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RETA 5866: Fourth Agriculture and Natural Resources Research at CGIAR Centers: Developing Sustainable Forage Technologies for Resource-Poor Upland Farmers in Asia



Forages for Smallholders Project

Six-Monthly Report, 1 January – 30 June 2002

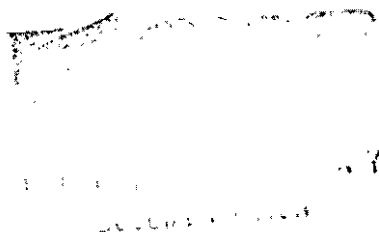
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Cover photo: A farmer in Impasug-ong, Philippines, shows her favourite forage: Guatamala grass (photo R. Roothaert).



Summary of Activities

The year started with the preparations for the Third Annual Planning Meeting of FSP in Luang Prabang, Lao PDR, which was held from 28 Jan – 2 Feb 2002. The meeting was attended by the coordinators of FSP, additional key delegates from each country, a CIAT board member, other CIAT staff, a collaborator from ILRI and a collaborator from ICRAF. The theme was 'The impact of the FSP on people, livestock and environment'. Many countries gave impressive presentations about the impacts of participatory forage research, and the methodologies they used for measuring those impacts.

Workplans were developed early in the year and quantifiable targets were set. Achievements for the first six months of this year are reported in this document, grouped by country and covering dissemination, multiplication systems and training activities. On average, more than 50 % of the targets for the year were met, indicating good progress. Activities in Lao PDR have not started yet this year. Release of funds was delayed due to late reporting of the previous year's results. The FSP team in Lao has experienced a major staff change, which has caused delays in implementation of activities.

More than 1000 farmers have participated in diagnostic exercises this year, more than 700 farmers participated in cross visits, and more than 700 new farmers have started to plan and experiment with forages. Already 94 % of the target of total farmers planting forages have been met. Hundred thirty-three new farmers have started to produce vegetative planting materials, more than a hundred new farmers started to produce seeds, and more than a hundred new groups started to produce planting materials. Multiplication systems have become part of the overall forage systems that have been developed with farmers. Many on-farm experiments had been planned for the year; and already 84 new farmers have started experiments. More than 1,400 farmers attended field days or training courses and 91 technicians were trained in other courses.

An economist from CIAT Colombia visited Lao and Vietnam to discuss and advise on monitoring and evaluation strategies. FSP methodologies were reviewed and the terms of reference for a consultant from the Netherlands was adjusted. The consultant conducted socio-economic studies in the Philippines and in Vietnam, from 20 April – 2 July 2002. The reports have been submitted to FSP and are being edited. They will be published as CIAT working documents. The studies report very positive effects on livestock productivity, farm income and labour savings as a result of the work of the FSP in the study areas.

A paper on adoption strategies for forages was presented at the workshop on Research and Development Strategies for the Livestock Sector in South East Asia through National and International Partnerships, 11-15 March 2002, Bangkok. It was a good opportunity to meet many policy makers in agriculture in S.E. Asia and discuss the use of participatory methodologies and their impact. Thailand produced issue no. 12 of the SEAFRAD newsletter, featuring several stories on animal production in legume feeding systems, improved productivity of native grasslands in Vietnam, and intensive stylo production in China.

1. Project background.

The project "RETA 5866: Fourth Agriculture and Natural Resources Research at CGIAR Centers: Developing Sustainable Forage Technologies for Resource - Poor Upland Farmers in Asia", in short called the "Forages for Smallholders Project" (FSP), started in January 2000. It is funded by the Asian Development Bank for a period of three years. The goal of the project is: "to improve the livelihood of upland farmers by enhancing available feed sources to increase livestock production and strategic use of grasses and legumes to conserve soil and to enhance nutrient management (ADB¹, 1999). The participating countries are China, Indonesia, Lao PDR, Philippines, Thailand and Vietnam.

Objectives and outputs

The objectives of the project are to:

- Develop sustainable forage technologies for resource-poor farmers in upland farming systems in Asia.
- Strengthen the capacity of National Agricultural Research Systems in the Bank's Developing Member Countries to develop and deliver these technologies to farmers.

The project has five outputs:

1. Productive and sustainable forage technologies for upland farming systems developed and tested by farmers.
2. Forage technologies extended to other farmers using participatory approaches for scaling-up from farm level to the community and provincial levels.
3. Effective local seed and planting material multiplication systems established and operational.
4. Capability in DMCs for developing and disseminating forage technologies using farmer participatory approaches (FPA) strengthened.
5. Network for sharing information among NARSs and in the region continued based on the Southeast Asia Feed Resources Research and Development (SEAFRAD) and electronic communications.

¹ Asian Development Bank 1999. Proposed Technical Assistance for the Fourth Agriculture and Natural Resources Research at CGIAR Centres. Manila, Philippines.

The FSP is co-ordinated by the Centro Internacional de Agricultura Tropical (CIAT), which is part of the Consultative Group on International Agricultural Research (CGIAR). The implementing agencies in the participating countries are:

China	Tropical Pasture Research Centre (CATAS), Hainan
Indonesia	Dinas Peternakan, Samarinda and Directorate General of Livestock Services (DGLS), Jakarta
Lao PDR	National Agriculture and Forestry Research Institute, NAFRI, Vientiane
Philippines	Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Los Baños, Visayas State College of Agriculture (ViSCA) and Department of Agriculture, Region 10
Thailand	Department of Livestock Development, Ministry of Agriculture and Cooperatives, Bangkok
Vietnam	National Institute of Animal Husbandry (NIAH), Ministry of Agriculture and Rural Development(MARD), Hanoi

The project operates in 12 focus sites (table 1), originally developed in an earlier project funded by AusAID.

Table 1. Focus sites in the FSP and dominant farming systems

Country	Province	Focus district/ municipality	Dominant farming system
Indonesia	East Kalimantan	Makroman, Samarinda	Rain fed lowland, intensive sedentary upland.
		Sepaku II, Pasir	Extensive sedentary upland, grasslands.
Lao PDR	Luang Phabang	Xieng Ngeun	Extensive sedentary upland, short rotation slash and burn.
	Xieng Khouang	Pek	Short rotation slash and burn, intensive sedentary upland (rice), grasslands
	Savannakhet	Savannakhet	Grasslands
Philippines	Misamis Oriental	Cagayan de Oro	Extensive sedentary upland
	Bukidnon	Malitbog	Extensive sedentary upland.
	Cebu and Leyte	Cebu City, Tabango	Intensive and extensive sedentary upland
Vietnam	Daklak	M'Drak	Extensive sedentary upland, grasslands.
	Tuyen Quang	Tu Quan, Phu Lam, Duc Ninh	Intensive sedentary upland.
Thailand	Nakornratchasima	Sung Nuen	Extensive sedentary upland.
China	Hainan	Baisha, Danzhou and Ledong	Extensive sedentary upland.

2. Achievements against targets in 2002

At the beginning of the year, every national FSP team set quantifiable targets for experimentation, dissemination, planting materials, and training activities. Although the targets were set for the whole year, it is possible to report on progress during the first 6 months of the year. In most countries, national targets were subdivided for provinces or districts, and achievements are reported at those levels (Table 2). As the project has expanded, there are now more sites than the original focus sites, and the reporting exercise becomes bigger every time. For the purpose of clarity, data are combined and presented by country in this report.

Table 2. Levels for reporting within countries.

Country	China	Indonesia	Philippines	Thailand	Vietnam
Provinces or Districts	Hainan	Pasir Balikpapan East Kutai Central Kutai Bulungan Samarinda Berau	Cagayan de Oro Malitbog Impasugong Manolo Fortich Cebu Leyte	Pakchong Sungnuen Sikhew Dankhunted	Tuyen Quang Daklak

Table 3. Summary of achievements in dissemination during the first six months of 2002

Country	Target/achieved	No. of PDs conducted	No. of farmers partic. in PDs	No. of new groups	No. of cross visits organised	No. of farmers partic. in cross visits	No. of new farmers planting forages	No. of total farmers planting forages in 2002
Vietnam	T	52	1330	0	40	650	20	1065
	A	0	0	0	12	0	0	994
Indonesia	T	24	430	36	23	389	478	879
	A	12	247	18	11	224	197	740
Thailand	T	8	120	8	18	175	295	449
	A	1	15	1	1	50	124	150
China	T	7	105	7	15	75	100	173
	A	3	45	3	6	30	47	137
Philipp's	T	30	340	23	29	640	383	850
	A	28	745	24	20	461	363	1205
Total target		121	2325	74	125	1929	1276	3416 ²
Total achieved		44	1052	46	50	765	731	3226
% achieved		36	45	62	40	40	57	94

² Excluding 1700 farmers who adopted forages in FSP Phase I (1995-1999).

The targets for dissemination activities for 2002 were much higher than in 2001. For example, a total of 1280 new farmers are expected to plant and evaluate new forages, against a target of only 580 last year (Table 3). Nevertheless, the rate of achievement is more or less 50 % for most activities already for the first six months of the year. In Vietnam, other responsibilities of the site managers prevented them from reporting dissemination activities in detail, hence the low numbers for Vietnam in Table 3. Activities in Cebu, Philippines, on the other hand, have contributed to many new dissemination results.

Table 4. Summary of achievements in forage multiplication systems in 2001

Country	Target/achieved	New groups producing planting materials			New individual farmers producing planting materials			Quantity of splits and cuttings	Quantity of seeds (kg)	No. of new on-farm tree seedling nurseries
		Vegetative	Seeds	V'tive + seeds	Vegetative	Seeds	V'tive + seeds			
Vietnam	T	0	0	0	11	13	5	560,000	50	2
Vietnam	A	0	0	0	0	0	0	0	0	0
Indonesia	T	25	3	8	202	5	15	263,000 splits and 46 bags	0	11
Indonesia	A	10	0	0	20	0	0	66,500	0	3
Thailand	T	0	0	0	0	0	0	0	0	0
Thailand	A	0	0	0	0	0	0	0	0	0
China	T	5	0	0	45	20	0	35,000	2,000	10
China	A	3	4	7	18	23	40	13,455	0	10
Philippines	T	12	54	14	2	2	7	90 sacks and 3,000 splits	0	19
Philippines	A	10	4	72	95	78	0	75 sacks and 140,000 splits	18	19
Total target		42	57	22	260	40	27		2050	42
Total achieved		23	8	79	133	101	40		18	32
% achieved		55	14	359	51	253	148		1	76

The targets and achievements for forage multiplication systems in 2002 are presented in Table 4. Although many targets are set for group activities, in practice, at least an equal

number of individual farmers produce planting materials. In the Philippines and China individual production has become more common than production in groups. Indonesia had a very high target for individual production of vegetative materials, but also the highest target for production in groups. The achievements for multiplication systems are generally above expectation; only groups producing seeds were few and the total amount of seeds produced by farmers. China will produce most seeds during the latter half of the year though, due to seasonality of seed production.

There have been numerous training events in the first half of 2002; Table 5 summarises the courses for farmers and technicians. In Appendices 1 and 2, details of these and courses are presented. Achievements are above 50 %, except for technicians training courses, some of which are planned later in the year. FSP staff in Vietnam, Thailand and the Philippines have also participated in training events organised by collaborating institutions (appendix 3).

Table 5. Summary of capacity building and other activities in 2001.

Country	Target/achieved	No. of farmer training courses or field days conducted	No. of farmers participated in training courses or field days	No of technicians' training courses	No. of technicians attended training course
China	T	5	130	1	10
China	A	3	60	1	14
Indonesia	T	3	425	21	38
Indonesia	A	6	88	5	13
Philippines	T	39	970	20	47
Philippines	A	26	935	10	46
Thailand	T	4	100	1	5
Thailand	A	2	100	0	0
Vietnam	T	30	650	1	20
Vietnam	A	12	240	1	18
Total target		81	2275	44	120
Total achieved		49	1423	17	91
% achieved		60	63	39	76

Other achievements

The annual international planning meeting was conducted in Luang Prabang, Lao PDR, from 29 Jan. – 2 Feb. 2002. More than 40 co-ordinators, researchers and field workers attended, from all member countries and other countries. The theme of the workshop was "The Impact of Forages on People, Livestock and the Environment", and each country had one or more presentations around the theme. During the workshop participants also started to develop workplans for 2002. These workplans are now completed and presented in Appendix 10. A CD with the PowerPoint presentations has been made available to all participants, main contacts at CIAT and to ADB. The proceedings will also be published on the FSP web site and a hard copies will be available.

All countries together had planned on farm experiments with 146 farmers for 2002. Already 84 farmers have started with these experiments. Details of the experiments are described in the workplans (Appendix 10) and some results or developments are discussed in the trip reports (Appendices 4 – 7). Six contributions were made by FSP members to the new SEAFRAD newsletter, issue 12.

A consultant from the Netherlands conducted a socio-economic study in the Philippines and in Vietnam, from 20 April – 2 July 2002. The reports have been submitted and are being edited. They will be published as CIAT working documents. The studies report very positive effects on livestock productivity, farm income and labour savings as a result of the work of FSP in the study areas.

The FSP co-ordinator of China and the site co-ordinator of Cagayan de Oro, Philippines, participated in an international course on Participatory Research and Development, organised by CIP-UPWARD. Both researchers used the opportunity to improve their workplans on participatory monitoring and evaluation of FSP forage research.

3. Publications

Books

Bosma, R.H., Roothaert, R.L. and Ibrahim 2002. Economic and social benefits of new forage technologies in East Kalimantan, Indonesia. CIAT Working Document No. 190, Centro Internacional de Agricultura Tropical, Cali, Colombia.

Cramb, R., Purcell, T. 2001 How to Monitor and Evaluate Impacts of Participatory Research Projects: A Case Study of the Forages for Smallholders Project. *CIAT Working Document No. 185*; Centro Internacional de Agricultura Tropical: Cali, pp 55.

Horne, P.M. and Stür, W.W. 1999. Developing forage technologies with smallholder farmers – how to select the best varieties to offer farmers in Southeast Asia. ACIAR Monograph No. 62, Australia, 80 pp.
Published in English, Chinese, Indonesian, Thai, Lao and Vietnamese.

Progress reports

R. Roothaert, P. Asis, L.H. Binh, R. Bosma, E. Gabonada, F. Gagunada, Ibrahim, P. Kerridge, Y. Kexian, T.T. Khanh, E. Magboo, L. Moneva, G. Nakamane, C. Phaikaew, V. Phimpachanhvongsod, J. Saguinhon, J. Samson, and V.H. Yen 2001. RETA 5866: Fourth Agriculture and Natural Resources Research at CGIAR Centers: Developing Sustainable Forage Technologies for Resource-Poor Upland Farmers in Asia. Forages for Smallholders Project, Six-monthly report, 1 July – 31 December 2001, 38 pp.

R. Roothaert, C. Phaikaew, J. Samson, P. Kerridge, E. Magboo, L.H. Binh, P. Phengsavanh, Y. Kexian, Ibrahim, T.T. Khanh, P. Asis, W. Nacalaban, J. Saguinhon, G. Nakamane 2001. RETA 5866: Fourth Agriculture and Natural Resources Research at CGIAR Centers: Developing Sustainable Forage Technologies for Resource-Poor Upland Farmers in Asia. Forages for Smallholders Project, Six-monthly report, 1 January – 30 June 2001, 37 pp.

R. Roothaert, P. Kerridge, J. Samson, E. Magboo, L.H. Binh, C. Phaikaew, P. Phengsavanh, Y. Kexian, Ibrahim, T.T. Khanh, P. Asis, W. Nacalaban, J. Saguinhon, G. Nakamane and A. Schermesser 2000. RETA 5866: Fourth Agriculture and Natural Resources Research at CGIAR Centers: Developing Sustainable Forage Technologies for Resource-Poor Upland Farmers in Asia. Forages for Smallholders Project, Six-monthly report, 1 July – 31 December 2000, 31 pp.

Developing Sustainable Forage Technologies for Resource-Poor Upland farmers in Asia, Six-Monthly Report, 1 January – 31 July 2000, Forages for Smallholders Project, 15 pp.

Papers

Roothaert, R. L., Kerridge, P.C. 2002. "Adoption strategies for forages - experiences of the Forages for Smallholders Project" Proceedings of the Workshop on Research and Development Strategies for the Livestock Sector in South East Asia through National and International Partnerships, 11-15 March 2002, Bangkok. ILRI, Los Baños, Philippines.

Peters, M., Lascano, C.E., Roothaert, R. and de Haan, N. C. (in press). Linking research on forage germplasm with farmers: the way to increased utilisation. ILRI, Addis Ababa.

Ralph Roothaert, Peter Horne and Werner Stür. 2001. Integrating forage technologies on smallholder farms in the upland tropics. Paper presented at the International Workshop "Forage Demand and Adoption by Smallholder Livestock Keepers", June 18-20, Addis Ababa, Ethiopia.

Ralph L. Roothaert and Jindra Samson. 2001. Management of forage crops for smallholders in S.E. Asia and its possible implications on the quality of farm land. Paper presented at the Asian Agriculture Congress, 24 – 27 April 2001, Manila, Philippines.

J. Samson and R. Roothaert 2001. The Challenge of Adoption: Scaling-up of Participatory Research in Forage Technologies. Poster presented at the 6th National Grassland Congress, Legaspi, Philippines. *Awarded with Best Poster Award.*

Proceedings

Stur, W.W. 2002. Proceedings of the Third Regional Meeting of the Forages for Smallholders Project held at the Agency for Livestock Services of East Kalimantan, Indonesia. CIAT Working Document 188, Los Baños, 219 pp.

R.L. Roothaert and J.N. Samson, Eds. 2001. Proceedings of the Annual Regional Programme Meeting of the Forages for Smallholders Project, 'Scaling-up of participatory forage technology development', Samarinda, East Kalimantan, Indonesia, 15 – 19 January 2001, CIAT, Los Baños.

Horne, P. M., Stur, W.W., Hacker, J. and Kerridge, P.C. (Eds) 2000. Working with farmers: the key to adoption of forage technologies. Australian Centre for International Agricultural Research: Canberra, pp 325

Roothaert, R.L. 2000. Proceedings of the Inception Meeting of CIAT/ADB Project "Development of Sustainable Technologies for Resource-Poor Upland Farmers in Asia", 17-18 February 2000, Los Baños, Philippines. CIAT, Los Baños, Philippines.

News articles

Hill, B., Roothaert, R., ADB Review, March-April 2002, 12-14 (2002).

Robert Hill. Farming success story in Northern Vietnam. To be published in Affinities, ADB Review, Far Eastern Agriculture, or local newspapers.

Robert Hill. Forage project sparks brave new venture. To be published in Affinities, ADB Review, Far Eastern Agriculture, or local newspapers.

Ralph Roothaert 2000. Forages for Smallholders in Asia: CIAT Project begins new Phase. UPWARD Fieldnotes Vol. 9(2) p. 9.

Newsletters

SEAFRAD News, Issue 12, April 2002.

SEAFRAD News, Issue 11, July 2001.

SEAFRAD News, Issue 10, May 2000.

Others publications

Forages for Smallholders Project, 2001. Internet web pages: www.ciat-asia.org/02-FSP/fsp.htm.

Two radio interviews with project staff were recorded and broadcast in East Kalimantan, Indonesia, reaching farmers in all rural areas, 2000.

4. International travel of project staff

Dates (2002)	Traveller	Countries visited	Purpose
26 Jan – 5 Feb	FSP delegates from all member countries	Lao PDR	Third annual planning meeting of FSP
11-14 March	R. Roothaert	Thailand	Regional livestock research priority setting workshop, FAO- ILRI
18-23 March	R. Roothaert, J. Samson	Mindanao, Philippines	Finalise workplans and review research process
3 - 12 April	R. Roothaert, N. Johnson	Lao PDR, Vietnam	To plan monitoring and evaluation systems, and to prepare socio- economic study
14 – 18 April	P. Kerridge	Philippines	To assist in writing new ADB proposal
2 – 7 June	R. Roothaert	Lao PDR, Vietnam	To attend CIAT regional meeting in Lao and visit field sites in Vietnam

5. Human resources

FSP co-ordinators and counterparts

Dr. Ralph Roothaert, Regional Coordinator FSP, Los Baños, Philippines.
Dr. Peter Kerridge, Coordinator CIAT – Asia, Vientiane, Lao PDR
Mr. Eduedo Magboo, FSP Coordinator Philippines, Los Baños.
Mr. Viengsavanh Phimpachanhvongsod, FSP Coordinator, Laos PDR, Vientiane
Mrs. Chaisang Phaikaew, FSP Coordinator Thailand, Bangkok.
Mr. Le Hoa Binh, FSP Coordinator Vietnam, Hanoi.
Ir. Ibrahim, FSP Coordinator Indonesia, Samarinda.
Assoc. Prof. Yi Kexian, FSP Coordinator China, Hainan.
Mr. Truong Tan Khanh, Daklak, Vietnam.
Mr. Willie Nacalaban, Malitbog, Philippines.
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6. Appendices

Appendix 1. Training courses and number of people trained.

Country and Province	Name of training course conducted by FSP	Location	Date started	Length (days)	No. of field workers and officers	No. of researchers	No. of farmers	Course organiser (person)
<i>Indonesia – East Kalimantan</i>	PME	Samarinda	09-Apr-02	10	22			country coordinator
	Training of key farmer in forage agronomy	Sepaku and Samboja	29-Jun-02	3			15	field worker
	Training in Animal Nutrition	Samboja	Jul-02	3			15	field worker
	Training on body weight	Loakulu	Jul-02	2			15	field worker
	Training of Bokasi	Makroman	17 June	2			15	field worker
	Forage development	Samarinda	August 02	12	15		0	FSP coordinator
<i>Thailand – Nakornratchasima</i>	Forage Agronomy	Pakchong	21-May	2			50	Ganda, Supachai
	Forage utilization field day	Pakchong	23-May	2			50	Ganda, Supachai
<i>Vietnam - Daklak</i>	Tech. Training on forage technology development and PM&E	Tay nguyen university	12-May	7	12	6	4	Truong tan Khanh, Van Tien Dung

Appendix 1. Training courses in 2001

Country and Province	Name of training course conducted by FSP	Location	Date started	Length (days)	No. of field workers and officers	No. of researchers	No. of farmers	Course organiser (person)
	4 farmer training courses in Ea Kar district on forage agronomy + 2 Field days	Village No2- Cu Ni, Ninh Thanh, M Oa, Village No 4 - Cu Hue, Xuan Phu, E Ao	03-Jun	2			115	Nguyen Van Ha, Khanh
	4 farmer training courses in Ea Kar district on forage agronomy + 3 Field days	Village No 6, No10 - Eadien commune, Village No 1, 6 - Ealai, Ea Mlay, Cu Mta	05-Jun	2			135	Le Van Thieu, le Thi Tuyet, Khanh
	4 farmer training courses in Ea Kar district on forage agronomy + 3 Field days	Hoa Khanh, Nam Dong, Hoa Phu, Ea Tling, Tam Thang	07-Jun	2			140	Nguyen Dinh Thu, Dung
	4 farmer training courses in Ea Kar district on forage agronomy + 3 Field days	Ea Huar, Tan Hoa, Ea Bar and Cuor Knia	09-Jun	2			140	Nguyen Van Duong
	1 farmer training courses + Field day	Ea Rieng commune	17-Jun	2			25	Hien, Khanh
	1 farmer training course	Ea Kao	19-Jun	1			25	He, Khanh

Appendix 1. Training courses in 2001

Country and Province	Name of training course conducted by FSP	Location	Date started	Length (days)	No. of field workers and officers	No. of researchers	No. of farmers	Course organiser (person)
<i>Philippines – Cagayan de Oro</i>	Farmers' seminar on forage production	Cagayan de Oro					188	Perla Asis
<i>Philippines - Bukidnon</i>	Forage Agronomy Training	Siloo	7 Jan	2			43	FSP
	Soil & Water Conservation Training	San Migara	25 March	1			19	FSP
	Livestock weight using girth measurement training	Poblacion	20 May	1			35	FSP
	Forage Agronomy Training	Samolo	27 June	2			20	FSP
	Livestock Production Training	Omagling	19 Feb	2			25	FSP

Appendix 2. FSP partners trained by other organisations in 2001.

Country	Name of training course conducted by FSP	Location	Date started	Length (days)	No. of field workers and officers	No. of researchers	No. of farmers trained	Course organiser (person)
Vietnam	Training on forage agronomy for farmer (Funded by PARC project)	Buon Don	12-Jun	2	2	0	12	Nguyen Van Duong and Khanh
Thailand	Beef fattening	Lopburi province, Nakornratchasima	22-Apr	3			20	Viroch Kukuntod, Dept. of Public welfare BENRO
Philippines	Technology of Participation-I	Bohol, Phil.	13 March	3	1			BENRO
	Technology of Participation-II	Boracay, Phil.	6 May	3	1			BENRO
	Farm Planning & Budgeting	Davao City, Phil.	2 June	3	2			DAR/ADB
	Integrated Rural Accessibility Planning	Malitbog	5 June	1	1			LGU-Malitbog
	2nd International Course on Participatory Research and Development	Los Banos	04- March	18		2		CIP-UPWARD

Appendix 3. Organisations that FSP has collaborated with in 2002.

Country	Name of organisation	Type of organisation	Place, Province	Activities in common with FSP
Philippines	Department of Agriculture	Research Institute	Cagayan de Oro City, Misamis Oriental	Forage Agronomy Training course and livestock projects
	Department of Agrarian Reforms	Research Institute	Cagayan de Oro City, Misamis Oriental	Livelihood project for the farmer collaborators
	ICRAF	Research Institute	Claveria, Misamis Or.	Soil and Water Conservation Project
	Philippine Coconut Authority	Research Institute	Misamis Oriental	Coconut-livestock integration
	Provincial Government of Bukidnon	Research Institute	Malaybalay, Bukidnon	Farmers Field Day/Livelihood Projects/Agri-fair
	Municipality Government of Malitbog, Bukidnon	Government agency	Malitbog, Bukidnon	Farmers Field Day/Livelihood Projects/Agri-fair
	Bukidnon Environment & Natural Resources Office	Government agency	Malaybalay, Bukidnon	Training on Technology of Participation
	DASVM-ViSCA	College - department	Leyte, Eastern Visayas	forage plots for instructional purposes (college students in agriculture)
	Department of Agriculture	Research Institute	Cagayan de Oro City, Misamis Oriental	Forage Agronomy Training course and livestock projects
	Department of Trade and Industry	Research Institute	Cagayan de Oro City, Misamis Oriental	Livelihood project for the farmer collaborators
	Department of Agrarian Reforms	Research Institute	Cagayan de Oro City, Misamis Oriental	Livelihood project for the farmer collaborators
	ICRAF	Research Institute	Claveria, Misamis	Soil and Water Conservation Project

Country	Name of organisation	Type of organisation	Place, Province	Activities in common with FSP
			Or.	
	ICRAF-Visayas	research institute	Leyte, Eastern Visayas	promotion of soil and water conservation practices (contour hedgerows)
	National Dairy Authority	Research Institute	Cagayan de Oro City	Dairy Cattle project for FSP farmer collaborators
	Natural Resources	Research Institute	Cagayan de Oro City	Soil and Water Conservation Project
	PCC at VISCA	government agency - agriculture	Leyte, Eastern Visayas	dissemination of forage planting materials to carabao raisers
	Philippine Carabao Center	Research Institute	Musuan, Bukidnon	Dairy Buffalo Project for FSP farmer collaborators
	Philippine Coconut Authority	Research Institute	Misamis Oriental	Coconut-livestock integration
	Provincial Governmnet of Bukidnon	Research Institute	Malaybalay, Bukidnon	Farmers Field Day
Indonesia	BPLP Training Center	Training Center	Samarinda, East Kalimantan	Training for Field Worker
	Deliveri	Livestock Project	TanahGrogot, Pasir District, East Kalimantan	Training for Field Worker in PRA
	Care International	NGO	East Kalimantan ,Samarinda	Field day ,forage species plots in Marangkayu
	Kutai Barat Agriculture Services	government agency - agriculture	Kutai Barat,Melak	Preparing planting material for farmers test
Thailand	Division of Self Help Land Settlement Department of Public Welfare Ministry of Labour and Social Welfare	Government	Pakchong, Nakornratchasima	Beef fattening Project

Appendix 3. Collaborating organisations in 2001

Country	Name of organisation	Type of organisation	Place, Province	Activities in common with FSP
Vietnam	NIAH	Research	Ha Noi	Coordinator
	Taynguyen University	University	Buon Ma Thuot, Daklak	Manager
	DARD in Buon Don and Cu Jut Districts	Government	Daklak Province	Supervisor and Development workers
	Extension Office in M'Drak, Ea Kar, and Cu Jut Districts	Government	Daklak Province	Supervisor and Development workers
	DARD in Daklak Extension Office in Daklak	Government	Daklak Province	Supervisor
	Daklak province	Government	Daklak Province	Supervisor
	Head of fish farmer group in Buong Mathuot (Nguyen thi He)	Farmer groups	Daklak Province	Development worker
	Head of fish farmer group in Ea Rieng commune, Krong Bach District (Nguyen Thi Hien)	Farmer groups	Daklak Province	Development worker
China	Farmer Centered Research Network, China(FCRNC)	NGO	China Agricultural University, Beijing	Exchanging and sharing the experiences in Farmer's Participatory Research in China and abroad

Appendix 4. Trip report Bangkok, 11 – 14 March 2002

Ralph Roothaert

Objective:

To participate in the workshop on 'Research and Development Strategies for the Livestock Sector in South East Asia through National and International Partnerships', organised by FAO and ILRI.

Technical and policy issues:

During the first two days, presentations were made on:

- Current activities of ILRI, FAO and partners.
- Livestock policies and markets
- Technology and adoption processes
- Markets and smallholder participation
- Food safety and quality

I was invited to give a presentation during the third session, with the title: 'Adoption strategies for forages – Experiences of the Forages for Smallholders project'.

One objective of the meeting was to develop concepts for livestock research and development in the region, and to prepare plans for presentation to donor organisations. The third day was reserved for working groups to address these objectives. Groups were divided by countries, with more than one country per group. I was chairing the group for the Philippines and Indonesia. The intended outcome of the group discussions were researchable issues for ILRI and FAO. The process followed the following steps:

1. Listing the characteristics of small-scale livestock producers.
2. Identifying the features that cause change in the systems, either internal or external factors, positive or negative.
3. Describe different pathways to development of the systems.
4. Identifying researchable issues, where ILRI and FAO have a comparative advantage.

Some pathway scenarios were discussed, showing that small farmers either:

- Remain small, but increase production level
- Become larger, more intensive, more specialised livestock systems, and more commercial
- Specialise in other agricultural activities
- Leave the livestock sector

Issues that were suggested for ILRI and FAO were global policy research. Specific issues were research on domestic subsidy and export subsidy practices of member countries in relation to WTO regulations. Other policy issues that emerged were implications of sanitary regulations for export, that can have negative effects on local production of ruminants and poultry, meant for local markets. Issues that were researched in the past with little success and that have to be re-addressed are the difficulty of banks to deal with smallholder credits, and the failure of cooperatives to

channel these credits. Other options need to be found. Bringing markets closer to the smallholders (infrastructure, information, organisation, education) is another issue that governments, NGOs and other Institutions are likely to continue addressing in the future. Indonesia stressed the importance of technology innovations that ILRI can address. If the aim is to increase production levels of smallholders, low input technologies need to be developed, improved utilisation of manure, more stable feed supply in food feed systems, and increased efficiency of labour. Ruminant livestock were identified as the most important enterprise to escape poverty for smallholders, and would therefore need more research support.

General observations

The relevance of smallholder farmers in the future in S E Asia was questioned by some, and suggestions were made to focus on more intensive large scale systems, following examples of developed countries. Fortunately it was generally agreed that smallholder livestock production can be an important pathway out of poverty.

The meeting drew experiences of high profile people from various countries in the livestock development and research sector. Voices from all countries were almost equally heard and language barriers were much less prevalent compared to other workshops. Therefore the meeting was unique in its kind. It was a good exercise to put forage research and development in the context of policy, marketing, trade and animal health. I did not attend the last 2 days which were devoted to proposal development for ILRI and FAO.

People met

Dr. Sorn San, National Animal Health and Production Centre, Cambodia We discussed the possibilities of participation of Cambodia in the next phase of the FSP project. Cambodia is interested, as some of their feed projects on multi-nutrient blocks, rice straw treatment and Leucaena have stopped due to lack of funds.

Dr. Salvador Fernandez-Rivera. Coordinator Livestock Feeds and Nutrition Programme, ILRI, Addis Ababa. Salvador told me that the DFID-IFAD project will include Vietnam. CIAT is given the responsibility for facilitating the implementation in Vietnam. Salvador promised to send an official communication through email.

Appendix 5. Trip report Mindanao, 18 – 23 March 2002

Ralph Roothaert

Objective:

- To finalise workplans in Malitbog, Cagayan de Oro, Impasugong and Manolo Fortich Municipalities, and set targets for reporting in 2002.
- To monitor research and development activities.
- To review research and development processes.

Cagayan de Oro, 18-3-2002

I met with a group of farmers of Dansolihon and Lumbia, who were all interested to participate in an experiment on integration of fodder tree species on farm. Species included in the trial were *Calliandra calothyrsus* (control), *Trichantera gigantea*, *Cratylia argentea*, *Sesbania sesban*, *S. rostrata*, *S. grandiflora*, *Morus alba*, *Leucaena leucocephala* K636, *L. Trichandra*, and *Desmodium cinerea*. The original objective was to compare the performance of two sets of species, divided over two groups of farmers. Due to some spontaneous modifications, however, the farmers ended up raising a mix of species in their individual nurseries, and the distinction of two groups was not clear anymore. For statistical reasons it was important to remain the group factor, in order to be able to reduce the error caused by environment. A new grouping division was created according to the table below. Species in group 1 were *C. calothyrsus* (control), *L. trichandra*, *M. alba*, *T. gigantea*, and *L. Leucocephala* K636; species in group 2 were *S. sesban*, *S. grandiflora*, *S. rostrata*, *C. argentea* and *D. cinerea*. There were at least 6 farmer replicates per group. Many farmers were interested in planting *C. calothyrsus*, *T. gigantea* and the three *Sesbania spp.* Some extra seeds and planting materials were provided, to satisfy everyone's needs. *M. alba* and *T. gigantea* were planted through cuttings. *M. alba* seemed more resistant to drought than *T. gigantea* during the establishment phase. Very little rain had fallen in the last few months. Apart from the fodder trees, farmers expressed an interest in trying the grass *Brachiaria ruziziensis*. (Follow up: RR).

Impasugong, 19-3-2002

I met with Hon. Mayor Okinlay, and we discussed the livestock development and research activities in the municipality. This year, 400 cattle will be dispersed to farmers in 13 different barangays. Farmers will fatten the animals for 6 months and will be paid PhP 50 for every kg liveweight gain. The Brahman cattle originate from Delmonte farm, and are returned to the same farm. Farmers need to have planted at least 600 m² of forage to qualify for the dispersal.

In the new barangays Kibenton and in Cawayan, participatory diagnoses (PD) were carried out. PDs are extended over 4 weeks; a team of several ATs visit the village once a week, for half a day. Sometimes, different PDs can be carried out during the same period. This approach has several advantages. Contact time is never longer than 4 hours, which leaves farmers always the option of spending the rest of the day to attend

farm activities. It also provides the opportunity to reflect on the sessions with the farmers and clarify issues the next time, or to gather information during the week to satisfy farmers' queries. Eight ATs have been trained by FSP in participatory research, forage agronomy and gender analysis. The teams conducting PDs divide tasks and topics, such as questioning, drawing and writing reports. Farmers who had participated in PDs planted napier (florida and dwarf), guatemala grass, setaria, arachis, *Paspalum atratum*, leucaena, calliandra and signal grass. Calliandra is also used by the Department of Agriculture and Natural Resources for reforestation. The Kibawi Seed Farm of the Bukidnon Agriculture and Fisheries Council produces seeds of stylo, which farmers can obtain and plant on contours. It is suggested that farmers compare this with the CIAT *S. guianensis* 184 (**follow up: Elsie, Ed**).

Some problems that farmers face are related to the lack of policy to restrict movement of stray animals. Farmers who planted forages on external farm boundaries often find that their forage crops are browsed by stray animals. Some people even tether their animals on the boundary of someone else's farm. Signal an star grass planted on boundaries sometimes encroach crop land, which farmers find undesirable.

Farmers groups exist in Impasugong; they are normally multipurpose cooperatives dealing with marketing of corn and tomatoes. FSP meetings with farmers are not restricted to these groups; different existing groups and individuals meet together. It would be advantageous if new groups were formed for research activities of FSP, each group with a relatively stable membership, and clear objectives of research and development activities. This way it would be easier to achieve and measure progress of development of new forage technologies in the municipality. A select number of individuals could carry out research on behalf of the whole group.

The FSP team in Impasugong have planned with farmers to test forages on contours, boundaries and communal areas. River banks and vacant areas are considered communal. It is likely that planting on contours will be most appreciated, as the use of it can easily be controlled. Experience in other countries have shown that communal management of improved forages is difficult; it requires high organisational structures and consensus of the communities involved. The lack of a penalty system for stray animals contributes to these difficulties. Restrictions on stray animals, imposed by the Mayor, would stimulate cultivation of forages in Impasugong.

Selected farmers in Impasugong have visited focus sites at Cagayan de Oro and Malitbog. A few farmers have joined a trip to Batangas, to see the leucaena feeding systems. It is important to monitor farm developments of these key farmers, to be able to show tangible impacts of these cross visits.

A monitoring and evaluation exercise had been conducted in November - December 2001. Thirty-six farmers were interviewed and data were recorded about species planted, area per species, date planted, source of planting material, use of forage, planting system and management system. The same farmers need to be visited again in June 2002, to evaluate expansion of forage areas per species, and other changes (**action: FSP team Impasugong**).

Other farmer meetings that regularly occur are about:

- Livestock dispersal
- Other crops

- Cooperative
- Barangay assembly
- Weekly palima, sometimes on forage multiplication
- FSP Christmas party with award ceremonies for farmers

Malitbog, 20-3-2002

A group meeting was held with 19 farmers from various barangays, and 8 development workers. Almost all farmers present had cattle or carabao; two farmers had only goats. The venue was 'Alayon Forage Kaluluwayan', a farmers group established several years ago. A demonstration plot had been established at the site before 1995 by the PPAEP project. In 1996, FSP added more forage species obtained from Central Mindanao University, and a few farmers tried these species in plots of 5m x 5m. The group started with five farmers and has grown to 12 farmers. From 1997, the site was also used as a base for other barangays to learn about new forages. Species in the original demo plot were *B. brizantha*, *B. decumbens*, *B. humidicola*, setaria var. *splendida*, setaria var. *nandi*, *Andropogon gayanus*, napier, king, guinea, arachis, stylo 184. The ones preferred by farmers now are setaria *splendida* (drought resistant), napier and king grass (both good yield). Stylo was considered good for grazing, although it needs to be reestablished after 3 years. When *decumbens* or *brizantha* are mixed with arachis and grazed, the grass disappears and the legume remains after some time. When arachis is mixed with *humidicola*, arachis disappears. Setaria var. *splendida* or *nandi* are good combinations for mixed grazed pastures with arachis. A few farmers are growing *Gliricidia* var. *Retalhuleu*. One farmer has a large area with it providing live stakes for climbing beans. Some farmers are now experimenting with calliandra in nurseries.

Farmers sell all their cattle to middlemen, who collect the animals from their farms. Prices are based on liveweight, but weights are estimated by the middlemen. Some farmers are aware of the prices per kg liveweight paid at the abattoirs in Cagayan de Oro. Prices normally range between PhP 46 and 50, but can be as low as PhP 38 during school enrolment, when most farmers sell their livestock to be able to pay fees and uniforms. Enrolment is every year in June, coinciding with the beginning of the rainy season. Selling cattle at this time of the year reduces profitability of the cattle enterprise drastically. This could be an important factor that prevents farmers to balance diets of their livestock with improved forages. There seems to be scope to work with communities to address these problems. Farmers could sell their animals a few months earlier and invest in commodities that can be sold without loss during enrolment season. A community based agribusiness scheme would be advantageous. Farmers could also be empowered through the availability of a cattle weighing scale, placed for instance near the Municipal Hall.

Some farmers present at the meeting explained the history about a new forage group that they formed: 'Mabuhay'. Last year, they met farmers of the Kaluluwayan group at the market in San Louis, and started talking about forages. The Kaluluwayan group referred them to the extension worker, Nelson. They started with planting setaria on contours and formed a group of 4 members. They have since then participated in several cross visits, facilitated by FSP. They are now growing 5 different species for feed and erosion control.

Meeting on monitoring and evaluation, 21-3-2002

I arranged a meeting with all field workers and FSP site managers from Malitbog and Cagayan de Oro, in Cagayan de Oro. We reviewed the monitoring and evaluation of 30 random farmers from each site that were interviewed with formal questionnaires. Teaching how to enter and organise data in MS Excel consumed several hours, and this was regarded as very useful. With some simple commands in the computer programme, results could be grouped in different categories. About half of the people attending were able to manipulate data in the computer after this day. I stressed the importance of visiting each farm when data are collected; in that way misunderstandings about forage area per species can be minimised. In Malitbog it had been difficult to track seven of the randomly selected farmers. Apparently they had been on holiday, or away from the farm for a long time. It is a significant observation that 23 % of the farmers in Malitbog abandon their farm during part of the year.

We also evaluated the impact of FSP methodologies. These impacts could be divided into livestock and other activities. An obvious livestock impact was that FSP farmers had more chance to receive cattle and goats from dispersal programmes of the Department of Agricultural Reform. There were many non-livestock impacts as well. Participatory diagnoses (PD) often resulted in better understanding of problems with crops. An example was a training course for farmers on IPM for banana diseases, that resulted from a PD. FSP field workers often function as liaison persons between the farmers and the Barangay Development Council, to address various non-agricultural problems. Cross visits organised by FSP have also resulted in better liaison with ICRAF and increased knowledge on commercial tree species and how to integrate in their farm.

Manolo Fortich, 22-3-2002

I met with Hon. Socorro O. Acosta, Mayor of the municipality. There had been an addition to the Agricultural Office staff; Mr. Mar Ramotigue is the new MAO, and Mr. Ernesto Ducusin is now Municipal Agriculturist (MA). Ms. Acosta talked about the importance of smallholder livestock production in her municipality. She identified the absence of a livestock market in the area as a problem, and was intending to establish one in Manolo Fortich. It is hoped that this would stimulate smallholder beef production, through fairer cattle prices for farmers. We also discussed the need for more ATs to be associated with FSP; at present there is only one, and he is over stretched with work. The Mayor promised to assign German Genesi, Cynthia velasco, Mar Remotigue, and Antonio Guillermo to FSP. We agreed that at least three of them would attend a training course on participatory research and forage agronomy, organised by FSP this year. Another candidate for the training would be Ponciano Chavez, an NGO staff (**follow up: Ed Magboo**). There are several accredited NGOs in the municipality: micro credit for ultra poor women, cooperatives, and 'Binhi' home industries.

Del Monte farm was visited to find out about cattle dispersal schemes. Del Monte imports thousands of lean cattle from Australia each year, and fattens them with pineapple waste. They also have about 900 breeding stock, producing 700 calves per year. This year they are availing 1000 lean cattle for farmers in Bukidnon Province, to fatten for 6 months. Farmers are paid PhP 50 per kg liveweight increase, and are covered by insurance, which is a good deal. Del Monte prioritises the municipalities in the near neighbourhood, but are flexible to provide to others as well.

Fodder trees on farm, experiment FSP-07, Cagayan de Oro City

Name	Barangay	number	reser	Call	L.	Mulb	Trich.	L.	S. ses	Cratyl	Des.	S. ros	S.	Group
		er	ve		trich		gig	K636	ia	cin		gran		
Regina Bisol	Dansolihon	1		200	200	100	200	200			200			1
Pedro Durango	Dansolihon	2		200		200	100		200	200	200			1
Manuel Buray	Dansolihon	3		200					200	200	200			1
Virgie Rublica	Dansolihon	4		200					200	100	200			1
Eilleaquin	San Simon	9		200	200	200	200	200						1
Mabunay														
Merlita Abalde	San Simon	11		200	200	200	200	200						1
Elizabeth	San Simon	12 *		100	100			100						1
Tawakal			absent											
Allan Tabangco	San Simon	14 *	not yet											1
Nectalie	Lumbia	5		200	200				200	200	200 *	*		2
Raganzajo														
Diomesio	Lumbia	6		100				200	200		200 *	*		2
Layonon														
Caesar Armero	Lumbia	7		200					200	200	200 *	*		2
Longino	San Simon	8		200					200	200	200 *	*		2
Nevarro														
Ethelinda	San Simon	10		200	200	200	200		200			*	*	2
Mangayah														
Evangelina	San Simon	13 *		200	200	200	200		200	200		*	*	2
Cadalo														

People met

Hon. Mario T. Okinlay, Mayor of Impasugong Municipality
Hon. Socorro O. Acosta, Mayor Manolo Fortich Municipality
Hon. Osmundo de la Rosa, Mayor of Malitbog Municipality
Mr. Lucrecio Madarang, Del Monte Philippines Inc., Manolo Fortich

Appendix 6. Trip report Lao PDR and Vietnam, 1 –12 April 2002

Nancy Johnson and Ralph Roothaert

Objective:

- To review monitoring and evaluation systems
- To plan socio-economic study for Philippines and Vietnam

Summary

CIAT's Asia staff has made a commitment to including monitoring and evaluation and impact assessment in their work. Efforts are being made to assess not only technology adoption and impact, but also the usefulness of participatory methods and the impact of project activities on the capacity of local partner institutions. Significant progress has been made on developing M&E frameworks, and in the case of the forages projects (FSP and FLSP) implementation of both M&E and impact assessment is underway.

Projects in Asia currently have little input from social scientists, however efforts are being made to change this through the hiring of consultants and preparation of proposals to fund social scientist positions. Some ways in which social scientists in CIAT (especially in BP1) can help support and extend this work include:

- Prepare a simple document that defines M&E and impact assessment, and provides examples of different kinds of analysis that can be done. We often use the two terms interchangeably, when in fact they are distinct (though related) activities with different purposes and methods.
- The FSP project may be a good candidate for a broader impact study, given the scope of the project and the existence of baseline data. If there is interest in pursuing this, we could seek funding for the study. Several consultants familiar with the projects may be available to implement it.
- Peter Kerridge would like to see individual project evaluation efforts linked into CIAT's overall sustainable livelihoods framework. One way to do this would be identify some common indicators—or elements of the livelihoods framework for which project-relevant indicators could be developed—that all M&E/Impact assessment efforts should include
- Help Asia staff identify appropriate consultants and prepare terms of reference for socio economic analysis within their projects. There will be a need for this next year in the context of the Nippon Foundation project supervised by Reinhardt Howeler.

Principal Contacts

All Asia-based CIAT staff (including PRGA)

Ms. Margaret Yoovatana and the Deputy Director General, Thai Department of Agriculture

Dr. Orapan S. Nabangchang, School of Economics, Sukhothai Thammathirat Open University

Drs. Werner Stur and Joane Millar, consultants to Forage and Livestock Systems Project (FLSP)

Dr. Tim Purcell, University of Queensland/Agrifood Inc, Hanoi.

Description of Activities

Bangkok April 1-2

1. Discussed Nippon cassava project and possible impact assessment work for 2003.

2. Meeting on assessing the impact of the CGIAR in Thailand.

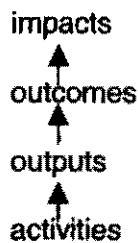
Participants: Nancy Johnson, Reinhardt Howeler, Watana Watananonta, Margaret Yoovatana and the deputy director general of the Department of Agriculture

Ms. Margaret Yoovatana, a social scientist at the Dept of Agriculture who often represents Thailand at regional CG meetings, is interested in documenting the impact of the CG centers in Thailand in an effort to increase Thailand's financial contribution to the CG. She has obtained approval from the Department of Agriculture to proceed with the study, however she is in the very preliminary stages of conceptualizing the study. They are interested looking beyond production impacts to poverty and distributional issues. While some funding from the Department of Agriculture may be available, they are interested in seeking funds for joint study or studies with CG centers. We decided that a first step would be to assemble what information is already available from the Center's on their impact in Thailand, and to use that as a base for further planning.

3. Meeting with Dr. Orapan S. Nabangchang, School of Economics, Sukhothai Thammathirat Open University to discuss a possible resource economist position to conduct multi-scale socioeconomic analysis of alternatives to shifting cultivation in uplands of Laos and Vietnam.

Vientiane, Apr 3-7

We discussed M&E and Impact assessment in the forages for small holders project (FSP, funded by ADB) and the Forages and Livestock Systems Project (FLSP, funded by AUSAID). We met with Peter Horne, Werner Stur and Joane Millar, a recently hired post doc fellow, based in Australia, who will work with the FLSP to implement and assess the usefulness of the M&E framework. Presently, an ME system is operating for FSP in Philippines, Indonesia and Vietnam. Courses have been conducted with field staff, key farmers and other stakeholders. Main components are: (1) the 6 monthly surveys of 30 randomly selected farmers, to assess changes in use and expansion of forage systems on farm, (2) farmer focus group studies to measure impacts on livestock productivity, and (3) frequent informal visits and discussions of farmers, field workers and management. An impact study had been carried out by Ir. Bosma in Indonesia, and he will also carry out similar studies in Philippines and Vietnam in June – July 2002. The terms 'ME' and 'impact' are sometimes used interchangeably, which can cause some confusion. A guideline that proved useful was a simple flow diagram as follows:



The 6 monthly survey is considered to measure mainly outcomes. We concluded that outcomes and impact of many participatory processes cannot easily be captured by surveys. Field visits of researchers and coordinators remain an important tool. Some of these outcomes are presented in Ralph's trip report to Mindanao, March 2002.

FLSP will start with several activities for ME this year:

1. Baseline case studies. Three households in 2 villages each will be interviewed on various aspects.
2. Village characterisation. Wealth assessment is an important component, as a tool to target the poor.
3. Human and Institutional capacity. We developed some methods for this in detail. Task 1 was to assess what project staff have learned from (a) farmers and (b) the project. Categories were technical knowledge, processes, skills, and attitudes/values/behaviour. Task 2 was to a self assessment of knowledge and skills of project staff, which was compared with assessment of supervisors.
4. Social capital in village.

FSP can adopt some of these activities in particular countries, if time and human resources permit.

We also discussed a PRGA proposal in institutionalising participatory research and its possible implementation in CIAT through a committee composed of CIAT staff members.

Vietnam, April 8-12

In Vietnam we spent 2 days visiting sites and meeting with farmers and staff members of FSP and the Nippon project in Tuyen Quang province. Mrs. Yen, the FSP site coordinator of FSP, had been given new responsibilities by her department to coordinate a provincial dairy project. Among the responsibilities were to prepare distribution of 750 imported dairy cattle to smallholders. We had cautioned the department though that these projects are very risky, as farmers had no experience with dairying, and no infrastructure was in place yet. As a result of her busy schedule, data of ME were still on forms and had not been entered in any electronic format. In stead of reviewing these data, we discussed the focus group studies on financial benefits of forages. We developed new spreadsheets for assessing profitability of fish and cattle farming.

We met with Tim Purcell in Hanoi. Through a new computer package we were able to extract spreadsheets from the original Access data base of the 'Adoption tree' and 'Benchmark survey'. Analysis of the original databases, developed in 1999, had been impossible in the past. Data that we can extract now will be useful to serve as a baseline for ME activities of FSP. They can also be used to extrapolate results of the socio-economic studies conducted by Roel Bosma.

Appendix 7. Trip report Lao PDR and Vietnam, 2-7 June 2002

Douglas Pachico, Ralph Roothaert

Objective:

- To attend the CIAT regional meeting in Vientiane
- To visit field sites in Vietnam

Extracts from the trip report of Dr. Douglas Pachico, Director of Research, CIAT:

About the meeting:

'Very considerable progress has been made towards implementing an integrated strategy for the uplands drawing effectively on inputs to varying degrees from a number of CIAT projects: agroenterprises, cassava, impact assessment, forages, land use, participatory research and soils. This is being done with a modest core investment that is leveraged with restricted project resources that account for about 80% of the resources expended in Asia. The art is to keep the portfolio of restricted projects aligned with a consistent strategy while also maintaining the flow of fresh restricted projects as project cycles come to an end. So far these dimensions are being very well managed and there is good prospect for expanded activities in diverse fields including agroenterprises, resource economics, and rural innovation.'

About the field trip:

'The next day we visited the local agricultural development office and then first visited two ethnically Vietnamese (kim) farms that have been reached through the FSP forage project. The first farm was quite prosperous, the second less so. Both were complex intensive mixtures of lowland rice, upland cassava as an animal feed, tea, livestock, fruit trees, forests higher up, and forages opportunistically inserted into a variety of niches as fodder banks and erosion control barriers. The poorer farmer reported that he fed brachiaria to buffalo, guinea grass and paspulum to fish, and stylosanthes to pigs which we saw eat it with great relish. Ralph reports that in some areas farmers cook sweet potato greens with stylo for pig feed. A consultant from Wageningen is doing a study of the economics of the new forages and he reports very positive results of increased income, reduced labor requirements, especially of women and children. Should be a very interesting study when completed.

It is very impressive how the formal research system has delivered new forage options to farmers who through a participatory approach are finding their own ways of incorporating and utilizing diverse germplasm in their systems. The combination is powerful: without the research system farmers would not have gotten access to brachiaria, while without the farmers, the research scientists were not thinking of brachiaria's potential as a fish food. Livestock are very important in the Asian upland systems, and feed resources are often going to be the key, along with animal health, to intensified production for improved small farm income. Manure is very carefully collected and managed for maintaining soil fertility. At this site even the less prosperous farm had, along with its mud floor, electricity for TV, fan, and light. It seems unlikely that all the next generation can all stay on the farm, but there are livelihood opportunities still on these

types of farms and it would seem the capacity to educate youth for next generation off farm employment.

Next we visited two superficially similar upland ethnic minority communities, the first Dao, the second Tay. The purpose of visiting these two villages was to identify potential research sites in which to collaborate with IFAD. The Dao village again appeared fairly prosperous with some good rice land, extensive upland fields, much agroforestry and higher up the slopes, forest. They had many buffalo, healthy looking cattle, pigs and large numbers of chickens. Their most important livestock, according to the people, are their goats all of which are pastured up in the high forest. In both villages their first priority was more rice, that is, improved food security. Again in both villages they were surprisingly frank about their desire that the government relinquish control of the steep slope forested land so they could either plant tea or make other use of the land. In one village the old woman in traditional dress particularly wanted electricity so she could have a TV. Such upland communities will be priorities in the proposed IFAD project.

Forages and cassava are clearly important elements in these systems as livestock feed. Access to markets is also a priority as will be nutrient cycling and land management. Participatory research is a key approach and impact assessment has high relevance. Thus, CIAT has much to offer. At the same time, IRRI is working on rice in similar communities, livestock is critical, while sweetpotatoes, agroforestry and forestry are important so there has to be clarification of how we will all do research together.'

Appendix 8. Report on Training Course on Monitoring and Evaluation of the Forages for Smallholders Project in Samarinda, Indonesia April 9-15, 2002

Jindra Genio-Samson

Structure of ME workshop in Samarinda, Indonesia

Forages for Smallholders Project is currently working with six districts of East Kalimantan, Indonesia . The workshop was attended by 24 participants composed of field workers, livestock officers and FSP technicians coming from the different districts of Pasir, Balikpapan, East Kutai, Central Kutai, Bulungan and Samarinda. The course was facilitated by one FSP staff , co-facilitated by the FSP national coordinator and a former FSP collaborator who acted as translator to address the concern of language barrier between the facilitators and the participants.

The workshop lasted for 7 days comprised of presentations, field days, data analysis, report writing and formulation of M&E workplan for the entire East Kalimantan.

New lessons learned

- Monitoring is not a new concept for many of the participants since they have been practising this already in their respective offices, but the in depth understanding of the “whole integral process” of PME concepts, practical application and its use in the project has improved their perspectives.
- The use of structured forms helped the participants to visualize the concepts of monitoring and evaluation. One measure that can determine whether they have truly grasp the meaning is when they try to modify and expanded the form according to the important indicators that they think are also useful. ME forms cannot be standardised in all countries because each country has their own focused concern.
- In the conduct of focus group discussion and interview, one has to have a brief background of the farmer or the location (eg. whether farmer belongs to a farmer group or an individual farmer) in order to categorise the context of the information generated. In the situation in Indonesia, farmer groups have a specialised system of planting and distributing forages as compared to an individual farmer.
- In the conduct of interviews, its very important that the exercise is fully explained to the farmers to avoid misconceptions.
- Majority of the participants were new fieldworkers, officers and technicians who had no or very little experience with FSP activities. It would have been very relevant to add sessions presenting FSP structure, principles and objectives. Many participants also had little knowledge and experience with participatory methods and wanted to

learn more about participatory tools. Training sessions on some tools that are highly relevant for ME can be added to the programme.

- The selection of participants for the ME is very relevant in the project's objective especially that FSP is near its phase end. It will be more effective that participants who will attend the training have already been working with FSP for at least 6 months to one year so that they have already a full grasp of the project's realm. Monitoring and evaluation of FSP activities requires a full understanding of the project to be able to have a good analysis and evaluation. Like in the case of Indonesia, this suggestion might be very difficult since the decision of "who to attend" relies on the supervisors. Its also crucial to make communications that would explain entirely the situation of the project to the supervisors so that they would allow the appropriate persons (requested by the coordinator) to attend the training.
- A workshop time frame of seven days is just appropriate. A one day break during the duration of the workshop is very much appreciated by the participants because they are able to relax, socialise and continue writing reports.

Training Evaluation

Evaluation by the Participants

During a discussion at the end of the training workshop, the participants shared that monitoring has been one of the many things they do in their respective fields, only that the term and the process is different. Many expressed that after monitoring, there is little or no evaluation from them usually comes after. Evaluation is usually done by other people. After the training, the participants acknowledged that they have gained a better knowledge, method and skills of monitoring and evaluating a project.

Based on the card and chart exercise, the participants evaluated the workshop as:

- Able to increase their knowledge and experience on ME
- There is a good participation from all participants
- Facilitators are qualified and have a good delivery of the information on PME
- The workshop have been very participatory
- Able to know and make friends with other participants

According to the participants, what they least like in the training is the short time given in making reports, they have suggested that at least two days must be allotted. Short time for resting in the afternoon was also expressed. Many of the participants also expressed some uncertainty that they might not be given another opportunity to attend a follow up training since the decision of attendance solely relies whether their supervisors will allow them or not. That is why they suggested that there be a continuity of training and follow up on the ME.

Two very important suggestion raised by the participants is the (1) need for field validation of the reports they have made and presented, and (2) attendance of key farmers in the workshop. Other suggestions for improvements of future trainings include distribution of T-shirt & bags to the participants, additional allowance, more time for report writing and distribution of modules before the training.

Evaluation by the trainor

If the Dinas Peternakan plans to involve the participants in the conduct of FSP ME, it must be assured that all have a good understanding of the FSP project. Since many of the participants have not been trained in participatory research the FSP way, then it's a must that such a training be conducted prior.

The use of translator is very effective in conveying the information to the participants. Participants also were encouraged to ask questions in their own language. Its crucial that facilitators speak clear and slow since many participants understand English but is only limited in expressing in English.

The participants had given great efforts in their field work activities, as well as the analysis and report writing. Sessions were extended up to 10 pm during report writing period. As a result, the participants were able to produce good reports and presentations. The skills of the participants can still be further polished by training them on in-depth or relational analysis of the data they have collected in the field. Perhaps more time on data evaluation and analysis is needed to train the participants.

24 participants is too large for this kind of ME Training. With this large number of participants, it becomes unavoidable for some not to be active in the discussions and report writing. Varied interest becomes difficult to handle, especially if its outside the concern of FSP project. A maximum of 11- 15 person will provide more focus on the participants. Selection of participants is very crucial.

Conclusions

Persons who will conduct the monitoring and evaluation activity must be qualified, meaning –(1) they have a good grasp and involvement in the activities of FSP, (2) attended any of the previous trainings of FSP (forage agronomy, participatory, etc.), (3) have an understanding of the objectives and goals of the project. This will prevent providing too much time on sessions that tackle the basic principles and activities of the project instead of just an overview.

Appendix 9. Common and botanical names of forages mentioned in text

Botanical name	Common name
<i>Andropogon gayanus</i>	Gamba
<i>Arachis pintoi</i> CIAT 22160	Arachis
<i>Brachiaria brizantha</i>	Brizantha
<i>Brachiaria decumbens</i> CIAT 606	Signal
<i>Brachiaria dictyoneura</i>	
<i>Brachiaria humidicola</i> var. Yanero	Yanero
<i>Brachiaria humidicola</i> var. Tully	Tully
<i>Brachiaria ruziziensis</i>	Ruzi
<i>Calliandra calothyrsus</i>	Calliandra
<i>Centrosema macrocarpum</i>	Centrosema
<i>Centrosema pubescens</i>	Ucayali
<i>Cratylia argentea</i>	Cratylia
<i>Desmanthus virgatus</i>	Desmanthus
<i>Desmodium rensonii</i>	Desmodium
<i>Flemingia macrophylla</i>	Flemingia
<i>Gliricidia sepium</i>	Gliricidia
<i>Gliricidia sepium</i> accession Retalhuleu	Retalhuleu
<i>Leucaena leucocephala</i> variety K 636	Leucaena K636
<i>Leucaena trichandra</i>	Leucaena trichandra
<i>Morus alba</i>	Mulberry
<i>Panicum maximum</i>	Guinea
<i>Panicum maximum</i> CIAT 6299	Tobiata
<i>Panicum maximum</i> T 58	Purple guinea
<i>Paspalum atratum</i> BRA 961	Paspalum
<i>Pennisetum purpureum</i>	Napier
<i>Setaria sphacelata</i> - Nandi	Nandi
<i>Setaria sphacelata</i> var. <i>splendida</i>	Splendida
<i>Stylosanthes guianensis</i> CIAT 184	Stylo
<i>Sesbania grandiflora</i>	Turi
<i>Sesbania rostrata</i>	
<i>Sesbania sesban</i>	
<i>Trichantera gigantea</i>	Trichantera

Appendix 10. Workplans for 2002.

10.1 Workplan FSP China

Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Location	1. Development of forage technology					
CATAS	1. Shrub legume experiment with promising species, chemical analysis, commence in 2001	X	X	X	X	Preliminary identification of the best ones suitable in Hainan province
CATAS	2. New stylo evaluation for anthracnose resistance, planted in 2000.		X		X	Preliminary information on anthracnose resistance of 22 stylo varieties
Baisha (2) Danzhou (1)	3. Continue and evaluate FPR evaluation of grasses, legumes and shrubs in 3 villages with 15 farmers Commenced in 2000 (Living fencing and boundary planting of King grass and shrub legumes with 5 farmers, Baisha)		X	X		Identification of suitable species, report (yield and performance in dry season)
Danzhou or Dongfang	4. Stylo intercropping in fruit plantation with 5 farmers	X			X	Ground cover, yield, green manure and soil improvement
Baisha	5. Use of shrub legumes feeding and fattening goats and rabbits with 5 farmers	X	X	X	X	Estimate of animal and farmers economic performance
Danzhou	6. Arachis for green cover and animal production with 5 farmers	X	X	X	X	Forage potential and animal productivity fed Arachis.
2. Dissemination						
	1. Collection of secondary data	X				5 new villages Reports on natural conditions, population, land-use, agricultural data, organizations, services etc.

Appendix 10. Workplans

Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Hainan	2. New site selection of villages/communes	X				5 new villages selected
	3. Participatory diagnosis	X				7 participatory diagnosis in 5 villages (including two women groups) and report. Total 70 new farmers participated in PD
	4. Participatory planning	X				5 days (1 day per village)
	5. Participatory monitoring and evaluation				X	Description of suitable species and technologies
	6. Farmer to farmer visits			X		5 cross visits, 100 farmers from 12 village with established forage exchange information
3. Multiplication						
	1. Buy some grasses and shrub legume seeds from Vietnam and Indonesia	X				Description of official procedure for import and export of seeds to Hainan
	2. Build up seed supplies of shrub legumes. 5 farmers	X	X	X	X	Total 50 kg of seeds produced
	3. Seed production of promising new Stylo accessions 10 farmers	X	X	X	X	500-1000 grams of new accessions. Total 20 kg
	4. Seed production of <i>P. maximum</i> , <i>B. decumbens</i> , <i>B. brizantha</i> , <i>Setaria sphacelata</i> . 10 farmers	X	X	X	X	2-5 kg of each species
	5. Planting material nursery of King grass, Elephant grass cv.Mott, <i>Panicum maximum</i> , <i>Gliricidia sepium</i> , <i>Cratylia argentea</i> , <i>Arachis pintoii</i> and <i>Leucaena leucocephala</i> (on- station)	X	X	X	X	35000 cutting or splits and seedlings for <i>Gliricidia</i> , King grass etc.
4. Training						
	1. Farmers field visits and training		X			7 days training (1 day per village)

Appendix 10. Workplans

Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
2. One training course for technicians or extension workers to build up monitoring and evaluation capacity	X				3 days training, 10 technicians or extension workers trained
3. Training material translation and printing	X				Translate in Chinese and printing
4. Visits of extension workers to other FSP sites in Hainan to exchange experiences			X		10 staff visit
5. Farmer trainings on animal production management	X				30 farmers
6. Farmer training on forage agronomy	X				100 farmers trained
5. Networking					
1. Seafarad contributions		X		X	4 articles
2. Quarterly reports to regional coordinators	X	X	X	X	4 reports, email
3. Networking with PR group led by Prof. Li Xiaoyun					Collaborative projects
5. Workshop with counties	X				Improved knowledge of FSP project and extension of FSP outputs Sensitisation of county staff in the province

10.2 Workplan of East Kalimantan, Indonesia

Component (Activities)		Activity Schedule 2002												Expected outputs
Focus village	1. Development of forage technology	1	2	3	4	5	6	7	8	9	10	11	12	
Sepaku II, Makroman	Field days for new farmer groups					X	X	X						4 field days conducted in Sepaku and Makroman For 6 new groups
Sepaku, Makroman	Cross visit for new farmer group						X	X	X					Visits by 10 new FG and technician to be conducted
Sepaku II	Development of technologies for improving Imperata grassland: a. Oversowing of <i>Imperata</i> area with <i>Stylo</i> and <i>Brachiaria</i> , <i>Humidicola</i>			X	X	X	X							4 ha of improved <i>Imperata</i> areas on communal land and on 10 farms
Sepaku II	b. Establishment of improved forages by minimum cultivation		X	X	X	X	X	X						Forages for improvement of grazing area by minimal cultivation identified
Sepaku II	c. Utilization of grazing animals to spread improved forages in Imperata grasslands													Forage species that can be spread by grazing animals identified.
Sepaku, Makroman	Development of technologies utilizing forages as contour hedgerows for erosion control		X	X	X	X	X	X	X	X				20 farmers testing forage as contour hedgerow for erosion control.
Sepaku II, Makroman	On-farm planting of fodder tree legumes for dry season's feeding	X	X	X	X	X	X			X	X	X		Planting of fodder tree legume continued and expanded by farmers
Sepaku II, Makroman	Testing of different forages and food crops by women's group to increase income.			X	X	X								Different forage and food crops tested by women's group.

Appendix 10. Workplans

Component (Activities)		Activity Schedule 2002												Expected outputs
Sepaku, Makroman	Basket composting for vegetable and cash crops		X	X	X	X	X							10 households test basket composting for vegetables and cash crop production.
Sepaku II, Makroman	Evaluation of cattle fattening by farmers	X	X	X	X									To know cost and benefit of fattening cattle
Sepaku II, Makroman	PME exercises	X	X	X	X	X	X	X	X	X	X	X	X	12 PMEs conducted
New Sub-district	2. Dissemination													
Samarinda Iir (new village), Sepaku (new villages), Pasir Belengkong, Penajam Balikpapan Utara, Loa Kulu, Anggana Samboja, Sanga-sanga, Barong Tongkok, Muara Wahau, Sangatta, Kaliurang, Teluk Bayur, Tanjung Palas, Malinau	Selection of new sites, collection of secondary data PD and PP with 5 villages					X	X	X						2 new sub-districts identified
	Field days for new farmer groups						X	X	X					Farmers' problems and solutions identified
	Cross visit for new farmer groups, FW and technicians to the nearest focus sites					X	X	X						4 field days conducted for 6 farmer groups
	Cross visits and assistance to new areas						X	X	X					Increased knowledge of new farmer (10 FG and 5 FW, each FG 5 farmer)
	Demonstration on forage species suitable under oil palm plantation and under coconut					X	X	X	X	X				Key farmers of focus sites have visited new sites and helped new farmers
	Meetings of leaders and key farmers of different farmer groups to discuss strategies for scaling up					X			X			X		4 farmers testing forage under oil palm or coconut
	Radio, TV and news papers broadcasting on farmers activities.	X	X	X	X	X	X	X	X	X	X	X	X	Meetings every two months with villages within close proximity
	Regional competition in nursery of farmer group					X	X	X	X	X	X	X		12 radio interviews, 4 TV and 3 newspaper interview.
														I regional competition to build up motivation for the use of forages

Appendix 10. Workplans

Component (Activities)		Activity Schedule 2002												Expected outputs	
New Province (Palembang and others)	Assistance in Participatory approach									X	X				3 person from East Kalimantan to assist in Participatory approach
New sub district	PME exercise	X	X	X	X	X	X	X	X	X	X	X	X	X	12 PME's to be conducted
3. Multiplication															
Focus site and new areas	Production of vegetative planting materials by farmer group and individual farmers	X	X	X	X	X	X	X	X	X	X	X	X	X	2000 cuttings supplied to each new farmer.
	Production of seeds and root cuttings for new farmers	X	X	X	X	X	X	X	X	X	X	X	X	X	2,000,000.00 root cuttings prepared for new farmers
Sepaku II, Makroman	Production of root cuttings and seeds	X	X	X	X	X	X					X	X	X	Planting material produced by farmers in focus site to supply needs of new farmers
Sepaku II, Makroman	Establishment of tree seedlings in poly bags				X	X	X					X	X		80 % tree seedling germinate and distributed
4. Training/Capacity building															
Sepaku II, Makroman	Training of key farmers in forage agronomy							X							15 key farmers trained
Sepaku II, Makroman	Training of key farmers in animal nutrition and health							X							15 key farmers trained
Sepaku, Makroman, Loakulu, Samboja	Training of key farmers in make UMB process								X						15 farmers know how to make UMB
Sepaku, Loakulu	Training of farmer on body weight estimation using tape measure								X						15 farmers to be trained on ruminant bodyweight estimation using tape measure
Samarinda	Training of field workers in Participatory monitoring and evaluation (PME)				X										15 field workers trained in PME

Appendix 10. Workplans

Component (Activities)		Activity Schedule 2002										Expected outputs	
Samboja and Samarinda	In country workshop to exchange experiences of field worker and technicians										X		1 workshop organized
Samarinda	National training on FPR and forage technology for field workers and technicians							X	X				15 technicians and field workers trained
Makroman	Training of farmer on the Bokasi Process (rapid composting)					X							15 farmers trained
Vientiane	English training in LAO PDR							X	X				1 field worker trained
5. Networking													
	Contribution to SEAFRAD newsletter					X					X		2 contributions to SEAFRAD newsletter
	Involvement in national workshops and seminars					X		X				X	2 workshops participated
	Attendance of regional and international workshops					X						X	2 workshops participated
	Network with Mulawarman University, Care,LPTP.				X			X				X	Coordination of programs

Appendix 10. Workplans

10.3 (a) Workplan of Cagayan de Oro, Philippines

Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Cagayan de Oro City	1. Development of forage technologies					
	1. Testing, evaluating and demonstrating the integration of tree legumes into the farming system for animal feeding (on-farm research on fodder trees)	8				On -farm weekly visit 8 farmers Narrative Report
	2. Testing, evaluating, and demonstrating forage integration into farming system for soil conservation	5	5	5	5	20 farmers 4 groups Case study
	3. Quarterly meeting among farmer groups for exchanging views and share learning experiences	1	1	1	1	4 quarterly meetings
	4. Participatory evaluation	30		30		60 farmers
	5. Regular visits to the focused group of farmers for the PM&E activities	30	30	30	30	Forage development activities of 30 farmers involved in the PM&E closely monitored
	2. Dissemination of forage technologies to selected sites					
	1. Planning workshop with core farmers groups to discuss status, plans & issues related to forage area expansion	1	1			2 workshops with farmers 40 farmers
	2. Selection of new sites	4				4 new farmer groups

Appendix 10. Workplans

Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
3. PD, PP, Gender Analysis	2	2			4 PD,PP, Gender Analysis
4. Farmer's Livestock Field day		1		1	2 Livestock Field days 200 farmers attended
5. Establishment of forages by new farmer	1	1	1	1	40 new farmers
3. Multiplication of forage planting materials					
1. Seed production of <i>Calliandra</i> , <i>Leucaena</i> K636, Stylo 184 & <i>Centrosema</i>	2	2	2	2	8 farmers producing seeds
2. Maintenance of seed/vegetative multiplication site at CCC	1	1	1	1	More species options were provided to farmers
3. Grafting, marcotting <i>Leucaena</i> KX2 F1 hybrid	2	2	2	2	8 farmers producing 80 seedlings produced
4. Identification of multiplication sites managed by the farmers in FS Catanico & Tagpangi, Baikingon	1	1	1	1	4 sites each barangay
4. Training & Capacity Building					
1. Training in participatory approaches & development (c/o UPWARDS)	1				FSP-Cagayan de Oro City Coordinator attended
2. Bi-annual meeting and planning workshops involving the Technicians, key farmer leaders and local government officials for the stakeholders to be aware of the overall plans and progress of the project in Cagayan de Oro City	1		1		Two meeting/ workshops conducted with 20 stakeholders participated
3. 3. On-farm farmers' seminar on the relevance of integrating soil & water conservation technologies into their farming system	1	1			Two on-farm seminars conducted with 40 farmers participating

Appendix 10. Workplans

Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
4. On-farm farmers' seminar on forage production, agronomy, animal feeding and other related topics		3	3	3	9 seminars conducted and 180 farmers attended
5. Key-farmers leaders and Technicians cross-visit Cebu Mag-ugmad Foundation		15			10 farmers 5 DW
6. Key-farmers cross-visit Davao	20				15 farmers 5 DW
7. Key-farmers cross-visits ICRAF, Malitbog, Impasugong, PCC Bukidnon		50	50		5 cross visits conducted involving some 00 key-farmers
8. Involve key farmers from focus sites in strengthening & sustaining existing forage networks thru informal group discussions	2	2	2	2	2 Key-farmers utilized as resource person
9. Cross visit for the LGU executives		1			Participation of 2 LGU executives to a cross-visit to MFI, Cebu City
5. Networking					
1. Participation in local agricultural fair			1		1 participation
2. Take part and contribution to SEAFRAD	1		1		2 articles
3. Facilitating access to livestock livelihood (PCC, NDA, DENR, PCA, DAR, NGO and others)	5	5	5	5	10 farmer recipients of animal dispersal program
4. Participation in international workshop				2	2 participants
5. Payment to communication expenses (telephone, cell phone, internet, air parcels, etc.)					Quick communication with collaborators established

Appendix 10. Workplans

(b) Workplan of Malitbog, Philippines

	Component (Activities)	Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Malitbog	1. Development of forage technology					
	1. Testing, evaluating and demonstrating the integration of tree legumes in to the farming system		2		2	Four farmers individual plots established.
	2. Establishment of tree legumes nurseries	2	2			Four tree legume nurseries established on- farm
	2. Dissemination of forage technology in selected sites					
	For new sites:					
	1. Participatory Diagnosis	8	8			Problems of farmers identified
	2. Participatory Planning	8	8			Activities for forage establishment laid-out
	3. Participatory Evaluation			6	6	Preferences of farmers to different forages identified
	4. No. of new sitios planting forages			6	6	
	5. No. of new farmers planting forages		24	24		
	6. Meeting with "Alayons"	15	20	20	15	70 meetings conducted with some 630 farmers attending
	3. Multiplication System					
1. Establishment of multiplication plots and communal nurseries for vegetative planting materials in new sites		4	4		Eight multiplication sites established	

Appendix 10. Workplans

Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
2. Procurement of tree legume seeds (Flemengia and Desmodium) from Bansalan, Davao del Sur					10 kg of legume seeds (Flemingia and Desmodium) procured
4. Trainings and capacity building					
<i>For Key Farmers</i>					
1. On-farm seminar on livestock production and management	2	2	2	2	Eight on-farm seminars conducted with some 200 farmers participating
2. Farmers' Cross Visits:					
• Claveria, Mis. Oriental- Soil Conservation	2	2	2	2	200 farmers attended
• Bansalan, Davao del Sur- Utilization of fodder trees		1			20 participants attended
• Cebu- Soil conservation technology and MFI organizational management		1			20 farmers attended
• Cagayan de Oro City- Livestock Field Day		1			25 farmers attended
• Balingasag, Misamis Oriental- Goat management		1			25 farmers attended
3. On-farm seminar on crop-forage-livestock Integration in sloping lands	2	2	2	2	Eight on-farm seminar conducted with 200 farmers attending
4. Farmers Field Day- to promote exchange of information and experiences among farmers		2	2		Conducted 4 farmers' field day with about 120 farmers attending

Appendix 10. Workplans

Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
<i>For Development Workers</i>					
1. Process documentation and data Analysis		1			Seven Development Workers trained
2. Forage Agronomy Course		1			Three Development Workers trained
3. Case Study preparation technique		1			Three Development Workers trained
4. Capacity Building – Provision of one disk jet printer	1				One disk jet printer provided
<i>For LGU Executives</i>					
1. Cross-visit to MFI Inc. Cebu City		1			Two LGU Executive attended the cross visit
5. Networking					
1. Contribution to SEAFRAD		1	1		Two articles prepared
2. Participation to locally conducted scientific congress and agricultural fairs	1	1			Participated in two locally organized agricultural fairs by providing FSP booth
3. Participation to international workshop					At least two Technicians attended
4. Payment of communication expenses (telephone, mobile phone, e-mail, air parcels, etc.)					Quick communication system with project collaborators established

(c) Workplan for Impasugong, Philippines

	Component (Activities)	Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Impasugong	1. Development of forage technology					
	1. Testing, evaluating and demonstrating new forage technologies learnt by cross-visits on soil conservation		1	1	1	Established at least 1 area per barangay
	2. Dissemination of forage technology in selected sites					
	1. Expansion of forage area in existing barangay		3	3	4	At least 10 farmers expanding forage area in every barangay
	2. Planning with core groups on status and issues related to forage expansion	1	1	1		Plan for 3 new barangay conducted
	3. Selection of new sites (Kibenton, Cawayan, La Fortuna)	1	2			Three new sites selected
	4. Conduct of participatory diagnosis	1	2			Problems of farmers identified
	5. Monitoring and evaluation activities	3	4	6	7	Document on technologies, process, systems, methods of forage development in the focused barangays (6)
	3. Multiplication of Forage Planting Materials					
	1. Establishment of on-farm multiplication plots	1		2		Five multiplication plots established and planting materials distributed
4. Training and Capacity Building						
1. Process Documentation and data analysis			1		Eight Development Workers attended	

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Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
2. Case Analysis writing techniques		1			Eight Development Workers attended
3. On-Farm Farmers' seminars					
• Beef cattle production			1		45 farmers trained
• Forage Agronomy, utilization and animal nutrition		1			45 farmers trained
4. Farmers cross-visit					
• Mag-uugmad Foundation Inc., Cebu City		1			15 key-farmers and 5 Development Workers attending
• Kinuskusan, Davao			1		20 Key-farmers and 5 Development Workers attending
• ICRAF, Claveria, Misamis Oriental	1				30 Key-farmers and 8 Development Workers attending
5. Cross visit of LGU executives to MFI Inc., Cebu City					Two LGU executives visited MFI Inc., Cebu City
5. Networking					
1. Linkage with LGU Dispersal Program					
2. Participation in local agricultural fair					2 workshops with 16 technicians
3. Participation to municipal and provincial workshop and seminar					2 workshops with 16 technicians
4. Participation to international workshop					2 workshops (1 technician attending)

(d) Workplan of Manolo Fortich, Philippines

Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	1. Development of forage technologies					
Kalugmanan, Lindaban	1. Testing, evaluating and demonstrating integration of legumes and new grass species into existing farming system for animal feeding					At least 6 farms testing, evaluating and demonstrating new species.
	2. Inventory of feed resources in old barangays.					Feed calendars
	3. Evaluation of cattle productivity					5 farmers in 2 barangays recording girth circumference of cattle monthly.
	2. Dissemination of forage technologies in selected sites					
Maluko, Dahilayan, Mampayag	1. Participatory diagnosis, participatory planning, and in new barangays.					PD,PP,PE in 2 new barangays conducted, 45 farmers participated, 3 new groups
	2. New farmers testing and evaluation forage species on-farm					45 new farmers have planted forages
	3. Participatory evaluation					3 Monthly reports on evaluation.
	4. Cross visits to Cagayan de Oro and Malitbog					2 visits facilitated, 40 farmers participated
	5. Expansion of forage areas in farmers field in the existing					Expansion of forage areas by farmers in 3 barangays

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Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
barangays					
3. Multiplication system					
1. Establishment of forage multiplication plots					One new group and 20 new individuals producing 20 bags of planting materials of species that are in high demand.
2. Species conservation					One plot established including 20 grass and 10 legume accessions.
3. Establishment of on-farm tree legume nurseries					At least 3 farmers individually established tree legume nurseries on –farm
4. Training and capacity building					
1. Training of additional Ats forage agronomy and farmer participatory research (FPR)					At least two Ats trained
2. On-farm farmers' seminar on forage agronomy, utilization and animal nutrition					6 on-farm seminars organised, and 15 farmers participated in each seminar.
5. Networking					
Liaise with other government and non-government organization for livelihood projects for the benefit of FSP farmer collaborators					Maintained rapport with institutions capable of assisting farmers for livelihood projects related to forages and animal production

(e) Workplan for Leyte, Philippines

Component (Activity/ies)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Leyte	1. Development of forage technologies					
	(none- all sites are new)					
	2. Dissemination of forage technologies					
	1. Meetings and visits to ICRAF, LGU and existing organizations to establish linkage)	5	5			LGU, existing organizations and ICRAF staff in 5 sites visited
	2. Initial visits to farmers in potential sites	5				Farmers in 5 sites visited and PD scheduled
	3. Participatory Diagnosis	2	3			Farmers identify their problems and potential solutions
	4. Identify sites and farmer-groups to work in forage technology development	1	2			3 farmer groups identified
	5. Planning with farmers and collaborators	1	2			3 work plans formulated
	6. Establishment of forages by farmers	10	10	20	20	60 farmers establishing forages in their farms
	7. Participatory monitoring and evaluation	10	10	20	20	ME and regular meetings/visits conducted with farmers
	8. Review and planning by farmers		1		1	2 review and planning meetings conducted
	3. Planting Material Supply Systems					
	1. Establishment of planting material multiplication area in LSU	1				1 planting material multiplication area established in LSU
	2. Establishment of planting material		2	3		5 on-site multiplication areas established

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Component (Activities)	Activity Schedule				Expected outputs	
	2002					
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		
	multiplication area within the site					
	4. Capacity Building					
	1. Hands-on training on forage establishment, utilization and management		1	1	1	3 trainings conducted
	2. Training for development workers/field technicians (on forage agronomy, participatory approaches and methods)					5 development workers/field technicians trained
	3. Cross-visits for farmers (5) and field workers (2)	1	1			2 cross visits conducted
	4. Field days for farmers			2		2 field days conducted
	5. Networking					
	1. Attendance to forage forum at MFI, Cebu					2 farmers + 1 staff attending forum in MFI (Cebu) site
	2. Articles for SEAFRAD Newsletter	1	1	1	1	4 articles for SEAFRAD News
	3. Communication to coordinator and collaborators	x	x	x	x	Reports and communications sent

(f) Workplan for Cebu, Philippines

Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Cebu	1. Development of forage technology					
a) Cateves, Guba, b) Lepanto, Alegrea,	1. Planning workshop with core farmer groups on plans and issues related to forage expansion	X				100 individual farm plans on forage development of <i>alayan</i> (PO) members
c) Taba-ao, Tabogon	2. Intra-site visit		X			3 exchange visits
	3. Annual self-assessment				X	Impact of forage technologies assessed
	2. Dissemination of forage technologies					
	1. Hands-on training on forage technologies (forage agronomy, utilization and animal nutrition)	X	X	X		2 trainings conducted (25 farmers/training)
	2. Cross-visits					2 cross-visits conducted (25 farmers/cross-visit)
	3. Farm planning	X	X			Individual farm plan indicating forage integration
	4. Identify farmers interested to try out new forage species	X	X			Farmers interested to try new forage technologies identified
	5. Farmers' evaluation of forages				X	Well-adopted forage species identified
Guba	3. Capacity Building					
	1. Trainers' training (MFI pool of trainers and PO leaders)				X	20 MFI pool of trainers and PO leaders trained
	1. Forage agronomy, utilization and animal nutrition	X	X	X	X	100 farmers trained
	2. Cross-visits					
	3. Participatory monitoring and evaluation				X	20 PO leaders trained

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Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
4. Networking					
Argao, Guba, Borbon, Tuburan, Tabogon, Tabuelan, Alegria	1. Exchange visits		X		1 exchange visit for 7 sites
	2. Forage forum		X		50 farmers from 7 sites
	3. c. Impact assessment			X	Impact in 5 partner sites assessed (Borbon, Tuburan, Tabogon, Tabuelan, Alegria)

10.4 Workplan for Thailand

Component (Activities)	Activity Schedule				Expected outputs	
	2002					
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		
1. Development of forage technology						
Sung Nuen	1. Participatory planning		1/19		Plan formulated by farmers	
Sung Nuen	2. Participatory evaluation		X		Identify desirable/undesirable of forage characteristics of forage species	
Packhong	3. Stylo and Lablab evaluation (on-station)	X	X	X	X	Alternative stylo variety for 184, Lablab varieties for dry season forage and for silage making
Pakchong	4. Integrated use of improved forages, cassava and legume hay for beef fattening (with R. Howeler)	X	X	X	X	Introduce improved pasture 35 farmers. Three out of 35 farmers integrated feeding technology for beef fattening 3 farmers (15 cattle)
	5. PME exercise			X	X	The project sites monitored and impact assessed

Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
2. Dissemination of forage technologies					
1. Selection of new sites	X				1 new site selected
2. Collection of secondary data	X				Land use, age data, organization, services
3. Participatory diagnosis		X			1 report of participatory diagnosis conducted
4. Farmer visit to station		X			3 visits of 100 farmers farmers learned more on forage species
5. Farmer visit to farmer		X			3 visits of 100 farmers to experienced farmers
6. Participatory planning		X			1 participatory planning conducted
7. Participatory evaluation			X	X	Desirable/undesirable of forage characteristics of forage species identified
3. Multiplication					
1. Prepare planting material		X			Planting material will be available for farmers
2. Distribute planting material		X			A set number of farmers will establish forage on farm
3. Seed production for farmers in Thailand					700 kg of seeds made available to farmers
• farmer visit to farmer (seed producer)		X	2/50	1/20	A number of farmers will gain more choice on seed production
• Production of seed on station and for other FSP countries and freight		X	X	X	Planting material will be available for FSP countries
Experiment on seed production and management of <i>Brachiaria brizantha</i>	X	X	X	X	<i>Brachiaria brizantha</i> seed production technique developed
4. Training					
1. Farmers training		100			Farmers trained in forage establishment and utilisation

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Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	2. Dissemination of forage technologies					
Sung Nuen Seekew Dankhontod Kornburi Buaya Pakchong	1. Selection of new sites	X				1 new site selected
	2. Collection of secondary data	X				Land use, age data, organization, services
	3. Participatory diagnosis		X			1 report of participatory diagnosis conducted
	4. Farmer visit to station		X			3 visits of 100 farmers farmers learned more on forage species
	5. Farmer visit to farmer		X			3 visits of 100 farmers to experienced farmers
	6 Participatory planning		X			1 participatory planning conducted
	7 Participatory evaluation				X	X
	3. Multiplication					
	1. Prepare planting material		X			Planting material will be available for farmers
	2. Distribute planting material		X			A set number of farmers will establish forage on farm
	3. Seed production for farmers in Thailand					700 kg of seeds made available to farmers
	• farmer visit to farmer (seed producer)		X	2/50	1/20	A number of farmers will gain more choice on seed production
	• Production of seed on station and for other FSP countries and freight		X	X	X	Planting material will be available for FSP countries
	Experiment on seed production and management of <i>Brachiaria brizantha</i>	X	X	X	X	<i>Brachiaria brizantha</i> seed production technique developed
	4. Training					
	1. Farmers training		100			Farmers trained in forage establishment and utilisation

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Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
2. Cross visit for project staff and district livestock officers		X			Increase capability of extension staff (4 times)
3. On site training on PD		X	X		Increase capability of 5 local staff to conduct PD with farmers and invited FSP expert
5. Networking	X	X	X	X	
1. Electronic mail facility					
2. Digital camera					

10.5 (a) Workplan for Daklak, Vietnam

Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	1. Development of forage technology					
M'Drak, Ea Kar	1. <i>Arachis</i> for grazing – planted 2000 2001 Evaluate with 5 farmers		X	X		5 Farmers evaluation on % cover, palatable of species, and botanical composition in second year
	2. Sowing of planting of strips with improved forages in natural grassland Planted 1999, 2000 under grazing 2002 Evaluate with 5 farmers	X			X	Farmer evaluation, technical evaluation on second and third year. Botanical composition, cover (%) Spread from plant rows
	3. Evaluation legumes in coffee (<i>Stylo</i> , <i>Arachis pinto</i>) planted in 2001 with 10 farmers	X	X		X	Farmer evaluation Cover Yield using for feeding animal Environment
	4. Demonstration on using tree legumes in boundary planting of shrub legumes. Established in 2000 and 2001 and available on farm	X	X		X	5 Farmers evaluation on body condition, live weight gain when supply tree legumes leaves at night. Farmer discussion and transfer technologies (15 farmers)
Ea Kar	1. Continue experiment on using forages for fattening cattle. Traditional fattening (5 farmers)	X	X	X	X	Estimate of animal performance
	2. Experiment on supplying different ration of <i>Gliricidia</i> spp to fattening cattle • Experiment on station with 12 calves		X	X		Technical evaluation of live weight gain, feed conversion ration, intacked Farmer evaluation and transfer technologies
	3. Trial on new <i>Brachiaria brizantha</i>					Technical evaluation of the yield, dry tolerance and seed production

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Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	2. Dissemination				
Krong Ana	Collection of secondary data • Selection of villages/communes	X			Reports on natural conditions, population, land use, agricultural data, organizations, services etc. 15 village selected
M'Drak	6 new village 30-40 farmers/village	X	X		Reports on PD's in new communes, 180 farmers
Ae Kar District	PD's in 6 villages, 30-40 farmers/village	X	X		Reports on PD's in new communes, 180 farmers
Cujut	PD's in 6 villages, 30-40/village	X	X		Reports on PD's in new communes, 180 farmers
Buon Don	PD's in 6 villages, 30-40/village	X	X		Reports on PD's in new communes, 180 farmers
Boun Ma Thuot	PD's in 1 village, 30-40 farmers	X	X		Reports on PD's in new communes, 40 farmers
Krong Ana	PD's in 2 villages, 30-40 farmers/village	X	X		Reports on PD's in new communes, 80 farmers
New village	Farmer field days		X		15 villages with 300 farmers
New village	Participatory planning		X		15 villages with 300 farmers
M'Drak, Ea Kar, Buon Don, Cujut, Krong Ana and Buon Ma Thuot	Farmer training		X		350 farmers trained in planting and managing forages 15 courses in 2001 15 courses
	Participatory evaluation			X	X Description of suitable species and technologies 12 villages old forage areas 15 new villages
All sites	PM&E on the impact of FSP in different level			X	X Report on impact of FSP on farmer, villages, district and province level
M'Drak, Ea Kar, Buon	Farmer to farmer visits				X 300 farmers with established forages

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Component (Activities)	Activity Schedule				Expected outputs	
	2002					
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		
Don, Cujut, Krong Ana and Buon Ma Thuot					exchange information	
	Transport and per diem costs for provincial, district and commune officers to visit farmers	X	X	X	X	Involvement of Provincial and District Officers as facilitators 22 Commune officers \$2/day, 4 d/mo, per diem and transport 10 District officers \$3/day, 4d/mo per diem and transport 3 Provincial officers \$10/day 1 d/mo per diem 2 University officer of \$10/day 4 d/mo Car hire \$28/d x d/mo
	3. Multiplication					
Daklak Province	Buy seed of 8 grasses and 8 legumes from Thailand, Indonesia and China	X				95 kg (25kg <i>Panicum maximum</i> 25 kg <i>Paspalum atratum</i> , 25 kg Stylo 184, 10 kg <i>Brachiaria brizantha</i> , 10 <i>Brachiaria decumbens</i>)
M'Drak Ae Kar	Production and sale of cuttings by farmers of Pm, Bd, Bb, Br, P			X	X	Approx 300,000 splits and stakes sold to FSP and other farmers
M'Drak, Ea Kar	Seed production of <i>P. maximum</i> , <i>B. brizantha</i> , <i>P. atratum</i> , <i>Stylo</i> , <i>Gliricidia</i> by 10-15 farmers			X	X	10-15 farmers producing and selling seed
	4. Training					
	Training technicians in communication, PD and forage technology		X			Staff from provincial district and communes are trained 20 people
M'Drak, Ea Kar	6 farmers training course on seed production technologies			X	X	3 courses in Ea Kar and 2 in M'Drak with 120 farmers trained
	10 field days					See dissemination

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Component (Activities)	Activity Schedule				Expected outputs
	2002				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	10 farmer training course on agronomy				See dissemination
Buon Don and Cu Jut	6 farmer training courses on animal nutrition and animal management		X	X	Groups from district and commune staff trained 10 in 2001, 12 in 2002
	5. Networking and management				
	Quarterly reports to national and regional coordinators				4 reports
	Workshop with province				Improved knowledge of FSP project and extension of FSP outputs in the province
	Internet connection	X	X	X	X
	Efficient management of research and dissemination	X	X	X	X
	Camera purchased				

(b) Workplan for Tuyen Quang, Vietnam

Component (Activities)	Activity Schedule				Expected outputs	
	2002					
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		
	1. Development of forage technology					
Tu Quan	Evaluate <i>Stylo</i> 184, <i>S. hamata</i> , <i>V. unguiculata</i> , Wynn cassia, <i>Arachis pintoii</i> with 5 farmers	X	X	X	X	Farmer evaluation
Phu Lam	Introduction of shrub legumes for shade, and in boundary areas (<i>Glicicidia</i> , <i>Leucaena</i> , <i>Calliandra</i>) with 5 farmers				X	Farmer evaluation
Duc Ninh Phu Lam	Study natural feed resource, in forest reserve as complimentary feed resource to agricultural land (RR in collaboration with Thai Nguyen Univ.) with 10 farmers					Knowledge of availability and use of natural feed resources at different times of the year
Phu Lam Duc Ninh	Selection of forage species of pig (stylo, ramia, gigantean, sweet potato) and fish (Cf. <i>Bracharia</i> Toledo and ruzi and setaria) with <i>P. atratum</i> , <i>P. maximum</i> , with 10 farmers	X	X	X		Farmer evaluation Preference by pig and fish
Thai Long Song Lo	Utilization of maize forage for feeding cattles		X	X	X	Farmers evaluation
All	Obtain information on value of forages for feeding fish, pigs and cattle, taking quality into consideration					Improved relation between area of forage planted livestock production
All sites	Monitoring and evaluation of forage development					M&E reports
	2. Dissemination of forage technologies					
	Selection of villages/communes					30 new villages selected for 2002

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Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	PD's 30 villages in 2002	X				Reports on PD's in new villages
	New farmers visit focus communes		X	X		400 farmers from 30 villages in 2002
	Participatory planning Follow up visits		X			30 village groups in 2002
	Farmer training in planting		X	X		400 farmers trained in 2002
	Participatory evaluation			X	X	Description of suitable species and technologies in villages with established
	Field visits of farmers from focus communes to new farmers after 6 months			X	X	Report on exchange of ideas between farmers
	3. Multiplication					
Province	Buy seed of grasses and legumes from Thailand					47 kg seed purchased
All districts	Production and sale of cuttings by farmers					250,000 splits grasses 10,000 stakes <i>Gliricidia</i> /year
Yen Son	Seed production of grasses and legumes	X	X	X	X	50 kg <i>P. maximum</i> 10 kg <i>P. atratum</i>
Sundong						20 kg <i>V. unguiculata</i> 4 kg <i>Flemingia</i> 2 kg <i>Leucaena</i>
	4. Training					
	Training technicians in communication, PD and forage technology		X			15 people from province, districts and communes are trained
	Cross visit Tuyen Quang to Daklak			X		4 people
	Training for farmers about utilization of legumes forage to feed the cows		X			300 farmers and 30 extension workers
	Field days		X			400 farmers attended
	Farmer training in management of fodders and animal management		X	X		400 farmers trained in forage agronomy and animal management
	Courses in seed production		X			50 farmers trained in seed production
	English training course in Lao PDR				X	Site manager trained

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Component (Activities)		Activity Schedule				Expected outputs
		2002				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
	5. Networking					
	Quarterly reports to national and regional coordinators	X	X	X	X	
	Printer for site manager, maintenance 2002 (Computer has been provided)					
	Internet connection and telephone	X	X	X	X	Contact maintained with other FSP staff in Vietnam and regional coordinator
	Management of research and dissemination	X	X	X	X	Goals achieved

