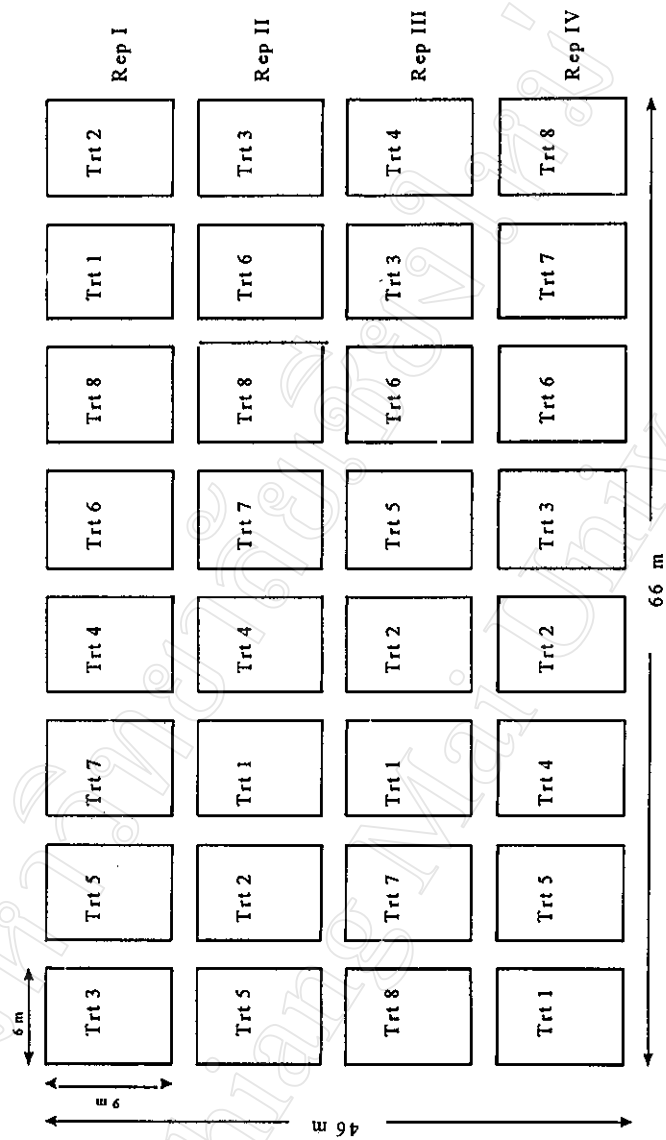


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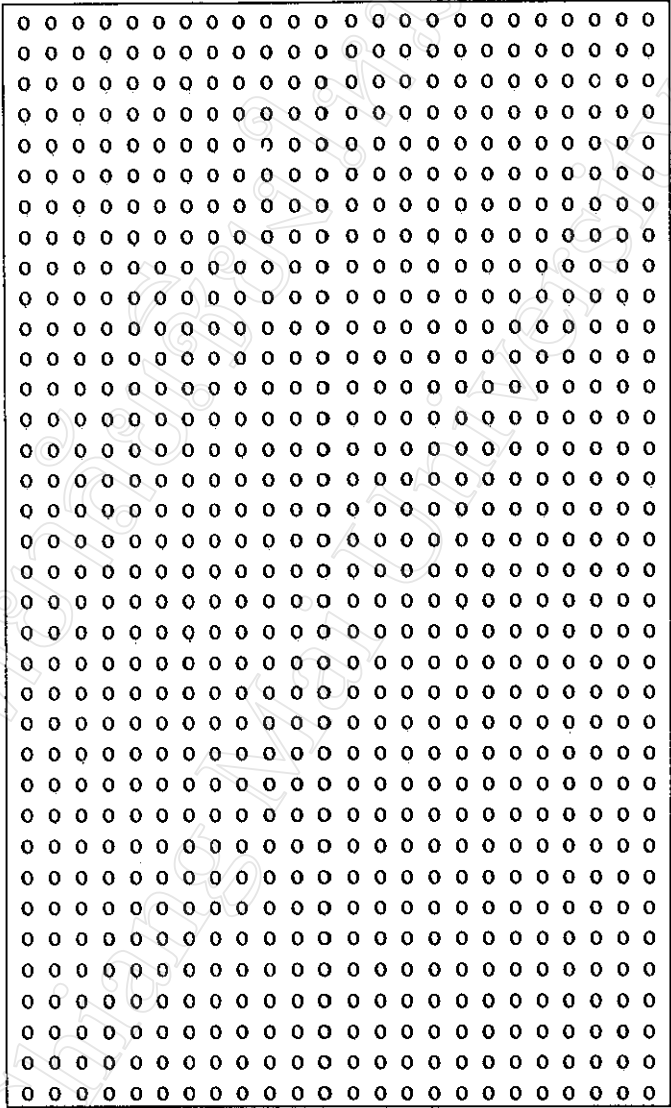
APPENDICES

Appendix Figure 1. Layout of the field experiment (Randomized Complete Block Design)



- Treatment:
1. Rice (sole crop)
 2. Pigeon pea (sole crop)
 3. Rice: pigeon pea, 50%:50% (strip cropping)
 4. 4Rice: pigeon pea, 75%:25% (strip cropping)
 5. Rice: pigeon pea, 25%:75% (strip cropping)
 6. Rice: pigeon pea, 50%:50% (inter-cropping)
 7. Rice: pigeon pea, 75%:25% (inter-cropping)
 8. Rice: pigeon pea, 25%:75% (inter-cropping)

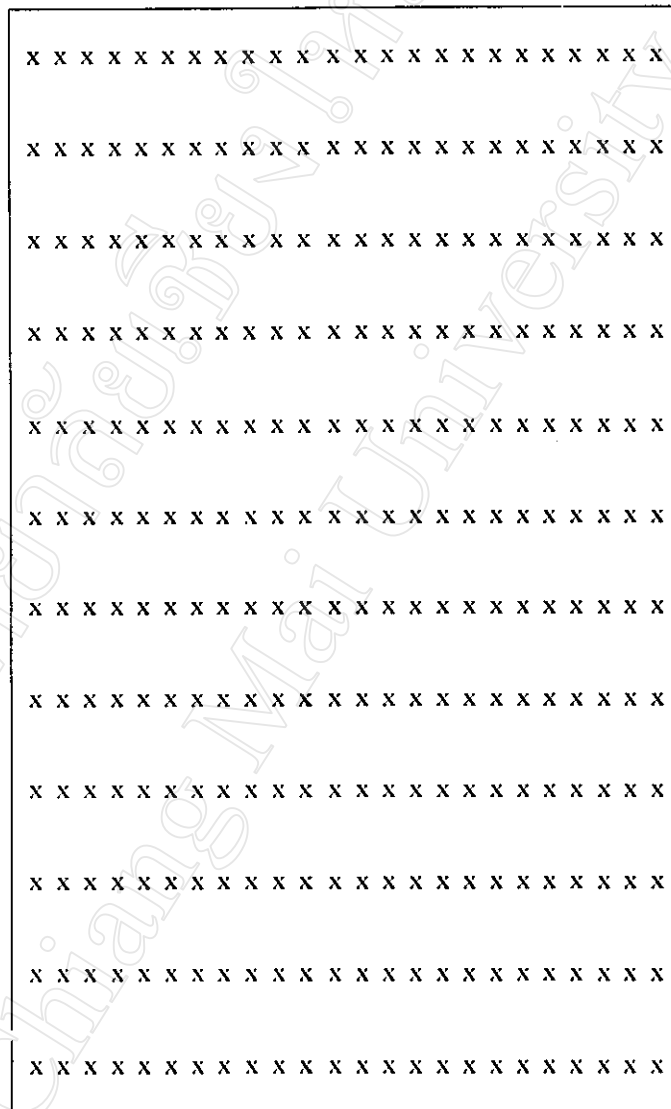
Appendix Figure 2. Treatment 1 (Sole rice)



Rice planting:

- * Between row 25 cm (36 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Figure 3 Treatment 2 (Sole pigeon pea)

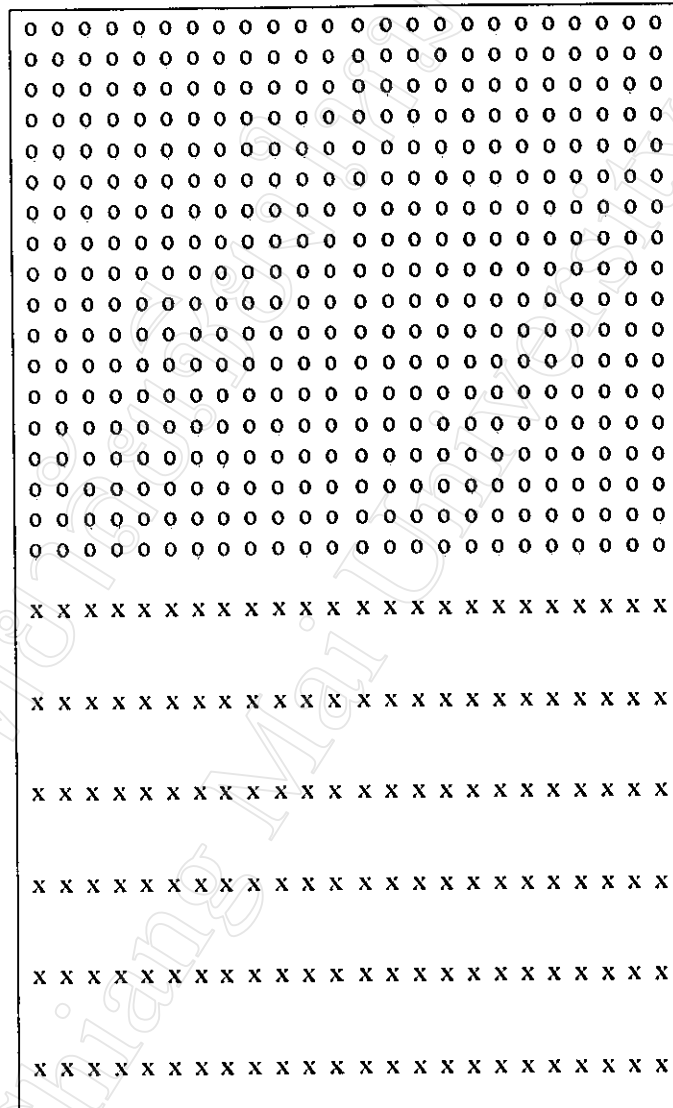


Pigeon pea planting:

* Between row 75 cm (12 rows/plot)

* Within row 25 cm (24 hills/row)

Appendix Figure 4. Treatment 3 (Rice:Pigeon pea, 50:50%, strip cropping)



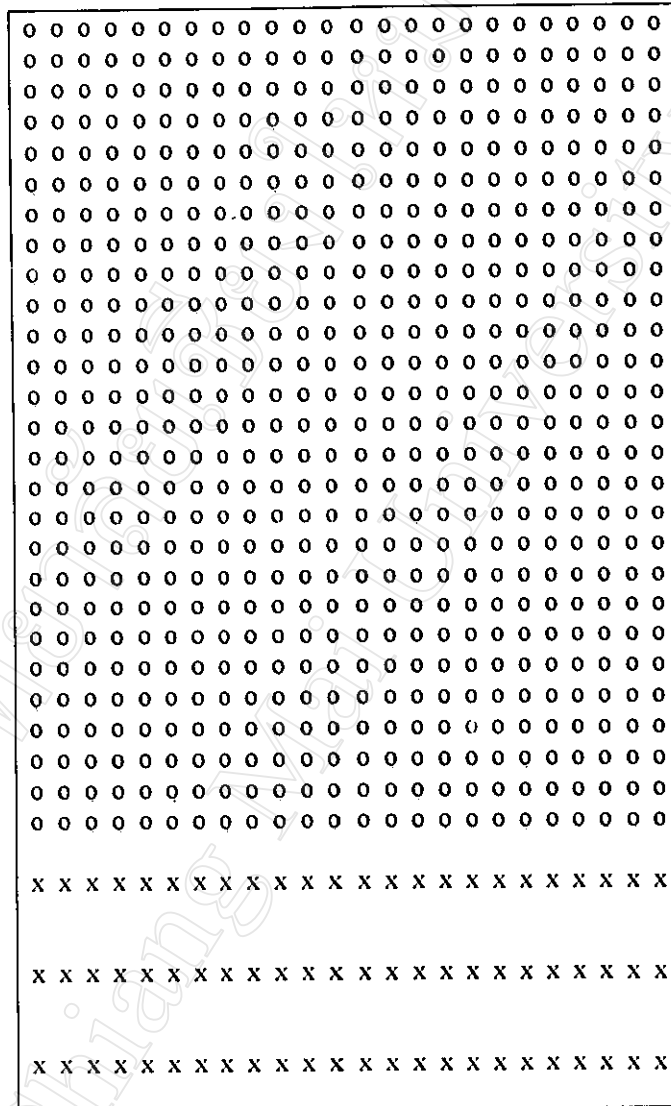
Pigeon pea planting:

- * Between row 175cm (6 rows/plot)
- * Within row 25 cm (24 hills/row)

Rice planting :

- * Between row 25cm (18 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Figure 5. Treatment 4 (Rice:Pigeon pea, 75:25%, strip cropping)



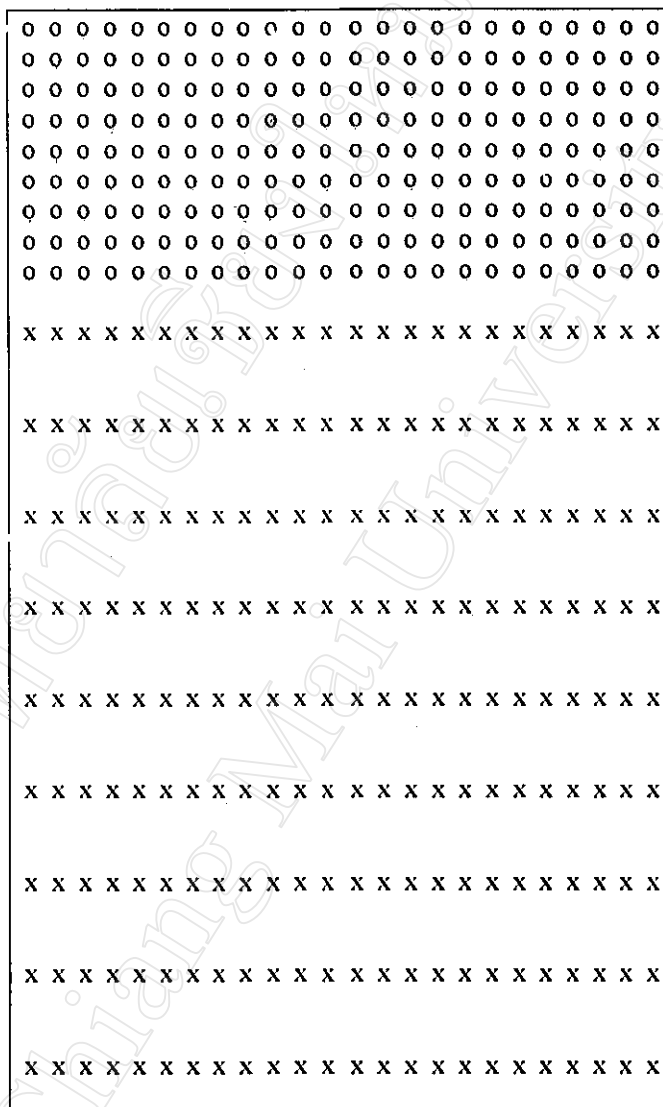
Pigeon pea planting:

- * Between row 325 cm (3 rows/plot)
- * Within row 25 cm (24 hills/row)

Rice planting :

- * Between row 25cm (27 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Figure 6. Treatment 5 (Rice:Pigeon pea, 25:75%, strip cropping)



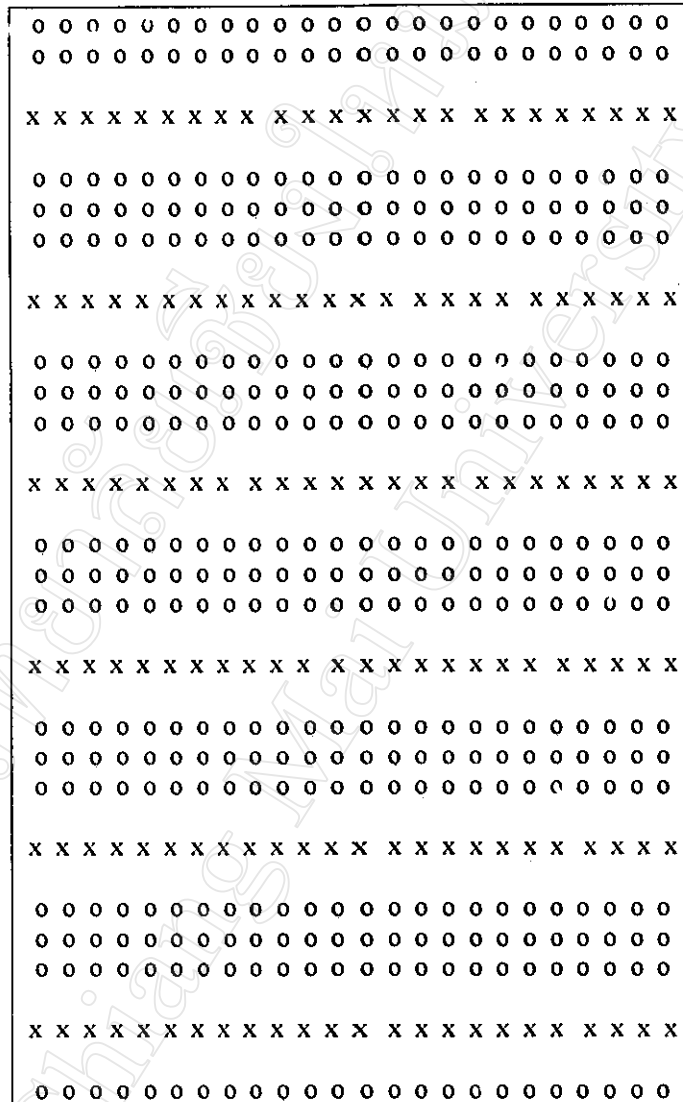
Pigeon pea planting:

- * Between row 100 cm (9 rows/plot)
- * Within row 25 cm (24 hills/row)

Rice planting :

- * Between row 25cm (9 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Figure 7. Treatment 6 (Rice:Pigeon pea, 50:50%, row intercropping)



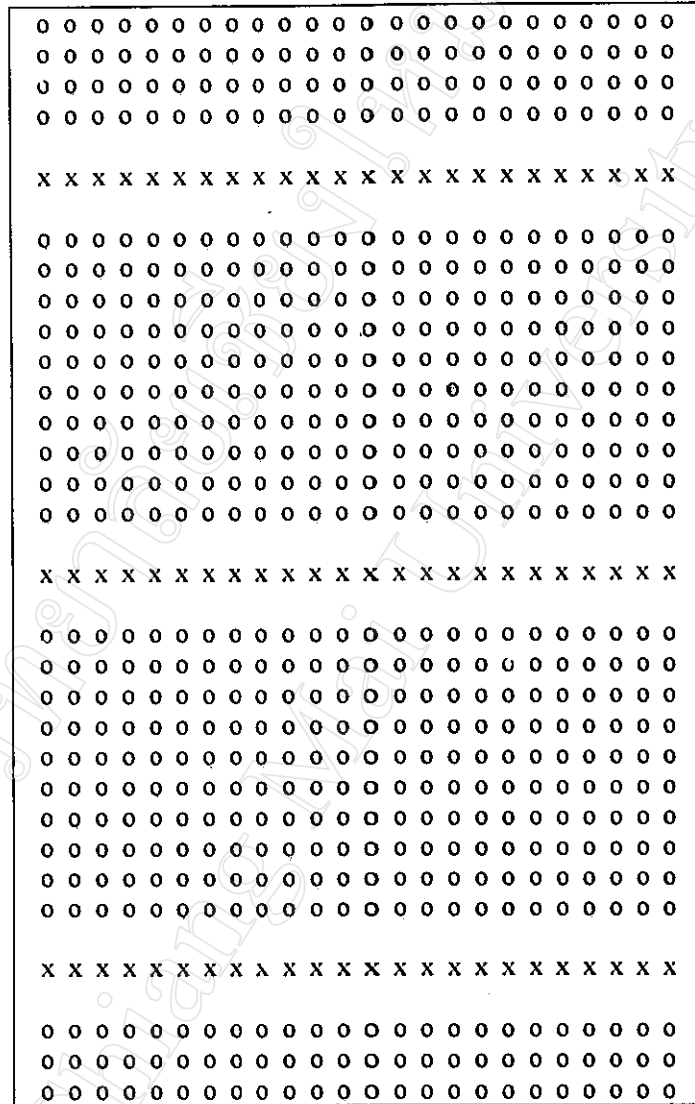
Pigeon pea planting:

- * Between row 175cm (6 rows/plot)
- * Within row 25 cm (24 hills/row)

Rice planting :

- * Between row 25cm (18 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Figure 8. Treatment 7 (Rice:Pigeon pea, 75:25%, row intercropping)



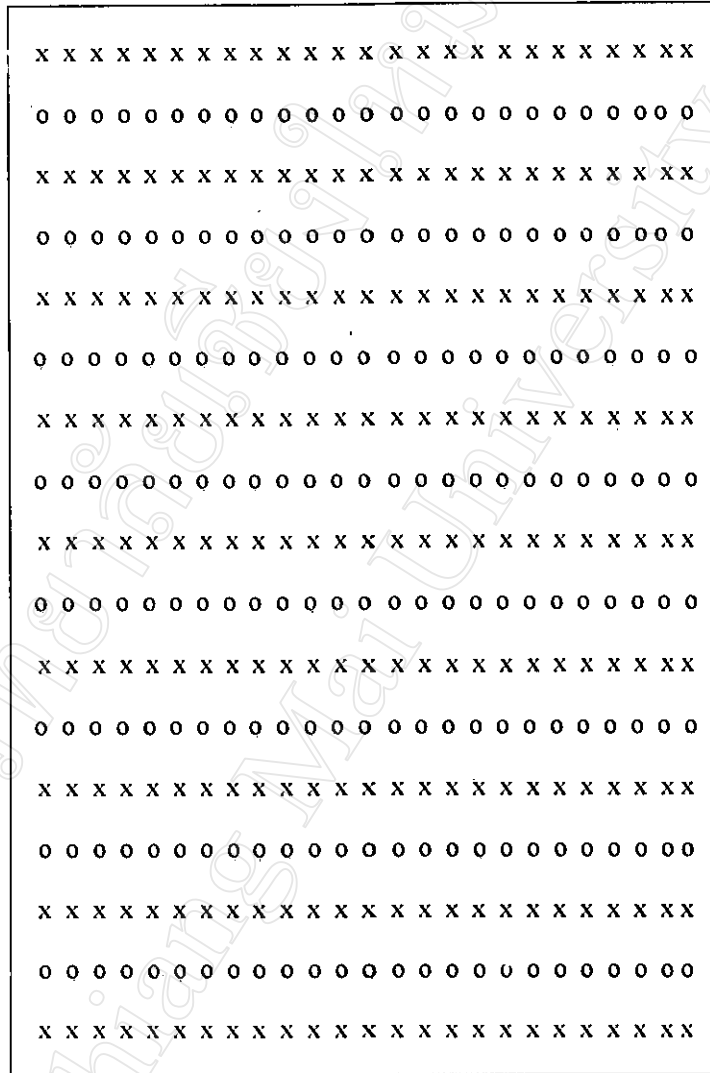
Pigeon pea planting:

- * Between row 325 cm (3 rows/plot)
- * Within row 25 cm (24 hills/row)

Rice planting :

- * Between row 25cm (27 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Figure 9. Treatment 8 (Rice:Pigeon pea, 25:75%, row intercropping)



Pigeon pea planting:

- * Between row 100 cm (9 rows/plot)
- * Within row 25 cm (24 hills/row)

Rice planting :

- * Between row 25cm (9 rows/plot)
- * Within row 25 cm (24 hills/row)

Appendix Table 1 General rice production statistics for the Lao PDR – 1997

Province	Rainfed lowland 1997		Rainfed upland 1997		Irrigated (96-97)		Total	
	Planted area (ha)	Prodn (t)	Planted area (ha)	Prodn (t)	Planted area (ha)	Prodn (t)	Planted area (ha)	Harvest area (ha)
I. Northern region	67,500	233,500	116,880	175,600	2,498	8,880	186,878	178,333
1. Phongsaly	5,700	18,000	17,000	24,200	20	70	22,720	21,920
2. Luangnamtha	7,000	22,500	11,000	19,700	32	100	18,032	17,987
3. Oudomsay	8,700	30,450	23,300	29,950	68	250	32,068	27,038
4. Bokeo	8,500	34,000	5,780	11,300	-	-	14,280	14,280
5. Luang Prabang	9,410	31,000	35,000	52,800	880	3,340	45,290	44,750
6. Houaphanh	10,380	35,250	11,650	14,150	548	1,860	22,578	20,558
7. Sayabouly	17,810	62,300	13,150	23,500	950	3,260	31,910	31,800
II. Central region	257,700	727,000	31,060	47,200	20,599	89,520	309,359	280,694
1. Xiengkouang	12,730	42,000	8,520	16,000	-	-	21,250	21,250
2. Vientiane	33,160	106,500	5,500	6,450	2,498	10,800	41,158	36,428
3. Vientiane M.	45,500	136,500	2,000	3,200	11,360	49,900	58,860	56,000
4. Borikhamsay	20,700	41,000	5,700	7,000	444	1,620	26,844	20,974
5. Khammouane	40,500	96,000	1,255	1,800	1,880	8,100	43,635	36,735
6. Savannakhet	101,310	293,500	4,985	8,150	4,383	19,000	110,678	102,373
7. Special Region	3,800	11,500	3,100	4,600	34	100	6,934	6,934
III. Southern region	129,450	339,000	16,160	24,200	3,658	15,100	149,268	142,268
1. Saravan	38,000	110,000	8,250	13,400	1,185	5,000	47,435	46,635
2. Sekong	2,500	7,000	3,400	4,200	190	670	6,090	5,840
3. Champasak	78,450	193,000	1,710	2,400	2,218	9,200	82,378	76,628
4. Attapeu	10,500	29,000	2,800	4,200	65	230	13,365	13,165
Total	454,650	1,299,500	164,100	247,000	26,755	113,500	645,505	601,295
								1,660,000

Source: NARC and Lao-IRRI Project, 1998

Appendix Table 2. Targeted decrease in upland rice planted area and production in Lao PDR and Luang Prabang Province.

Upland rice	1995				2000			
	Area		Production		Area		Production	
	ha	%	ton	%	ha	%	ton	%
Whole of Lao PDR	196,200	31	305,500	21	58,000	9	90,000	4%
Luang Prabang	38,100	81	52,300	67	18,900	59	34,020	41

Appendix Table 3. Policy targets for changes in rice planted areas in the Lao PDR and Luang Prabang Province.

Rice environment	1994		2000		Change	
	ha	%	ha	%	%	
Lao PDR	Rainfed upland	219,100	36	58,000	9	-76
	Rainfed lowland	380,800	62	488,000	86	+128
	Irrigated	11,000	2	25,000	4	+227
	Total rice areas	610,910	100	565,500	100	-7
Luang Prabang	Rainfed upland	55,900	86	18,900	58	-66
	Rainfed lowland	8,800	13	11,510	35	+131
	Irrigated	400	0.6	2,150	7	+537
	Total rice areas	65,100	100	32,560	100	-50

Source: Ministry of Agriculture and Forestry (1995)

National Rice Research Program and Lao-IRRI Project (1998)

Crops Section, Luang Prabang Agriculture and Forestry Service (1996)

Appendix Table 4 ANOVA of rice straw at harvest.

Source	DF	SS	MS	F	P
REP (A)	3	2429.99	809.998	1.41	0.2711
TRT (B)	6	131352	21892.0	38.23	0.0000
A*B	18	10306.4	572.576		
Total	27	144088			

Note: ANOVA Analysis of Variance; DF Degree of Freedom; MS Mean Square; F F-value; P Probability;

Appendix Table 5. ANOVA of rice yield

Source	DF	SS	MS	F	P
REP (A)	3	168.639	56.2129	0.69	0.5674
TRT (B)	6	43384.1	7230.69	89.32	0.0000
A*B	18	1457.17	80.9536		
Total	27	45009.9			

Appendix Table 6. ANOVA of pigeon pea yield at harvest.

Source	DF	SS	MS	F	P
REP (A)	3	432.491	144.164	0.66	0.5882
TRT (B)	6	3781.38	630.230	2.88	0.0380
A*B	18	3941.06	218.948		
Total	27	8154.92			

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