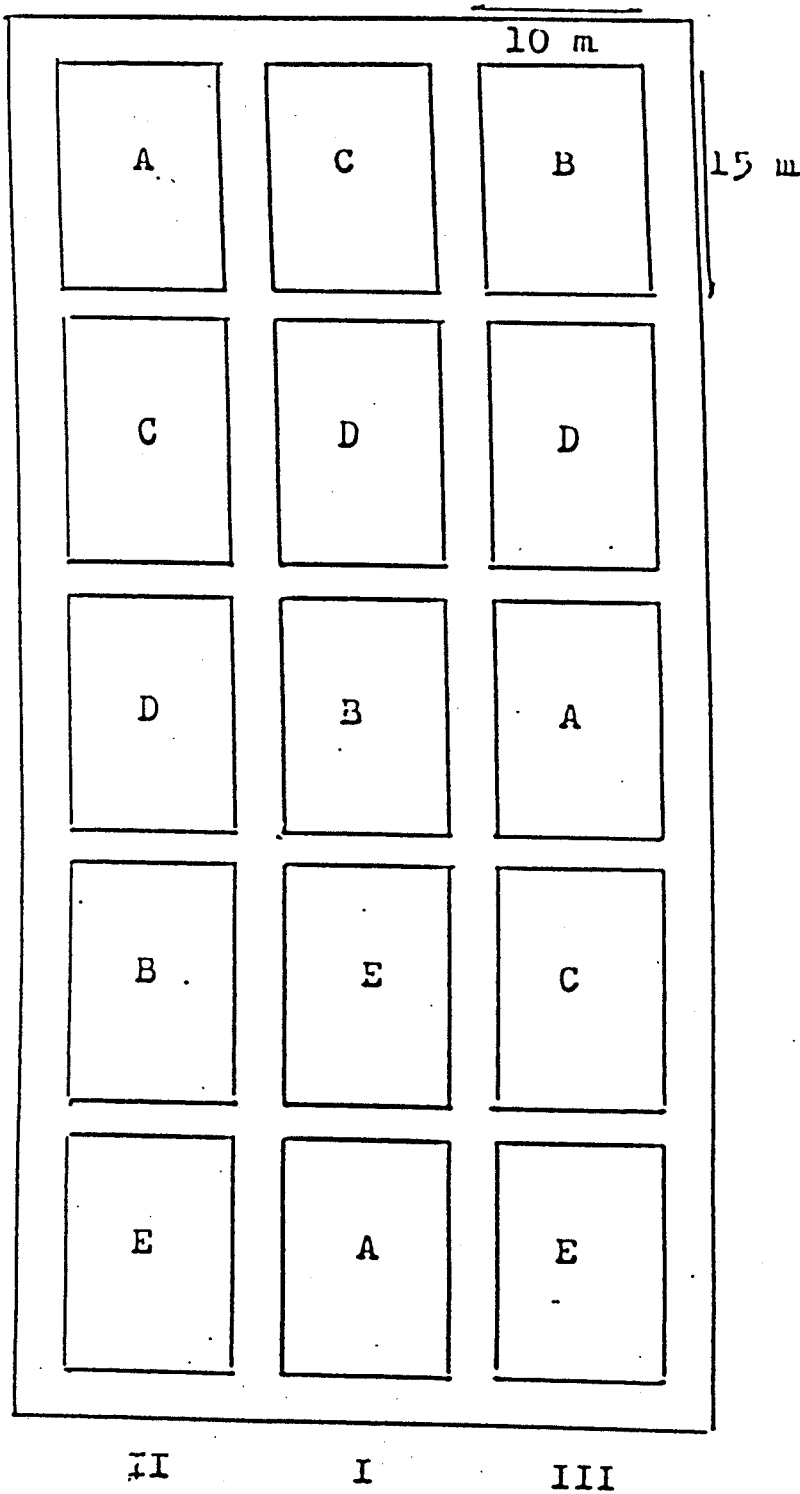


APPENDICES

Appendix 1.

Field layout of the experiment



Appendix 2.

Cost of production for monoculture and intercropped sweet potato

A. SWEET POTATO MONOCULTURE

I. OPERATIONAL COST

1.	Land preparation		
	1.1. Clearing and cutting of grasses and bushes of 10.000 M ² @ Rp. 35	Rp.	350.000
	1.2. Ploughing, 10.000 M ² , Rp.	Rp.	200.000
	1.3. Plotting and leveling	Rp.	100.000
	1.4. Mounding	Rp.	167.500
2.	Planting and fertilizing		
	2.1. Planting	Rp.	75.000
	2.2. Fertilizing	Rp.	75.000
3.	Maintaining		
	3.1. Replanting	Rp.	30.000
	3.2. Weeding	Rp.	80.400
	3.3. Hilling up the soil	Rp.	40.200
	3.4. Lifting the vines	Rp.	20.000
4.	Harvesting	Rp.	100.000
5.	Cleaning and washing of tubers	Rp.	40.000

II. MATERIALS

1.	Sweet potato cutting		
	2. Fertilizer	Rp.	619.750
		Rp.	101.919
TOTAL			Rp. 2.000.569

B. SWEET POTATO + CORN

1. OPERATIONAL COST

1.	Land preparation		
	1.1. Clearing and cutting of grasses and bushes, 10.000 M ² , @ Rp.35	Rp.	350.000
	1.2. Ploughing, 10.000 M ² , Rp. 20	Rp.	200.000
	1.3. Plotting and leveling	Rp.	100.000
2.	Planting and fertilizing		
	2.1. Planting	Rp.	75.000
	2.2. Fertilizing	Rp.	75.000

3. Maintaining		
3.1. Replanting	Rp.	30.000
3.2. Weeding	Rp.	80.400
3.3. Hilling up the soil	Rp.	40.200
3.4. Lifting the vine	Rp.	20.100
4. Harvesting	Rp.	100.500
5. Cleaning and washing of the tubers	Rp.	40.200
6. Drying and seeding of corn	Rp.	75.000

II. MATERIALS

1. Sweet potato cuttings	Rp.	371.850
2. Corn seeds	Rp.	5.000
3. Fertilizer	Rp.	85.246
		<hr/>
TOTAL	Rp.	1.648.496

C. SWEET POTATO + SOYBEAN

I. OPERATIONAL COST

1. Land preparation	Rp.	650.000
2. Planting and fertilizing	Rp.	150.000
3. Maintaining	Rp.	170.700
4. Harvesting	Rp.	100.500
5. Cleaning and washing of the tubers	Rp.	40.000
6. Drying and seeding of the soybean	Rp.	75.000

II. MATERIALS

1. Sweet potato cuttings	Rp.	619.750
2. Soybean seeds	Rp.	5.000
3. Fertilizer	Rp.	118.125
		<hr/>
TOTAL	Rp.	1.924.275

D. SWEET POTATO + CORN + SOYBEAN

I. OPERATIONAL COST

1. Land preparation	RP.	650.000
2. Planting and fertilizing	Rp.	150.000
3. Maintaining	Rp.	170.700
4. Harvesting	Rp.	100.500
3. Cleaning and washing of the tubers	Rp.	40.200
4. Drying and seeding of soybean and corn	Rp.	75.000

II. MATERIALS

1. Sweet potato cuttings	Rp.	247.900
2. Corn seeds	Rp.	2.500
3. Soybean seeds	Rp.	2.500
4. Fertilizer	Rp.	66.088
	<u>TOTAL</u>	<u>Rp. 1.505.388</u>

SUMMARY OF THE SWEET POTATO INTERCROPPING PRODUCTION COSTS

Type of sweet potato intercropping system	Production cost	
	Indonesian Rupiah (Rp)	Canadian dollar (Can. \$)*
Sweet potato monoculture	2.000.569	1,538.89
Sweet potato + Corn	1.648.496	1,268.07
Sweet potato + Soybean	1.924.275	1,480.21
Sweet potato + Corn + Soybean	1.505.388	1,157.99

* In 1989 Can. \$ 1 was equal to Rp.1300,-

Appendix 3.

Insect and spider families associated with sweet potato cropping systems at 35, 42, 49 and 56 DAP.

A. Insect and spider families associated with the sweet potato cropping systems sampled at 35 DAP.

Order & Family of insects & spiders	Sweet potato agroecosystem			
	A	B	C	D
<u>COLEOPTERA</u>				
F. Chrysomelidae	5	27	18	34
F. Coccinellidae	-	1	4	3
F. Curculionidae	-	-	2	1
F. Cassidae	3	1	-	-
F. Nitidulidae	-	2	1	-
F. Carabidae	-	-	2	2
F. Buprestidae	-	-	-	-
<u>HYMENOPTERA</u>				
F. Argidae	-	1	2	-
F. Formicacidae	1	1	8	1
F. Braconidae	-	-	3	4
F. Chalcididae	1	1	3	2
F. Eurytomidae	-	-	1	1
F. Aulacidae	-	-	1	1
F. Andrenidae	1	-	-	-
F. Scelionidae	-	-	2	2
<u>HOMOPTERA</u>				
F. Cicadelidae	-	8	2	13
F. Delhpacidae	-	1	1	2
F. Cercopidae	-	-	1	3
F. Apididae	-	-	5	3
<u>HEMIPTERA</u>				
F. Miridae	-	-	2	2
<u>ORTHOPTERA</u>				
F. Pyrgomorphidae	-	2	3	4
F. Acrididae				
- Acridinae	8	3	3	2
- Cyrtacanthacrinae	13	10	4	7
F. Tetroginiidae				
- Pseudophyllidae	2	-	-	8
- Phaneropterinae	-	-	4	14
F. Gryllidae				
- Nemobunae	2	1	1	9

<u>LEPIDOPTERA</u>				
F. Pyralidae	12	2	10	4
F. Sphingidae	2	2	2	2
F. Nymphalidae	3	3	3	1
F. Noctuidae	-	-	-	6
<u>DIPTERA</u>				
F. Phoridae	-	-	1	2
F. Lonchopteridae	-	4	2	1
F. Asilidae	-	-	1	7
F. Bombylidae	-	-	1	2
F. Empididae	-	-	2	2
F. Conopidae	2	1	3	2
F. Syrphidae	4	3	2	1
F. Agromyzidae	-	4	73	159
F. Muscidae	-	-	2	3
F. Anthomyiidae	-	-	3	1
F. Ottidae	-	-	2	3
F. Dolichopodidae	-	-	2	4
F. Stratiomyiidae	-	-	2	2
F. Tephthridae	-	-	-	2
<u>ARANEAE</u>				
F. Lycosidae	1	10	56	51

B. Insect and spider associated with sweet potato cropping systems at 42 DAP.

Order & Family of insects & spiders	Sweet potato agroecosystem			
	A	B	C	D
<u>COLEOPTERA</u>				
F. Chrysomelidae	22	59	37	180
F. Coccinellidae	1	3	15	25
F. Curculionidae	-	2	1	2
F. Cassididae	6	3	2	5
F. Carabidae	-	5	9	3
<u>HYMENOPTERA</u>				
F. Formicacidae	2	3	2	3
F. Braconidae	-	-	3	3
F. Chalcididae	-	7	11	7
F. Scelionidae	-	1	2	1
F. Cephidae	-	1	2	2
<u>HOMOPTERA</u>				
F. Ciudadelidae	-	14	19	20
F. Delphacidae	2	3	3	2
F. Acanaloniidae	-	-	4	4

<u>HEMIPTERA</u>				
F. Pentatomidae	-	-	13	271
F. Thyreocoridae	-	-	119	123
F. Lygaeidae	1	2	2	1
F. Miridae	14	342	63	144
F. Coreidae	-	-	2	1
F. Reduviidae	-	-	3	3
<u>ORTHOPTERA</u>				
F. Pyrgomorphidae	5	7	1	1
F. Acrididae	-	-	-	-
- Acrididae	9	3	3	36
- Cyrtacanthacrida	1	6	8	-
F. Tetriginidae	-	-	-	-
- Pseudophyllidae	7	3	7	10
- Phaneropterinae	1	-	-	12
F. Gryllidae	-	-	-	-
- Oecanthinae	-	-	1	3
- Nemobunae	5	7	6	13
<u>LEPIDOPTERA</u>				
F. Pyralidae	3	-	1	5
F. Spingidae	2	-	3	1
F. Nymphalidae	-	-	3	3
F. Noctuidae	-	-	-	3
<u>DIPTERA</u>				
F. Asilidae	8	3	37	18
F. Bombylidae	-	-	5	3
F. Stratiomyidae	-	4	-	2
F. Rhagionidae	-	-	2	-
F. Phoridae	-	-	3	5
F. Lonchopteridae	-	12	-	4
F. Therevidae	-	4	-	4
F. Empididae	-	-	1	8
F. Conopidae	-	39	3	9
F. Syrphidae	2	2	1	4
F. Dolichopodidae	-	-	3	1
F. Tephritidae	-	6	2	6
F. Agromyzidae	-	32	265	211
F. Ottidae	-	-	-	-
F. Muscidae	4	-	1	4
F. Anthomyiidae	-	-	2	2
<u>MANTODEA</u>				
BLATTARIA	2	-	-	-
<u>ARANEAE</u>				
F. Lycosidae	38	48	137	247

C. Insect and spider associated with sweet potato cropping systems collected at 49 DAP.

Order & Family of insects & spiders	Sweet potato agroecosystem			
	A	B	C	D
COLEOPTERA				
F. Chrysomelidae	8	47	86	58
F. Coccinelidae	4	2	27	24
F. Curculionidae	6	1	5	-
F. Cassididae	11	5	4	2
F. Buprestidae	-	1	-	-
F. Carabidae	-	-	-	5
HYMENOPTERA				
F. Formicacidae	15	9	21	11
F. Braconidae	-	4	2	5
F. Chalcididae	3	8	16	4
F. Scelionidae	-	2	2	3
F. Ichneumonidae	-	-	4	-
F. Megachilidae	5	-	4	6
F. Sphecidae	-	-	1	6
HOMOPTERA				
F. Cixiididae	12	21	45	48
F. Delphacidae	4	6	5	14
F. Acanaloniidae	-	-	14	6
F. Cicadidae	-	1	3	5
F. Cercopodidae	-	1	-	3
F. Aphididae	-	-	3	1
HEMIPTERA				
F. Pentatomidae	-	2	19	133
F. Thyreocoridae	5	-	125	92
F. Lygaeidae	-	2	4	4
F. Miridae	14	62	131	93
F. Coreidae	-	-	6	9
F. Tingidae	-	3	2	-
ORTHOPTERA				
F. Pyrgomorphidae	-	2	28	15
F. Acrididae	-	-	-	-
- Acrididae	39	67	56	44
- Cyrtacanthacrida	6	6	80	23
F. Tetriginiidae	-	-	-	-
- Pseudophyllidae	4	-	12	11
- Phaneropterinae	14	55	27	5
F. Gryllidae	-	-	-	-
- Oecanthidae	-	-	4	-
- Nemobunae	4	12	52	26
LEPIDOPTERA				
F. Plutellidae	5	1	3	3
F. Sphingidae	3	-	1	1
F. Nymphalidae	5	-	3	5

<u>NEUROPTERA</u>	-	-	1	-
<u>DIPTERA</u>				
F. Asilidae	7	15	19	22
F. Tipulidae	-	-	-	-
F. Mydidae	-	-	-	-
F. Stratipmydae	-	-	3	1
F. Phoridae	-	31	-	9
F. Lochopteridae	-	-	2	8
F. Bombyliidae	-	8	13	7
F. Empididae	-	30	16	13
F. Conopidae	-	-	-	3
F. Syrphidae	8	26	17	8
F. Pipunculidae	-	-	-	-
F. Dolichopodidae	-	46	17	7
F. Tephritidae	-	9	7	2
F. Agromyzidae	-	52	112	191
F. Septidae	-	-	-	2
F. Helemyzidae	-	-	-	-
F. Muscidae	22	28	43	9
F. Anthomyiidae	-	2	1	1
F. Sarcophagae	-	-	-	-
<u>MANTODEA</u>	-	-	4	6
<u>ARANEAE</u>				
F. Lycosidae	72	79	246	343

D. Insect and spider associated with sweet potato cropping systems at 56 DAP.

Order & Family of insects & spiders	Sweet potato agroecosystem			
	A	B	C	D
<u>COLEOPTERA</u>				
F. Chrysomelidae	45	31	313	339
F. Coccinelidae	12	11	44	52
F. Curculionidae	7	2	2	12
F. Cassididae	11	3	6	6
F. Buprestidae	1	-	1	2
F. Carabidae	-	-	2	2
F. Nitidulidae	-	-	4	3
<u>HYMENOPTERA</u>				
F. Formicacidae	-	3	19	14
F. Braconidae	3	4	8	5
F. Chalcididae	2	2	15	5
F. Aulacidae	-	1	1	1
F. Scelionidae	-	1	2	5
F. Ichneumonidae	-	-	2	1
F. Cynipidae	-	-	-	1
F. Andrenidae	-	-	-	2

<u>HOMOPTERA</u>				
F. Cicadellidae	6	17	14	29
F. Delphacidae	-	2	3	7
F. Acanalonidae	-	4	14	2
F. Cicadidae	-	-	1	3
F. Coccidae	-	-	1	4
<u>HEMIPTERA</u>				
F. Pentatomidae	48	24	1693	1276
F. Thyreocoridae	27	12	468	624
F. Lygaeidae	3	4	2	2
F. Miridae	86	75	209	396
F. Coreidae	8	3	46	22
<u>ORTHOPTERA</u>				
F. Pyrgomorphidae	-	3	23	10
F. Acrididae	-	-	-	-
- Acrididae	4	9	30	65
- Cyrtacanthacaridae	6	2	125	46
F. Tetriginiidae	-	-	-	-
- Pseudophyllidae	10	1	14	19
- Phaneropteridae	19	9	56	45
F. Gryllidae	-	-	-	-
- Oecanthinae	5	-	32	30
- Nemobunae	27	5	62	23
<u>LEPIDOPTERA</u>				
F. Sphingidae	3	-	1	-
F. Nymphalidae	-	-	3	-
F. Noctuidae	-	-	-	2
<u>NEUROPTERA</u>				
-	-	-	1	-
<u>DIPTERA</u>				
F. Asilidae	6	3	4	1
F. Bombylidae	6	5	12	24
F. Stratiomyidae	-	4	6	4
F. Rhagionidae	-	-	1	-
F. Phoridae	10	5	27	12
F. Lochopteridae	12	7	23	1
F. Therevidae	-	1	-	1
F. Empididae	7	5	12	4
F. Conopidae	-	-	-	1
F. Syrphidae	3	5	5	6
F. Pipunculidae	-	1	-	1
F. Dolichopodidae	-	1	4	6
F. Tephritidae	-	1	4	5
F. Agromyzidae	-	4	4	-
F. Sepsidae	-	-	-	2
F. Muscidae	20	14	15	146
F. Anthomyiidae	-	2	1	1
F. Apioceridae	-	-	2	-
<u>MANTODEA</u>				
-	2	1	-	-
<u>BLATTARIA</u>				
-	-	-	4	-
<u>ARANEAE</u>				
F. Lycosidae	57	12	371	161