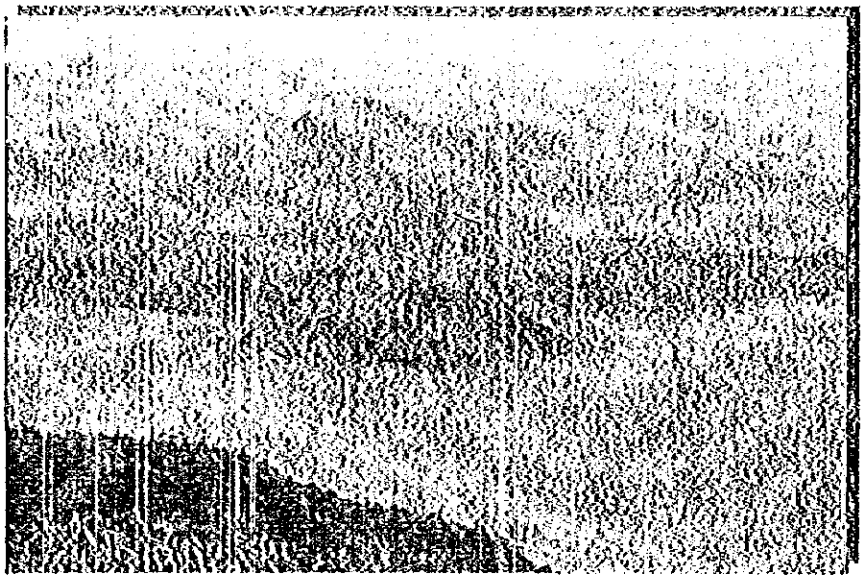
Annex 5 Continued

	- The Evaluation of Soil Workability	• R. Carating
	- Debate: Does Typic Pedon Reflect the Central Concept of Subgroup Taxon in Soil Taxonomy?	• M. Vinluan and T. Ohkura
	• SPCC Data Base	
	- Soil Series Concepts in Upland of Romero River Watershed	• M. Vinluan
	- Physico-Chemical Data, the Lowland Soils of the Romero River Watershed	• Soil Survey Staff / R. Carating
	• SPCC Ratings and Soil Management Guidelines	
	- The Growing of Rice in the Tropaquepts of the Romero River Watershed	• R. Carating
	• SPCC Training and Outreach Activities	
	- Notes on Clay Mineralogy Refresher Course	• R. Carating/ T. Ohkura
2, 3/July-September, 1996	• Notes from the Editor	• R. Carating
	• SRDC Transitions	• R. Carating
	- Concepcion - At the Helm of BSWM	
	- Micosa is SRDC Project Manager	
	- Inciong Heads SPCC Core Group	
	• SPCC Activities	• R. Carating
	- SRDC Project Mid Year Review Conducted	
	- SPCC Computer Set Arrives	
	- JIRCAS & MAFF Officers Visit SRDC for Net Link	
	• SPCC Concept Papers	
	- The Evaluation of Soil Hazards in SPCC	• R. Carating
	- The Soil As An Economic and Environmental Assessment	• E. Samar
	- Paper Reviews	• R. Carating
	- SPCC Data Base Network Design	• T. Ohkura
	• SPCC Data Base	• R. Carating
	- Physico-chemical Data, the Upland Soils of the Romero River Watershed	
	• SPCC Ratings and Soil Management Guidelines	
	- The Growing of Rice in the Tropaquepts of the Romero River Watershed, Part 2	• R. Carating
	• SPCC Training and Outreach Activities	• V. Castaneda
	- Soil Survey Training in Japan	
2,4/October-December, 1996	• Notes from the Editor	• R. Carating
	• SPCC Activities	• R. Carating
	- SPCC Core Group Orients New Chairman	
	- Hamazaki Arrives as Short-term Expert	
	- Parent Material and Socio-Economic Surveys at Romero Project Site Conducted	
	• SPCC Concept Papers	
	- Commentaries on the Proposed SPCC System	• T. Hamazaki
	- Studies on the Micromorphology of Lowland Soils	• V. Castaneda
	• SPCC Outreach Activities	• R. Carating
	- Three SPCC Booklets to be Completed for 1997 Release	
3,1/January-March, 1997	• Notes from the Editor	• R. Carating
	• SPCC Activities	• R. Carating
	- SRDC Year End Project Review and '97 Planning Workshop Held	
	- Araragi is New JICA Team Leader	
	- SRDC Fetes Dr. Yasuda, Welcomes Dr. Ara-	

(Continued to following page)

Annex 5 Continued

	ragi • SPCC Concept Papers - Climate as a Factor of Agricultural Productivity - Initial Assessment of Climatic Qualities through Agroclimatic Zones, FAO Soils Bulletin 52 - Example of Agroclimatic Suitability Rating, FAO Soils Bulletin 52 • SPCC Soil Data Base - The SPCC Rating of the Soils of Batanes Province - Comments on SPCC Application in the Soils of Batanes	 • G. Antolin • R. Carating • R. Carating • M. Vinluan, I. Lapis, and R. Carating • J. Rondal
3,2/April-June, 1997	• Notes from the Editor • Special Issue: Cavite, A Neighbor to A Metropolis - Selected Lowland Soils - Selected Upland Soils • SPCC Activities - Redia Atienza: The New Soil Conservation Chief - Cabezon: Returning to SPCC Core Group as New ALMED Chief • SPCC Concept Papers - Proposed Changes in the Evaluation of Soil Moisture • SPCC News Update	• R. Carating • Soil Survey Staff/ R. Carating • R. Carating • J. Rondal • R. Carating



Taal Volcano, the Mother of Cavite Soils

A. Dispatch of Japanese Experts

Field	Name	1995 Feb.	1996	1997 Oct.	Total M/M *
1. Long-term Experts					
1)Team Leader	Dr. Tamaki YASUDA	11.0	12.0	1.0	24.0
	Dr. Michio ARARAGI			9.6	9.6
2)Coordinator	Mr. Toru HARADA	9.2	12.0	9.9	31.1
	Mr. Masaru IMAMURA			1.9	1.9
3)Soil and Fertilizer	Dr. Shigemitsu ARAI	10.0	12.0	10.0	32.0
4)Soil Conservation	Dr. Yoshimi UENO	11.0	12.0	10.0	32.0
5)Soil Productivity Capability Classification Standard	Dr. Toshiaki CHIKURA	11.0	12.0	10.0	32.0
Sub-Total	7	52.2	60.0	52.4	164.6
2. Short-term Experts					
1)Soil Productivity Capability Classification Standard	Dr. Yoshitake KATO	0.7			0.7
2)Soil and Fertilizer	Dr. Shoichiro AKAO	0.9			0.9
3)Soil Conservation	Mr. Ichiro TANIYAMA		2.0		2.0
4)Plant Ecological Chemistry	Dr. Yoshiharu FUJII		0.7 0.8		1.5
5)Agro-meteorology	Dr. Seishi ISOBE		5.0		5.0
6)Plant Physiology	Dr. Satoshi YAMADA		3.0	2.5	5.5
7)Plant Ecology	Dr. Masayuki NEMOTO		0.9		0.9
8)Soil Survey and Classification	Dr. Tadao HAMAZAKI		1.4		1.4
9)Plant Nutrition	Dr. Masanori SAITO			1.0	1.0
10)Soil Microbiology	Dr. Shuichi ASANUMA			1.0	1.0
11)Soil Erosion Monitoring	Mr. Kenji BANZAI			0.7	0.7
12)Installation	Mr. Wataru MARUYAMA**			0.4	0.4
Sub-Total	11	1.6	13.8	5.6	21.0
TOTAL	18	53.8	73.8	58.0	185.6

* M/M shows Man/Month

** Mr. MARUYAMA will stay at SRDC from Nov. 17 to Nov. 28.

B. Training of Philippine Personnel in Japan

Field	Name/Position	Training Period	Destination/Affiliation
1. FY 1995			
1)Plant Analysis	Ms. Esperanza V. DACANAY (Supervising Agriculturist)	1995.06.19-1995.09.27	National Agriculture Research Center (NARC)
2)Soil Chemistry	Ms. Beatriz C. MAGNO (Agriculturist II)	1995.07.17-1995.10.15	National Institute for Agro-Environmental Sciences(NIAES)
3)Soil Physics	Mr. Carlos F. SERRANO (Senior Agriculturist)	1995.07.17-1995.10.15	National Institute for Agro-Environmental Sciences(NIAES)
4)Soil Microbe	Mr. Reynald C. PALIS (Agriculturist Center Chief IV)	1995.09.11-1995.09.30	Ministry of Agriculture, Forest and Fishery (MAFF), NIAES
5)Soil Survey and Classification	Mr. Virgilio A. CASTANEDA (Senior Agriculturist)	1995.09.04-1995.09.22	National Institute for Agro-Environmental Sciences(NIAES)
2. FY 1996			
1)Soil Microbiology	Ms. Erwilra M. BAUTISTA (Agriculturist II)	1996.06.03-1996.09.01	Hokkaido National Agricultural Experiment Station(NIAES)
2)Soil Conservation	Mr. Pablo M. MONTALLA (Agriculturist II)	1996.06.10-1996.09.06	National Institute for Agro-Environmental Sciences(NIAES)
3)Plant Ecology	Mr. Elmer B. BORRE (Agriculturist II)	1996.06.10-1996.09.06	National Institute for Agro-Environmental Sciences(NIAES)
4)Observation of Agricultural Research Facilities in Japan	Mr. Alejandrio R. BALOLOY (Asistant Director)	1996.08.21-1996.09.08	Ministry of Agriculture, Forest and Fishery (MAFF), NIAES, etc.
5)Crop Analysis	Ms. Vilma M. QUIMSON (Senior Agriculturist)	1997.03.24-1997.06.28	National Institute for Agro-Environmental Sciences(NIAES)

Fiscal Year in Japan begins April 1 and ends March 31 of the following calender year.

Field	Name/Position	Training Period	Destination/Affiliation
2. FY 1997			
1)Computer Management	Ms. Cleofilde M. NICOLAS (Agriculturist II)	1997.08.12-1997.08.18	National Institute for Agro-Environmental Sciences(NIAES)
2)Soil Ecology	Ms. Crisey C. PERLADO (Agriculturist II)	1997.08.10-1997.08.13	National Institute for Agro-Environmental Sciences(NIAES)
3)Soil Mineralogy	Mr. Purisima G. PAJARO (Agriculturist II)	1997.07.28-1997.11.08	Tohoku University
4)Soil Amelioration Technology	Mr. Dominiano D. PANES Jr. (Agriculturist II)	1997.08.18-1997.12.17	National Agriculture Research Center (NARC)

C. Provision of Machinery and Equipment

(Pesos)

	Procurement in Japan	Brought by Experts	Procurement in the Philippines	Construction of Lysimeter	Repairment	Total
FY 1995	6.778.250.00	1.360.000.00				8.138.250.00
FY 1996	10.402.000.00	341.000.00	8.814.297.10	3.497.430.00	3.393.250.00	26.847.961.10
FY 1997	10.000.000.00*	224.000.00**				10.224.000.00
	27.180.250.00	2.425.000.00	8.814.297.10	3.497.430.00	3.393.250.00	45.810.217.10

*:Proposed
**:as of October 1997

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR SAN ILDEFONSO, BULACAN

NO.	NAME OF EQUIPMENT	QTY.	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
1	Spectro/Flame Photometer System Spector/Flame Photometer Special Accessories Air Compressor Reducing Valve Transformer	1 sets 1 1 1 1	FHK Fujihara Industrial Co. Ltd.	SPAD SFP-2	Digital spectrophotometer, 400x530x325mm, 28kg Digital flame photometer,315X200x325mm, 13 kg AC100V50/60 Hz 130VA	Bulacan	Y 2,570,000/ set
9	Cultivator (MEMETORA Power Tiller)	1	MEMERTOTA Agricultural Machinery Co. Ltd.	MRV-2D	1,540x540x640 mm, 94kg.	Bulacan	Y 620,000/set
10	Sprayer (Power Sprayer)	1 set	Maruyama MFG. Co.Inc.	MS153EMM -1	465x425x370mm,20.5kg. SprayerMS153 Engine MITSUBISHI G222P	Bulacan	
17	Shelf (Master Mate Shelf)	4 bxs.	International Storage Systems/MITA MURA	460 Series	D460xW 1,520xH 1,900 mm	Bulacan	
23	Basket 23	100pcs.	Homma Toji Kogyo Co.	PC-100A	250x200x80mm, 18-8 SUS	Bulacan	
24	Basket 25	100pcs.	Homma Toji Kogyo Co.		350x270x55mm, 18-8 SUS	Bulacan	

CHECKED AND VERIFIED BY:

RECEIVED BY:

Chief, SNWRRC

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR TNWRRC, TANAY

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
1	Spectro/Flame Photometer System Spector/Flame Photometer Special Accessories Air Compressor Reducing Valve Transformer	1 1 1 1 1	FHK Fujihira Industrial Co. Ltd.	SPAD SFP-2	Digital spectrophotometer, 400x530x325mm, 28kg Digital flame photometer,315x230x325mm, 13 kg AC100V50/60 Hz 130VA	Bulacan	Y 2,570,000/ set
5	Cone Penetrometer	1	DAIKI	DIK-5520	250x110x1250 mm, 3 kg	Tanay	
6	Cylindrical Intake-rate Meter	1	DAIKI	DIK-4200	250x50x60mm, 13.5 kg.	Tanay	
7	Soil Crushing-Sieving Machine	1	EVERWELL	RC-100A	600x720x835mm,5c kg.	Tanay	
8	Sieve Shaker	1	EVERWELL	SS-3C	AC-220V 60HZ,100x80x120mm,60kg.	Tanay	
9	Cultivator (MEMETORA Power Tiller)	1 set	Agricultural Mechinery Co. Ltd.	MRV-2D	1,540x540x640 mm. 94kg.	Tanay	Y 920,000/set
10	Sprayer (Power Sprayer)	1 set	Maruyama MFG. Co.Inc.	MS153EMM -1	465x425x370mm,20.5kg. Sprayer/MS153 Engine MITSUBISHI G222F	Tanay	
13	Wooden Frame Shieve#6.5mm 4406	2 sets	EVERWELL	6.5mm,4406	600x400x70mm	Tanay	
14	Wooden Frame Shieve#2mm 4406	2 sets	EVERWELL	2mm,4406	600x400x70mm	Tanay	

CHECKED AND VERIFIED BY:

RECEIVED BY:

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR RESEARCH

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
	Nitrogen Determination System	1	Buchi Laboratorium Technik	Model 22		Research	
2-1	Distillation Unit	1		B-316	AC220V 50/60Hz320x320x695mm 19.6kg		Y790,000/set
	Digester	(1set)		B-435	280x490x560mm,AC220V50/60Hz 20.0kg.	Research	Y 750,000/ set
	Standard Accessories	1					
2-2	Sample Tube 300ml	13 pcs.					
	Stand for 6 sample tubes	2 pcs.					
	Vapor Tube Viton Hose for vapor drain	1set					
	Accessories for Nitrogen		SHIBATA				
3	Determination Systems	(1set)	Scientific				
4	Stand for 6 samples tubes	5pcs.	Technology Ltd.	5404-1248			
7	Sample Tube	50pcs.		5404-311A	55x260mm	Research	
	Aspirator	1pc.					
	Glass Beads (50pcs/pack)	5 bxs.					
13	Stocker (deep freezer)	1 unit	SANYO	SCR-R551G	1,550x670x905mm with a transformer TOYOZUMI CD220-06	Research	
16	Dessicator WM	1 unit	SHINKO KASEI	ADDLA-D	1,000x530x1,790mm,AC220V 60Hz	Research	
18	Variable Autotransformer	2 bxs.	VOLTAC	B-20	240x140x240mm,6.5kg., 17VA	Research	
19	Hot Plate	1 set	SHIBATA	NP-6	AC100V, 50Hz,250x250x90mm, with a transformer SE-1500	Research	
22	Test Tube Mixer	1unit	SHIBATA	TM-1	AC220V 60Hz,350-2,500rpm with a transformer SE-100	Research	
25	Funnel Stand	5pcs.	Samplatec		For 2 funnels	Research	
26	Funnel Stand	1 set	Samplatec		For 6 separatory funnels	Research	
27	Forcept	5pcs.	KOWA IKAKI	K-2S	125mm	Research	

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR RESEARCH

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
28	Forcept	5pcs.	KOWA-KAKI	K-29	180mm	Research	
29	Compact Shaker	1set	SHIBATA	LCS-100	AC220V60Hz400x250x110mm 8kg. Transformer SE300	Research	
33	Dispenser 1mL, 2mL, 5mL, 10mL. (macropipet)	1 set	SHIBATA	2506-01 2506-02 25-6-05 2506-010	0.2-1ml. 0.4-2ml 1-5ml. 2-10ml.	Research	
34-2	Dispenser (macropipet)	1set	SHIBATA	2508-100	0.01-0.1 l	Research	
34-3	Dispenser (macropipet)	1set	SHIBATA	2508-1000	0.1-1	Research	
34-4	Dispenser (macropipet)	1set	SHIBATA	2508-5000	1-5 l	Research	
35	Tip	1 set e. 200-1000 pcs.	SHIBATA	2508-1001 2508-10001 2505-51	0.1ml (1000pcs.) 1ml (1000pcs) 5ml. (200pcs)	Research	
39	Dispenser	2sets	SHIBATA	2508-15	2-10	Research	
40	Dispenser (Reburet)	1 set	SHIBATA	2511-201	Dispenser 2-20ml, Bottle 1000ml.	Research	
41	Laboratory Bottles	3 sets	SHIBATA/DURAN	1720-1001	100ml. Screw-cap	Research	
42	Funnel	100pcs.	Unknown	439-09-11-03	Glass, 90mm	Research	
48	(Autotitrator) Metrohm set Titrino Recorder	(2set) 2 set 2unit	Metrohm Metrohm Citizen	 7195 Trino IDP562	With 728 stirrer, 719 keyboard & with Exchange Unit 295x230x120mm	Research	Y650,000/set
50	Water Quality Checker	1 set	TOA Co.	WQC-20A		Research	

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR LABORATORY

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
11	Ion Chromatograph	(1set)	HITACHI			Laboratory Instrument Rm. 2	
	Pump	1 unit		L-7100			
	Column Oven	1 unit		L-7300			
	Conductivity Detector	1 unit		L-7470			
	Integrator	1 unit		D-7500			
	Washing Mechanism Assy	1 unit		810-1218			
	Degasser	1 unit		L7610			
	Auto Sampler	1 unit		L7200			
12	Water Purifier					Laboratory Instrument Rm1	Y1,042,000/set
	Pure Still (Main Body)	1	SHIBATA	ROD-11			
	Spare Parts and Consumable		Fuji film	FP20	320x500x1000mm		
	Filter for PF 10 micron MSO-111						
	RO Module		TOYO-BO	HA3110PM			
	Heater		Organo				
18	Variable Autotransformer	2 pcs.	VOLTAC	S-20	240x140x340mm,6.5kg., 17VA	Laboratory	
19	Hot Plate	1 set	SHIBATA	NP-6	AC100V, 60Hz,250x250x30mm, with a transformer SE-1500	Laboratory	
20	Automatic Pressure Controller	1set	DAIKI	DIK-0212	430x450x210mm	Laboratory	
21	High Pressure Hose 2H-S	4 sets	DAIKI	DIK-3400	240x340x145mm	Laboratory	Y700,000/set
	Nitto-Kl Coupler PT1/4						
22	Test Tube Mixer	1unit	SHIBATA	TIM-1	AC220V 60Hz,350-2,500rpm with a transformer SE-100	Laboratory	
25	Funnel Stand	5pcs.	Samplatec		For 2 funnels	Laboratory	
26	Funnel Stand	1 set	Samplatec		For 6 separatory funnels	Laboratory	
27	Forceps	5pcs.	KOWA IKAKI	K-28	125mm	Laboratory	

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR LABORATORY

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
28	Forcept	5pcs.	KOWA-IKAKI	K-29	180mm	Laboratory	
30	COD Meter	1set	TOA Electronics Ltd.	COD-100	AC220V60Hz 220x158x400mm 3.3kg. Transformer SE300	Laboratory	
31	DO Meter	1set	TOA Electronis Ltd.	DO-25A	AC220V, 60Hz, 250x160x95mm	Laboratory	
32	Mortar and Pestle	1 box	Unknown		191-54mm, 62-12mm Agate Mortar-pestle	Laboratort	
34-1	Dispenser (Digipet)	1 set	SHIBATA	2508-10	2-12ml	Laboratory	
36	Tip for Macro Pipet Red (200 pcs.), Yellow (200pcs.), Green (200pcs.), White (200pcs.)	1sets 200 pcs. each	SHIBATA	2505-11 2505-21 2505-51 2505-101	1ml. 2ml. 5ml. 10ml.	Laboratory	
37	Stand	1set	SHIBATA	2520-01	Polypropylene for 4 dispensers	Laboratory	
38	Stand	1set	SHIBATA	2520-04	for 5 micropipets	Laboratory	
40	Dispenser (Reburet)	1 set	SHIBATA	2511-201	Dispenser 2-20ml, Bottle 1000ml.	Laboratory	No. 25
41	Laboratory Bottles	5 sets	SHIBATA/DURAN	1720-1001	100ml. Screw-cap	Laboratory	
46	Nitrogen Determination System Digestion Unit (2photos) Srubber	(1set) 2set 1pc.	Buchi Buchi Buchi	 435 412	 275x560x490mm 250x480x420mm	 Laboratory 2 sets + 1pc.	
	Distillation Unit (1photos)	2 sets	Buchi	S316	310x200x700mm	Laboratory	
48	(Autotitrator) Metrohm set Titrino Recorder	(2set) 2 set 2unit	Metrohm Metrohm Citizen	 716S Trino iDP562	With 728 stirrer, 719 keyboard & with Exchange Unit 235x230x120mm	Laboratory	¥650,000/set

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR LABORATORY

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
	ICP Atomic Emission	(1 set)				Laboratory	
	Spectrometer System						
	ICP Spectrometer	1 unit	Hitachi	P4000	1250x680x662mm		
	RF Generator	1 unit	Hitachi		460x580x520mm,40.68MHz		Y17,000,000/ set
	Autosampler	1 unit	Hitachi	SSC-110	350x420x386mm		
	Ultrasonic Atomizer	1 unit	CETAC	U6000AT	360x300x386mm, with a carrier		
49	Peristatic Pump	1 unit	Hitachi	408-0171	140x210x135mm		
	Hydride generation system	1 unit	Hitachi	HFS-3	300x250x290mm		
	Computer	1 set					
	Main body	1 unit	Acer	Acermate920	350x420x160mm, with a key board		
	Monitor	1 unit	Acer	34TL	14inch (35Cm.)		
	Oven	1 unit	VWR Scientific	1350FM	Horizontal airflow 675x610x10x920mm		
	Teflon Resolution Vessel	30pcs.	SHIBATA		50ml, 80mmx70mmH		
52	Pipet Analyzer	1 set	Diki Rika Kogyo kk	DiK-2020		Laboratory	

LIST OF EQUIPMENT PROVIDED USING FY 1995 BUDGET
DELIVERED ON APRIL 17, 1997
FOR SCMD AND OTHERS

NO.	NAME OF EQUIPMENT	QTY. /Set	MAKER'S NAME	MODEL NO.	SPECIFICATIONS	DIVISION/ SECTION to be assigned	REMARKS
4	(Sprinkling Intensity System) Main Unit Artificial Raindrop Generator, With Vibrator, Motor and Cover Sheet Water Supply Unit, Single Fram with Casters Poly-tank, Water Pump Flow meter Portable Generator	(1 set) 1 set 1 set 1 unit	DAIKI DAIKI Honda	DIK4260-S EM650		Soil Conservation	¥4,000,000/ set
44-1	Space Wagon	2 unit	Mitsubishi Motor Co.			Laboratory	
44-2	Pick-up Truck	1 unit	Mitsubishi Motor Co.				
44-3	Montero	1 unit	Mitsubishi Motor Co.	Pajero Montero			
46	L-300	1 unit	Mitsubishi Motor Co.	L-300			
52	Pipet Analyzer	1 set	Kette Co.	PM-700		Dr. Hernandez	

A. Dispatch of Japanese Experts

Field / Month	1998 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1. Long-term Experts												
1) Team-Leader	———	———	———	———	———	———	———	———	———	———	———	———
2) Coordinator	———	———	———	———	———	———	———	———	———	———	———	———
3) Soil and Fertilizer	———	———	·····	·····	·····	·····	·····	·····	·····	·····	·····	·····
4) Soil Conservation	———	·····	·····	·····	·····	·····	·····	·····	·····	·····	·····	·····
5) Soil Productibity Capability Classification Standard	———	·····	·····	·····	·····	·····	·····	·····	·····	·····	·····	·····
2. Short-term Experts												
1) Soil Information Processing*		———	———									
2) Soil Chemical Evaluation on the organic Matter									———	———		
3) Map Information Overlay Technology								———	———			
4) Prediction of Soil Erosion											———	———
5) Soil Biochemical Analysis of Soil Phosphorus								———	———			

* Scheduled in FY 1997

——— : Assignment Period ····· : Extension or Replacement (as of October 1997)

B. Training of Philippine Personnel in Japan in FY1998 (Proposed)

Field	Name/Position	Training Period	Destination/Affiliation
1)Observation	Dr. Lauro G. HERNANDEZ (Information Technology Officer II)	1998.09. -1998.09.	Ministry of Agriculture, Forest and Fishery (MAFF), NARC, NIAES etc.
2)Soil Information Analysis	Mr. Mario E. VINLUAN (Agriculturist II)	1998.06. -1998.09.	National Institute for Agro-Environmental Sciences(NIAES)
3)Soil Conservation	Mr. Edgardo R. REYES (Senior Agriculturist)	1998.05. -1998.06.	National Agriculture Research Center(NARC) Shikoku National Agricultural Experiment Station(SNAES)
4)Soil and Fertilizer	Ms. Mary Jane R. dela CRUZ (Agriculturist II)	1998.05. -1998.07.	Kyushu National Agricultural Experiment Station(KNAES)
5)Soil Conservation	Ms. Flipina Z. VENTIGAN (Agriculturist II)	1998.05. -1998.07.	National Institute for Agro-Environmental Sciences(NIAES)

C. Provision of Machinery and Equipment in FY 1998

	1998 April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1999 Jan.	Feb.	March
1. Purchased in Japan	□	—	—	—	—	— ○	— ◎	— X				
2. Purchased in the Philippines												
3. Brought by Experts				□ — X □ — X	X X	□ — X	□ — X					

□ :Purchase Order ○ :Shipping ◎ :Arrival in the Philippines X :Arrival at SRDC

Appendix

JAPANESE EXPERT AND THEIR FILIPINO COUNTERPART

ADVISERS	*Philippine Side*	*Japanese Side*
	Dr. Rogelio N. Concepcion *Executive Director*	Dr. Michio Araragi *JICA Team Leader*
	Alejandrino R. Baloloy *Deputy Executive Director*	
	Alejandro G. Micosa *Project Manager*	Masaru Imamura *JICA Coordinator*

SOILS AND FERTILIZER

Chairman
Dr. Perfecto P. Evangelista

Vice-Chairman
Dr. Lauro G. Hernandez

Members
Crisostomo B. Alcalde
Wilfredo E. Cabezon

Long-Term Expert
Dr. Shigemitsu Arai

Short-Term Experts
Dr. Shoichiro Akao
Dr. Satoshi Yamada
Dr. Yoshiharu Fujii
Dr. Masayuki Nemoto
Dr. Rungsun Im-erb
Dr. Masanori Saito
Dr. Shuichi Asanuma
T. Tozawa

Subject Matter Specialists

*Lolita Agustin
*Digna Allag
*Elisa Ayo
*Victorcito Babiera
*Amelia Bangalan
*Elvira Bautista
*Apolinario Carandaog
**Violeta Castaneda
*Esperanza Dacanay
**Bernardita Daguio
**Leonardo de Leon
**Teodoro Eroi
*Mary Jane dela Cruz
*Leonora de Leon
*Virgincito Estoconing
**Leandro Evangelista
*Redemcion Grifal
*Celia Crospe
*Beatriz Magno
*Ma. Teresa Manuel
*Josefina Mercado
*Rafael Monte
*Venerando Nabua
**Purisima Pajaro
*Marcelina Palis
**Perla Panganiban
**Wilfredo Peralta
*Jaqueline Rojales
*Leogarda Rubite
*Imelda Santos
*Francis Torres
*Ramon Ulibas
*Salvador Villarey
*Amy Yambot

Legend:
* Full-time
** Part-Time

SOIL CONSERVATION

Chairman
Florencio Mananghaya

Vice-Chairman
Dr. Reynaldo Palis

Members
Engr. Rodolfo Lucas
Wilfredo Cabezon
Eugenia Briones

Long-Term Expert
Dr. Yoshimi Ueno

Short-Term Experts
Dr. Ichiro Taniyama
Dr. Seishi Isobe
Dr. Kenji Banzai

Subject Matter Specialists

*Danilo Adriatico
*Florentino Agustin
*Salvador Balading
*Jose Bura
**Henry Cacayan
*Mario Collado
*Roger Creencia
*Roosevelt Creencia
**Wilfredo dela Cruz
*Redentor Gatus
*Arnulfo Gesite
*Eliosa Go
*Alda Latoza
*Jose Manguerra
*Marina Marges
*Pablo Montalla
**Cleotilde Nicolas
**Reynaldo Peregrino
*Edgardo Reyes
*Antonio Rivera
*Joseph Rojales
**Sonia Salguero
*Antonio San Andres
*Leonardo Semana
**Feriola Serrano
*Manuel Sta. Ana
*Filipina Ventigan

SOIL PRODUCTIVITY CAPABILITY CLASSIFICATION

Chairman
Dr. Nora Inciong

Vice-Chairman
Dr. Jose Rondal

Members
Wilfredo Cabezon
Nestor Ticzon
Edna Samar
Igmidio Lapis
Rodelio Carating

Long-Term Expert
Dr. Toshiaki Ohkura

Subject Matter Specialists

**Bertulio Arellano
*Clarita Bacatio
*Virgilio Castaneda
**Oscar Costelo
**Josefina Diloy
*Julieta Espineli
**Magdalena Favis
**Nestor Merjilla
**Querubin Navero
*Cleotilde Nicolas
**Cecilia Orlanes
*Cristy Perlado
**Leo Retamar
**Natividad Salonga
**Emiliano Sibolboro
*Jovette Tenorio
*Mario Vinluan

Legend:
* Full-Time
** Part-Time

Field Operation Services

Bernardo Pascua
Lorenzo Tomas
Deogracias Magtalas
Jaime Cabande
Odon Capangpangan
Florencio Rojales
Elmer Borre
Eduardo Alberto
Bayani Villanueva
Dominciano Ramos Jr.
Teodoro Bersabe
Oscar Salonga
Gregorio Antolin Jr.
Manuel Sandoval
Dennis de Guzman
Crisostomo Mamorbor

REVISED OPERATIONAL REQUIREMENT OF THE SOILS RESEARCH AND DEVELOPMENT CENTER PHASE II
PROJECT TYPE TECHNICAL COOPERATION PROGRAM
BUDGETARY PROGRAM (1995-1999)

	1995	1996	1997	1998	1999	TOTAL
1.0 Salaries						
1.1 Other Personal Services	3,691,817	0				3,691,817
Sectional Total	3,691,817	0	0	0	0	3,691,817
2.0 Maintenance and Other Operating Expenses						
02 Traveling Expenses	1,000,000	2,500,000	4,000,000	4,500,000	6,000,000	18,000,000
03 Communication Services	336,000	150,000	900,000	900,000	900,000	3,186,000
04 Repair and Maintenance of Government Facilities	0	300,000	300,000	300,000	300,000	1,200,000
						0
05 Repair and Maintenance of Government Vehicles	0	500,000	600,000	700,000	800,000	2,600,000
						0
06 Transportation Services	0	100,000	150,000	200,000	200,000	650,000
07 Supplies and Materials	2,974,000	4,200,000	5,000,000	5,000,000	6,000,000	23,174,000
08 Rents	0	200,000	250,000	250,000	250,000	950,000
11 Light, Water and Illumination	2,500,000	1,500,000	3,400,000	3,400,000	3,400,000	14,200,000
17 Seminars and Training	0	2,500,000	3,500,000	4,000,000	4,400,000	14,400,000
20 Gasoline and Oil	500,000	1,500,000	2,500,000	2,500,000	3,000,000	10,000,000
21 Fidelity Bond and Insurance Premium	0		4,000,000	4,000,000	4,000,000	12,000,000
29 Other Services	4,990,000	4,500,000	6,300,000	7,000,000	7,500,000	30,790,000
Sectional Total	12,000,000	*17,750,000	a 31,410,000	b 33,950,000	b 35,250,000	130,360,000
		* unreleased amount	a To be requested from the PAP lump-sum	b To be requested	b To be requested	
TOTAL	15,691,817	17,750,000	31,410,000	33,950,000	35,250,000	134,171,817
3.0 BSWM Regular Fund in support of Soils Research and Development Activities	15,691,817	9,464,530	15,000,000	15,000,000	15,000,000	71,156,347
TOTAL	15,691,817	9,464,530	15,000,000	15,000,000	15,000,000	71,156,347

Prepared By:

ELSIE A. BALAGTAS
Budget Officer III
FN: G-SYRPOR

Submitted By:

ALEJANDRO S. MICOSA
Project Manager

Recommending Approval:

ALEJANDRINO R. BALOLOY
Assistant Director

Approved:

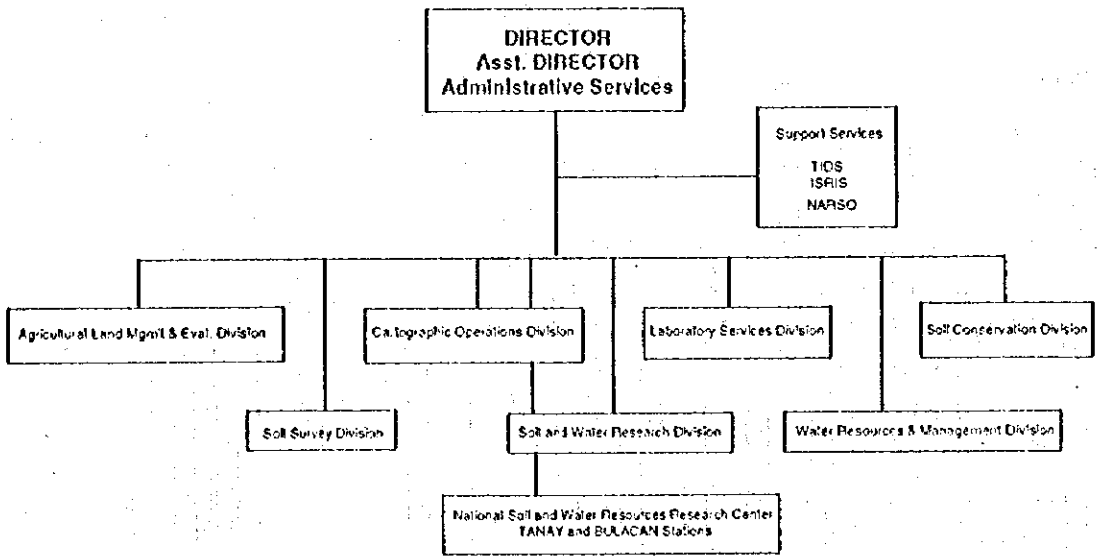
ROGELIO N. CONCEPCION, Ph.D.
Director

Bureau of Soils and Water Management
AGENCY PROFILE

MANDATE

The Bureau of Soils and Water Management shall advise and render assistance on matters relative to the utilization and management of soils and water as vital agricultural resouces; formulates measures and guidelines for effective soil, land and water resource utilization, as well as soil conservation in croplands with the relevant government agencies in resettlement areas and prepares the necessary plans for the provisions of technical assistance in solving soil related problems, prevention of soil erosion, fertility preservation, and other related matters; engages in rainmaking projects for agricultural areas and watersheds to solve the problems of prolonged droughts and minimize their effects on standing agricultural crops; for its won sector, recommends plans, programs, policies, rules and regulations to the Secretary and provides technical assistance in the implementation of the same.

THE ORGANIZATION



Agricultural Land Management and Evaluation Division

The Division providestechnical services to and establish linkages with line agencies and other client institutions involved in integrated rural development planning; identify and evaluate technical data on socio-economic, environmental and physical land aspects for land use decision; formulate standard guidelines for the inventory and evaluation of development potentials of agricultural lands and prepare and maintain a nationwide map index showing the distribution and location of physical land resources.

Cartographic Operations Division

In the organization of the Department of Agriculture, only the Bureau of Soils and Water Management has the mapping capability through its Cartographic Operations Division. In essence, BSWM serves as the mapping arm of the Department specifically resources mapping on soil-based thematic maps.

The map makers cater to the mapping needs of all technical divisions of the BSWM and the Department as well.

Laboratory Services Division

The Laboratory Services Division provides assistance not only on water and soil analysis but also on technologies which improve soil fertility and maximize land use. The technical staff of the Division provides training to agricultural productivity technologists and farm leaders on the proper use of soil test kits to determine the need for fertilizer application. The use of soil inoculants, now peoduced in the DA regional laboratories, reduces fertilizer inputs and increase farmers' income.

Soil Conservation and Management Division

The importance of soil conservation and management cannot be overemphasized. Many farming practices encourage soil erosion and unless we improve our farming method, our farmlands will become unproductive. The Soil Conservation and Management Division sees to it that these new farming soil conservation measures, practices and management reach every farmer throughout the country.

Soil Survey Division

Soil survey, mapping and classification to determine the suitable and non-suitable lands for agricultural and non-agricultural uses.

Soil and Water Research Division

Techniques related to methodologies and studies on soil conservation, biology, chemistry, genesis and morphology and physics are developed by the researchers in the soil and water research division.

Water Resources and Management Division

The Division takes charge of the water impounding projects of the BSWM. With the introduction of new ways and techniques in farming, farm lands which used to have no sufficient water supply can now be productive.

Technical assistance in planning, design, construction, operation and maintenance of small water impounding dams and other farm water resources development projects.

National Soil and Water Resources Research Stations

The BSWM maintains Research Stations/Centers located in Bgy. Cuyambay, Tanay, Rizal and San Ildefonso, Bulacan. These Research Centers have been established to conduct soil and water based research and development of our soils with reference to the upland soils in Tanay and the lowland soils in Bulacan. These are also where demonstration sites for the various researches are set up to help develop the country's farming systems and conserving the natural nutrients of our soil.

Training and Information Dissemination Services

As support service of the BSWM, the TIDS is resposible for the packaging of information relative to soil and water generated technologies in multimedia (video, photographic/technological exhibition, print publications, etc.). Having a highly technical capability in the production (Studio, Media Production facilities, A/V Library, etc.) of training and information materials for target clientele, it also maintains the operation and maintenance of the BSWM's training facilities (Convention Hall, Lecture Rooms, Soil Museum and Dormitory).

National Rain Stimulation Office

In line with the mandate of the BSWM and in pursuant to the President's directive to plan and conduct cloudseeding operations over drought-affected agricultural areas, reservoirs and watersheds, and maintain the normal normal water level of multi-purpose dams, NARSO has been tasked to conduct sorties country-wide. The acquisition of three Cessna planes and the Weather Sensor has been vital in these efforts .

Integrated Soil Resources Information Services

The Service is the computer arm of the BSWM having a MainFrame where various technical and basic data relative to soil and water are stored. Computerized systems designed and programmed are presently being utilized and implemented by the different Divions (RMS, PIS, SIS, etc.). It has capability in Geographic Information Systems (GIS) which is a powerful tool in analyzing and interpreting spatial and statistical data that can guide planners in decision making. It also created a well-established databases in support to different projects of the BSWM and other government agencies.

The SOILS RESEARCH AND DEVELOPMENT CENTER

The SRDC or SOILSEARCH which began under Phase I included the construction of the main building which now houses the research, survey, laboratory, cartographic, land evaluation, water management, soil conservation, mainframe computer facilities and offices of the BSWM. The Training Center, on the other hand, have video production and post-production facilities and equipment, a 400-seat Convention Hall and two 40 seater Lecture Rooms all equipped with audio-visual presentation capability.

The five-year Technical Cooperation Project called SRDC Project Phase II officially commenced in 1995 following Phase I (1989-1994) which was an agreement for both grant aid and technical cooperation between the Governments of the Philippines through its Department of Agriculture (DA) and Japan through Japan International Cooperation Agency (JICA) which established the Soils Research and Development Center (SRDC) of the Bureau of Soils and Water Management (BSWM).

SRDC Project Phase II further advances the national research and development agenda and the technology transfer capability of the BSWM in particular, and the DA in general.

The new phase seeks the improvement of agricultural productivity and management of technologies in problem soils in the ocuntry. The goal becomes more meaningful considering the 14 million total hectares of problem soils in the Philippines which impinges on more advancement for its agricultural and food security.

Republic of the Philippines
DEPARTMENT OF AGRICULTURE
bureau of soils and water management
Soils Research and Development Center Building
Elliptical Road corner Visayas Avenue
Diliman, Quezon City

MINUTES OF THE SECOND JOINT COORDINATING COMMITTEE MEETING
SRDC PROJECT PHASE II
December 18, 1996
SRDC Lecture Room 2

ATTENDEES :

1. Hon. Salvador H. Escudero III, DA
2. Hon. Hiroshi Goto, JICA
3. Dir. Rogelio N. Concepcion, BSWM
4. Mr. Akira Nakamura, JICA
5. Asst. Dir. Alejandrino R. Baloloy, BSWM
6. Mr. Alejandro G. Micosa, BSWM
7. Mr. Roger Gusilatar, NIA
8. Dr. Ireneo J. Manguiat, UP
9. Mr. Rolando M. Omonte, DAR
10. Ms. Beatriz P. del Rosario, PCARRD
11. Dr. Perfecto P. Evangelista, BSWM
12. Dr. Nora B. Inciong, BSWM
13. Mr. Florencio G. Mananghaya, BSWM
14. Dr. Tamaki Yasuda, JICA
15. Mr. Toru Harada, JICA
16. Dr. Toshiaki Ohkura, JICA
17. Dr. Shigemitsu Arai, JICA
18. Ms. Jaja Z. Siena, BSWM
19. Dr. Lauro Hernandez, BSWM
20. Mr. Crisostomo B. Alcalde, BSWM
21. Ms. Mary Jane dela Cruz, BSWM
22. Dr. Reynaldo Palis, BSWM

HIGHLIGHTS :

1. The Honorable Salvador H. Escudero III, Secretary of the Department of Agriculture, presided the meeting which started at 9.05 am. He acknowledged the presence of Hon. Hiroshi Goto, Resident Representative JICA Philippines. In his message, he expressed his gratitude for the assistance extended by the Japanese Government to the Philippine Government specifically the Department of Agriculture and the Bureau of Soils and Water Management for the implementation of SRDC Project Phase II. He presented the members of the Joint Coordinating Committee from the University of the Philippines (UP), Department of Agrarian Reform (DAR), National Irrigation Administration (NIA), and Philippine Council for Agricultural and Forestry Resources Research and Development (PCARRD).

2. Dr. Rogelio N. Concepcion, SRDC Executive Director, introduced the Philippine counterparts.

3. Dr. Tamaki Yasuda, JICA-SRDC Team Leader, introduced the Japanese counterparts.

4. Exec. Dir. Concepcion gave an overview of SRDC Project Phase II. Afterwards, Dr. Yasuda presented the Project's objectives based on the Tentative Schedule of Implementation (TSI).

5. A video presentation on the Project's status and highlights was shown.

6. Detailed project accomplishment per services were presented by Dr. Shigemitsu Arai for Soils and Fertilizers (SF), Dr. Reynaldo Palis for Soil Conservation (SC), and Dr. Toshiaki Ohkura for Soil Fertility Capability Classification (SPCC).

7. Mr. Toru Harada presented the administrative aspects of the SRDC Phase II implementation. He likewise inquired about the status of the Peso counterpart for the project.

8. In response to Mr. Harada's concern, Ms. Elsie Balagtas informed the committee that there are technical problems identified by Department of Budget Management (DBM) regarding the release and incorporation of the project funds into the regular budget released to BSWM.

9. To settle the problem and after learning that the cost of SRDC Phase II operation is charged against the BSWM regular funds, the Honorable Secretary intervened and after the meeting instructed the DA Finance Director to facilitate the release of SRDC counterpart funds which operation are charged against the BSWM regular funds.

10. Referring to Dr. Ohkura's report, the Honorable Secretary stressed that they should set a model watershed.

11. Honorable Goto delivered the closing remarks.

12. The meeting concluded at 10.45 am and the Executive Director invited the attendees for an early lunch.

Noted:

ROGELIO F. CONCEPCION, Ph.D.
SRDC Executive Director

Hon. SALVADOR H. ESCUDERO III
Secretary, Department of Agriculture