

ADAPTACION Y RENDIMIENTO DE GRAMINEAS Y LEGUMINOSAS FORRAJERAS

EN TARAPOTO - IST, PERU

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INIPA/PERU

El ensayo se realizó en el Campo Experimental del Instituto Superior Tecnológico (IST) de Tarapoto, situado a $6^{\circ} 31' 17''$ latitud Sur y a $76^{\circ} 21' 9''$ longitud Oeste, a una elevación de 300 m.s.n.m. La precipitación media anual (1983-84) fue de 1,100 mm y la temperatura media de 27°C (Figura 1). La región corresponde al ecosistema de Bosque Tropical Semi-siempreverde estacional. Las características físicas y químicas del suelo se presentan en el Cuadro 1.

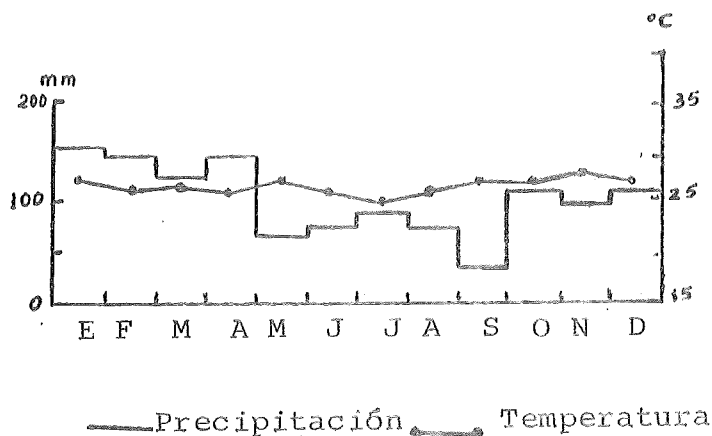


Fig. 1. Características climáticas de la Región de Tarapoto, Perú.

Se evaluaron en los períodos que aparecen en el Cuadro 2, 5 ecotipos de gramíneas y 22 de leguminosas.

Del ensayo, se han obtenido las siguientes conclusiones:

1. Por su rapidez de establecimiento, producción de forraje, tolerancia a plagas y enfermedades y por su persistencia, sobresalieron los siguientes ecotipos:

Andropogon gayanus 621
Brachiaria decumbens 606
 " *dycloneura* 6133
 " *humidicola* 679

671-685. Esp. 1/10.

Zornia sp	7847
Stylosanthes guianensis	64-A
"	" 136
"	" 191
Centrosema macrocarpon	5065
"	" 5062
Zornia latifolia	728

2. La variación de producción forrajera en las épocas húmeda y seca depende de cada ecotipo. Es notable la persistencia productiva durante la época seca de los ecotipos *Andropogon gayanus* 621 y *Centrosema macrocarpon* 5065.

3. En ambos periodos de evaluación, de máxima y mínima precipitación, al aumentar la edad del pasto hasta las 12 semanas, aumentó también la producción forrajera. Este aumento fue mayor entre las 6 y 9 semanas de edad.

Cuadro 1. Características físicas y químicas del Suelo en Tarapoto (IST), Perú

Profundidad cm	Arena %	Idmo %	Arcilla %	MO %	Pz ppm	N ^o Total ppm	pH	Al ---	Ca meq/100gr	Mg	K
0-20	68	12	20	0.7	11.6	560	5.3	0.1	1.3	0.32	0.28
20-40				0.2	3.5	448	5.4	0.1	1.2	0.46	0.24

* Bray II

Cuadro 2. Evaluaciones realizadas durante el establecimiento y en las épocas de mínima y máxima precipitación.

Siembra	Establecimiento	Producción	
		Máxima	Mínima
05-01-83	05-01-83	08-02-83	05-07-83
	01-04-83	03-05-83	27-09-83

Cuadro 3. Producción de MS de los ecotipos sobresalientes a diferentes edades de corte en época lluviosa (máxima) y seca (mínima). IST-Tarapoto, Perú.

P A S T O S	E D A D D E C O R T E (Semanas)												PROMEDIO	
	3		6		9		12						Max.	Min.
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
<u>GRAMINEAS</u>														
A. gayanus 621	654	606	2707	1017	2859	2664	3763	2817	2471	1776				
B. decumbens 606	610	515	998	594	2065	1800	3156	1771	1707	1170				
B. dictioneura 6133	681	495	1254	974	2061	1696	2647	1891	1661	1264				
B. humidicola 679	542	546	1403	700	1901	1554	2939	1767	1696	1142				
<u>LEGUMINOSAS</u>														
Zornia Sp. 7847	226	280	1896	973	2136	1076	2874	1176	1783	876				
S. guianensis 64 A	346	165	1319	670	2388	1066	2866	1066	1730	742				
" 136	359	300	1167	653	2136	1137	2909	1137	1643	807				
" 191	177	330	1173	663	2269	941	3106	1120	1681	763				
C. macrocarpon 5065	798	293	1016	648	1596	1298	2995	1436	1476	919				
" 5062	376	320	905	719	1671	1131	2900	1238	1463	852				
Z. latifolia 728	392	230	1478	687	1788	848	2367	1162	1506	732				
C. pubescens 5112	389	343	753	664	1726	1033	2683	1149	1387	797				
C. pubescens 5189	243	310	628	643	1351	1119	2477	1297	1174	842				

PERIODO DE ESTABLECIMIENTO PROMEDIO Y COEFICIENTE DE VARIACION DE ALTURA LOCALIDAD: COPEROLTA II PERU

ECOTIPO	9 SEMANAS			12 SEMANAS			15 SEMANAS		
	ALTURA (CM)	CV (%)		ALTURA (CM)	CV (%)		ALTURA (CM)	CV (%)	
GRAMINEAS :									
BRACHIARIA	606	30		35			43		
GAYANUS	621	25		27			39		
HUMIDICO	679	17		14			21		
BRACHIARIA	6019	30		15			26		
DICTYONE	6133	24		22			32		
LEGUMINOSAS :									
GUIANENS	136	18		25			40		
STYLOSANTHES	191	14		21			24		
DESMODIUM	350	10		9			13		
CENTROSEMA	438	10		12			12		
GUIANENS	644	21		17			41		
LATIFOLI	728	14		18			25		
GUIANENS	1233	13		16			33		
OVALIFOL	3794	3		5			11		
MACROCAR	5052	12		18			17		
MACROCAR	5065	21		30			31		
SP.	5112	13		12			15		
PUBESCEN	5189	13		11			15		
BRASILIA	5234	11		9			12		
GLABRA	7947	11		15			21		
HISTRIX	9690	24		32			37		
PHASEOLO	9900	8		10			19		
CAPITATA	10280	3		9			19		

ECOTIPO	PORCENTAJE DE COBERTURA			LOCALIDAD: COPEROLTA II PERU		
	COBERTURA	DUNCAN		COBERTURA	DUNCAN	
GRAMINEAS :						
DECUMBEN	38	A		60	A	
GAYANUS	36	A		46	BA	
HUMIDICO	28	A		71	A	
RUZIZIEN	35	A		15	B	
DICTYONE	25	A		41	BA	
LEGUMINOSAS :						
GUIANENS	23	C9		45	CF9D	
STYLOSANTHES	11	CD		21	GEF	
OVALIFOL	15	CD		23	GF	
PUBESCEN	18	CD		45	GF	
GUIANENS	644	CD		20	GF	
LATIFOLI	728	CD		21	GF	
STYLOSANTHES	1283	CD		25	GF	
OVALIFOL	3794	CD		8	G	
MACROCAR	5052	CD		31	GCEFD	
MACROCAR	5065	C9		50	C6	
SP.	5112	B		46	CB	
PUBESCEN	5189	CB		38	CEFD	
BRASILIA	5234	A		88	A	
GLABRA	7947	CD		18	GF	
HISTRIX	9690	A		63	B	
PHASEOLO	9900	CD		37	CEFD	
CAPITATA	10280	D		16	GF	

EVALUACION : 1 LOCALIDAD:CCPEROLTA II PERU
 PRODUCCION DE MATERIA SECA KG/HA

ECOTIPO	3 SEMANAS		6 SEMANAS		9 SEMANAS		12 SEMANAS	
	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN
GRAMINEAS :	MEDIA=161	D.E.=51	MEDIA=319	D.E.=128	MEDIA=262	D.E.=137	MEDIA=995	D.E.=333
BRACHIARIA	606	BA	435	A	440	A	1688	A
ANDROPOGON	621	R	236	A	216	BA	1135	BA
BRACHIARIA	679	BA	206	A	115	B	433	C
DICTYONE	6133	250	400	A	276	BA	722	BC
LEGUMINOSAS :	MEDIA=107	D.E.=36	MEDIA=204	D.E.=90	MEDIA=140	D.E.=72	MEDIA=316	D.E.=114
STYLOSANTHES	136	BA	240	BCD	176	BDAC	502	BA
GUIANENS	86	BA	596	A	290	A	492	BA
GUIANENS	191	BA	143	BCD	106	BDC	392	BAC
DESODIUM	350	BA	66	CD	113	BDC	56	F
OVALIFOL	438	BAC	274	B	170	BDAC	522	A
PUBESCEN	644	BAC	235	BCD	103	BDC	283	EDFC
STYLOSANTHES	728	BAC	173	BCD	206	BA	406	BAC
LATIFOLI	728	BAC	215	BCD	96	BDC	397	BAC
GUIANENS	1233	BAC	250	CB	180	BDAC	326	BDAC
STYLOSANTHES	3784	BAC	196	BCD	163	BDAC	348	BAC
DESODIUM	5062	A	203	CD	126	BDC	313	EDAC
MACROCAR	5065	BAC	100	CD	56	DC	103	EF
MACROCAR	5112	BA	240	BCD	196	BAC	263	EDFC
SP.	5112	BA	76	CD	90	BDC	356	BAC
PUBESCEN	5189	BC	156	BCD	153	BDAC	321	BDAC
BRASILIA	5234	BAC	60	D	50	D	116	EDF
ZUFNIA	7847	BAC	60	D	50	D	95	F
GLABRA	7847	BAC	60	D	50	D	95	F
AESCHYOMENE	9690	C	60	D	50	D	95	F
HISTRIX	9690	C	60	D	50	D	95	F
PUERARIA	9900	BAC	60	D	50	D	95	F
PHASEOLO	9900	BAC	60	D	50	D	95	F
STYLOSANTHES	10280	BAC	60	D	50	D	95	F
CAPITATA	10280	BAC	60	D	50	D	95	F

MAXIMA PRECIPITACION LOCALIDAD:CCPEROLTA II PERU
 PRODUCCION DE MATERIA SECA KG/HA

ECOTIPO	3 SEMANAS		6 SEMANAS		9 SEMANAS		12 SEMANAS	
	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN
GRAMINEAS :	MEDIA=132	D.E.=43	MEDIA=460	D.E.=149	MEDIA=976	D.E.=288	MEDIA=1857	D.E.=909
BRACHIARIA	606	A	380	A	956	BA	1752	BA
ANDROPOGON	621	A	584	A	1396	A	2929	A
BRACHIARIA	679	A	376	A	659	B	975	B
DICTYONE	6133	A	502	A	892	BA	1772	BA
LEGUMINOSAS :	MEDIA=92	D.E.=43	MEDIA=400	D.E.=146	MEDIA=803	D.E.=267	MEDIA=946	D.E.=277
STYLOSANTHES	136	C	513	BA	1092	BA	1584	A
GUIANENS	191	C	478	BAC	754	ACD	1454	BAC
STYLOSANTHES	350	BAC	526	A	843	BCD	992	DC
DESODIUM	438	BC	193	C	300	D	250	E
PUBESCEN	644	C	543	A	974	BA	1511	BA
STYLOSANTHES	728	BAC	360	BAC	759	BCD	784	D
LATIFOLI	728	BAC	360	BAC	822	BCD	994	DC
GUIANENS	1233	C	363	BAC	822	BCD	815	D
STYLOSANTHES	3784	A	450	BAC	772	BCD	810	D
DESODIUM	5062	C	356	BAC	789	BCD	662	ED
MACROCAR	5065	C	285	BAC	648	BCD	826	D
MACROCAR	5112	BAC	400	BCD	856	BCD	826	D
SP.	5112	C	236	BC	402	CD	608	ED
PUBESCEN	5189	BC	390	BAC	895	BC	830	D
BRASILIA	5234	BC	502	BA	1428	A	612	ED
ZUFNIA	7847	C	360	BAC	782	BCD	607	D
GLABRA	7847	C	320	BAC	644	BCD	607	D
HISTRIX	9690	C	320	BAC	644	BCD	607	D
PUERARIA	9900	C	320	BAC	644	BCD	607	D
PHASEOLO	9900	C	320	BAC	644	BCD	607	D
STYLOSANTHES	10280	BA	543	A	877	BC	1052	BDC

EVALUACION : I LOCALIDAD: COPEROLTA II PERU

ECOTIPO	PRECIPITACION	PORCENTAJE DE COBERTURA				LOCALIDAD: COPEROLTA II PERU			
		3 SEMANAS	6 SEMANAS	9 SEMANAS	12 SEMANAS	3 SEMANAS	6 SEMANAS	9 SEMANAS	12 SEMANAS
		COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN
GRAMINEAS :		MEDIA=50	D.E.=7	MEDIA=62	D.E.=10	MEDIA=70	D.E.=6	MEDIA=86	D.E.=11
BRACHARIA	DECUMBEN	46	A	56	B	63	B	91	A
	GAYANUS	43	A	55	B	68	A	80	A
	HUMIDICO	60	A	63	A	86	A	96	A
	DICTYONE	58	A	55	B	61	B	78	A
LEGUMINOSAS :		MEDIA=53	D.E.=11	MEDIA=60	D.E.=15	MEDIA=62	D.E.=11	MEDIA=72	D.E.=14
STYLOSANTHES	GUIANENS	136	A	60	BAC	63	BAC	86	A
	GUIANENS	191	EDDC	51	BAC	73	BA	71	BA
	OVALIFOL	350	EDDC	65	BA	73	BA	83	BA
	PURSCEN	436	EDDAC	53	EDDAC	70	BAC	73	BA
	LATIFOLI	644	ED	51	BAC	50	BDC	68	BA
	GUIANENS	1283	EDC	45	BC	48	CC	56	BA
	MACROCAR	3784	EDDC	50	BAC	68	BAC	76	BA
	MACROCAR	5085	EDDC	61	BAC	59	BAC	77	BA
	SP.	5112	EDDAC	76	A	65	BAC	81	BA
	PURSCEN	5189	EDDAC	76	A	70	BAC	81	BA
	BRASILIA	5234	EDDAC	73	BA	70	RAC	71	BA
	GLABRA	7947	EDC	71	BA	78	A	81	BA
	HISTRIX	9690	EDC	43	BC	46	DC	58	BA
	PHASEOLO	9900	BAC	71	BA	50	BDC	58	BA
	CAPITATA	10280	F	35	C	73	BA	65	BA
				32		30	D	30	C

EVALUACION : II LOCALIDAD: COPEROLTA II PERU

ECOTIPO	PRECIPITACION	PORCENTAJE DE COBERTURA				LOCALIDAD: COPEROLTA II PERU			
		3 SEMANAS	6 SEMANAS	9 SEMANAS	12 SEMANAS	3 SEMANAS	6 SEMANAS	9 SEMANAS	12 SEMANAS
		COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN
GRAMINEAS :		MEDIA=57	D.E.=23	MEDIA=72	D.E.=8	MEDIA=90	D.E.=9	MEDIA=97	D.E.=5
BRACHARIA	DECUMBEN	46	A	51	B	81	A	88	B
	GAYANUS	49	A	58	B	93	A	100	A
	HUMIDICO	70	A	96	A	96	A	100	A
	DICTYONE	6133	A	85	A	91	A	100	A
LEGUMINOSAS :		MEDIA=65	D.E.=12	MEDIA=75	D.E.=11	MEDIA=89	D.E.=11	MEDIA=94	D.E.=10
STYLOSANTHES	GUIANENS	136	A	83	BDAC	93	BAC	100	A
	GUIANENS	101	A	70	EDFC	63	BDAC	83	A
	OVALIFOL	350	A	100	A	100	A	100	A
	PURSCEN	439	A	73	EDDFC	56	O	80	A
	GUIANENS	644	A	56	F	71	DC	96	A
	LATIFOLI	728	A	75	EDDFC	95	BA	96	A
	GUIANENS	1283	A	60	EF	95	BA	98	A
	OVALIFOL	3784	A	90	EF	100	BA	100	A
	MACROCAR	5062	A	58	EDFC	86	BDAC	83	A
	SP.	5065	A	76	EDFC	95	BA	85	A
	PURSCEN	5189	A	90	BAC	100	A	100	A
	BRASILIA	5234	A	76	EDDFC	76	BDC	97	A
	GLABRA	7347	A	90	BAC	96	BA	100	A
	HISTRIX	9690	A	65	EDF	78	BDAC	96	A
	PHASEOLO	9900	A	80	EDAC	86	BDAC	100	A
	CAPITATA	10280	A	75	EDDFC	93	BAC	98	A

MINIMA PRECIPITACION REGRESIONES DE PRODUCCION MEDIA DE MATERIA SECA VS. EDAD LOCALIDAD: COPERCLTA II PERU

ECOTIPO	LINEAL		CUADRADO		NIVEL DE SIGNIFI.	R		CUADRADO		C U A D R A T I C O	
	CONSTA. LINEAL	LINEAL	CUADRADO	LINEAL		CUADRADO LINEAL	LINEAL	LINEAL	SIGNIFI. CUADRAT.	SIGNIFI.	
GRAMINEAS :											
BRACHIARIA	606	101.0	0.72	0.81	0.001	0.81	-37.5	0.590	13.65	0.060	
ANDROPOGON	621	64.1	0.69	0.80	0.001	0.80	-40.2	0.400	10.43	0.040	
BRACHIARIA	679	28.9	0.84	0.86	0.001	0.86	12.1	0.550	1.65	0.400	
DICTYONE	6133	53.0	0.75	0.75	0.001	0.75	53.1	0.210	-0.01	1.000	
LEGUMINOSAS :											
STYLOSANTHES	136	34.5	0.32	0.53	0.001	0.53	17.2	0.420	1.73	0.410	
GUIANENS	101	46.4	0.73	0.79	0.001	0.79	100.1	0.020	-5.33	0.160	
DESODIUM	350	25.7	0.74	0.75	0.001	0.75	12.4	0.540	1.33	0.500	
PURSCEN	438	9.7	0.57	0.78	0.001	0.78	33.0	0.001	-2.32	0.010	
GUIANENS	644	35.9	0.86	0.87	0.001	0.87	18.2	0.390	1.76	0.350	
LATIFOLI	728	21.2	0.68	0.59	0.010	0.59	23.7	0.430	-0.24	0.940	
GUIANENS	1283	30.0	0.90	0.91	0.001	0.91	20.6	0.130	0.64	0.460	
OVALIFOL	3794	26.9	0.62	0.62	0.001	0.62	20.3	0.480	0.66	0.610	
MACROCAR	5062	27.7	0.82	0.82	0.001	0.82	45.2	0.020	-1.75	0.290	
MACROCAR	5065	26.9	0.95	0.95	0.001	0.95	25.5	0.010	0.14	0.860	
SP.	5112	24.3	0.83	0.84	0.001	0.84	33.7	0.040	-0.94	0.510	
PURSCEN	5189	9.4	0.76	0.82	0.001	0.82	20.4	0.010	-1.09	0.090	
BRASILIA	5234	24.6	0.86	0.93	0.001	0.93	43.6	0.001	-1.89	0.120	
GLABRA	7847	22.7	0.85	0.95	0.001	0.95	-26.6	0.160	4.56	0.030	
HISTRIX	9690	21.7	0.73	0.91	0.001	0.91	2.0	0.910	1.98	0.240	
PHASELU	9900	12.8	0.73	0.69	0.001	0.69	38.3	0.001	-2.53	0.010	
CAPITATA	10290	8.1	0.61	0.67	0.010	0.67	18.6	0.100	-1.06	0.300	

MAXIMA PRECIPITACION REGRESIONES DE PRODUCCION MEDIA DE MATERIA SECA VS. EDAD LOCALIDAD: COPERCLTA II PERU

ECOTIPO	LINEAL		CUADRADO		NIVEL DE SIGNIFI.	R		CUADRADO		C U A D R A T I C O	
	CONSTA. LINEAL	LINEAL	CUADRADO	LINEAL		CUADRADO LINEAL	LINEAL	LINEAL	SIGNIFI. CUADRAT.	SIGNIFI.	
GRAMINEAS :											
DECUMEN	606	119.4	0.86	0.92	0.001	0.92	-14.9	0.750	13.43	0.010	
GAYANUS	621	191.5	0.84	0.92	0.001	0.92	-49.1	0.530	24.06	0.010	
HUMIDICU	679	75.6	0.87	0.98	0.001	0.98	46.0	0.010	2.95	0.070	
DICTYONE	6133	120.7	0.83	0.88	0.001	0.88	0.7	0.990	12.00	0.070	
LEGUMINOSAS :											
GUIANENS	136	119.1	0.94	0.97	0.001	0.97	33.9	0.240	8.52	0.010	
STYLOSANTHES	191	101.5	0.83	0.86	0.001	0.86	11.0	0.830	9.05	0.100	
DESODIUM	350	85.3	0.96	0.96	0.001	0.96	79.7	0.010	0.56	0.200	
PURSCEN	438	26.4	0.80	0.83	0.001	0.83	45.7	0.020	-1.93	0.240	
GUIANENS	644	112.4	0.89	0.91	0.001	0.91	34.1	0.480	7.83	0.110	
LATIFOLI	728	69.3	0.91	0.91	0.001	0.91	62.3	0.050	0.70	0.810	
GUIANENS	1293	80.5	0.90	0.97	0.001	0.97	43.9	0.040	3.66	0.050	
OVALIFOL	3794	73.9	0.97	0.97	0.001	0.97	84.3	0.031	-1.08	0.540	
MACROCAR	5062	71.4	0.95	0.95	0.001	0.95	62.2	0.020	0.92	0.670	
MACROCAR	5065	58.3	0.95	0.96	0.001	0.96	48.9	0.010	0.94	0.540	
SP.	5112	75.2	0.93	0.93	0.001	0.93	71.8	0.020	0.34	0.900	
PURSCEN	5189	46.4	0.90	0.92	0.001	0.92	22.7	0.240	2.37	0.210	
BRASILIA	5234	76.2	0.93	0.93	0.001	0.93	70.6	0.030	0.56	0.940	
GLABRA	7847	86.8	0.95	0.98	0.001	0.98	157.1	0.020	-7.02	0.380	
HISTRIX	9690	101.2	0.86	0.93	0.001	0.93	-10.9	0.730	11.21	0.010	
PHASELU	9900	65.3	0.89	0.89	0.001	0.89	39.2	0.200	2.61	0.370	
CAPITATA	10290	89.9	0.91	0.91	0.001	0.91	84.6	0.040	0.53	0.880	

EVALUACION : 1

MINIMA PRECIPITACION		EVALUACION DE INSECTOS				LOCALIDAD: COBEROLTA II PERU				
ECOTIPO		TRIPS AC.	PULGUILLA	COMEDOR	HEMIPTERO	SALIVAZO	BARRENAD.	PERFORAD.	OTRO1	OTRO2
GRAMINEAS :										
BRACHIARIA	606	0.00	2.17	1.17	0.50	0.00	0.00	0.00	0.00	0.00
ANDROPOGON	621	0.00	0.17	0.17	1.33	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	679	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	6133	0.00	0.17	0.33	0.50	0.00	0.00	0.17	0.00	0.00
LEGUMINOSAS :										
STYLOSANTHES	136	0.50	1.58	1.33	1.58	0.00	0.00	1.00	0.00	0.00
STYLOSANTHES	191	0.73	1.64	0.91	1.18	0.00	0.00	0.36	0.00	0.00
DESODIUM	350	0.50	0.00	1.50	1.50	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	438	1.17	1.17	2.17	1.67	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	644	0.36	1.36	1.45	1.82	0.00	0.00	0.55	0.00	0.00
ZORNIA	726	0.75	0.98	0.25	2.13	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	1293	0.17	0.33	0.17	0.17	0.00	0.00	0.17	0.00	0.00
DESODIUM	3794	0.67	0.00	0.50	0.67	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5062	0.33	0.83	2.08	1.58	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5065	1.00	1.17	2.50	2.17	0.42	0.00	0.00	0.00	0.00
CENTROSEMA	5112	1.00	1.00	2.33	1.92	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5189	0.83	0.30	2.17	1.67	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5234	0.63	0.57	2.00	1.67	0.33	0.00	0.33	0.00	0.00
ZORNIA	7847	0.57	0.57	0.86	2.29	0.00	0.00	0.00	0.00	0.00
AESCHYMONENE	9690	0.17	0.00	0.17	1.42	0.00	0.00	0.00	0.00	0.00
PURRARIA	9900	0.55	0.91	1.45	1.18	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	10280	0.44	0.89	0.44	1.89	0.00	0.00	0.22	0.00	0.00

MAXIMA PRECIPITACION		EVALUACION DE INSECTOS				LOCALIDAD: COBEROLTA II PERU				
ECOTIPO		TRIPS AC.	PULGUILLA	COMEDOR	HEMIPTERO	SALIVAZO	BARRENAD.	PERFORAD.	OTRO1	OTRO2
GRAMINEAS :										
BRACHIARIA	606	0.33	1.67	1.67	0.67	0.67	0.00	0.00	0.00	0.00
ANDROPOGON	621	0.00	0.17	1.17	1.33	0.17	0.00	0.00	0.00	0.00
BRACHIARIA	679	0.17	0.00	1.33	0.50	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	6133	0.17	0.67	0.83	0.00	0.17	0.00	0.00	0.00	0.00
LEGUMINOSAS :										
STYLOSANTHES	136	0.50	1.67	2.00	1.50	0.00	0.00	0.17	0.00	0.00
STYLOSANTHES	191	0.00	1.08	1.67	1.67	0.00	0.00	0.17	0.00	0.00
DESODIUM	350	0.00	0.17	1.92	0.83	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	438	1.17	2.00	3.50	1.25	0.00	0.00	0.17	0.00	0.00
STYLOSANTHES	544	1.58	1.67	1.67	0.67	0.00	0.00	0.50	0.00	0.00
ZORNIA	726	0.33	1.75	1.17	1.33	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	1263	0.17	1.33	1.33	0.83	0.00	0.00	0.17	0.00	0.00
DESODIUM	3794	0.17	0.57	1.83	0.50	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5062	0.33	0.83	3.58	1.42	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5065	0.33	1.17	3.50	1.42	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5112	1.08	1.08	3.75	1.25	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5189	1.17	2.00	2.92	1.75	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5234	0.67	1.33	2.58	1.58	0.00	0.00	0.00	0.00	0.00
ZORNIA	7847	0.50	0.75	1.50	1.75	0.00	0.00	0.00	0.00	0.00
AESCHYMONENE	9690	0.50	0.75	1.67	1.42	0.00	0.00	0.00	0.00	0.00
PURRARIA	9900	0.50	0.33	1.92	1.17	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	10280	0.50	1.83	1.83	1.75	0.00	0.00	0.67	0.00	0.00

EVALUACION : I LOCALIDAD: COPEROLTA II PERU

MINIMA PRECIPITACION EVALUACION DE ENFERMEDADES

ECOTIPO	HOJA				TALLO			OTROS					
	NEGRA	MARRON	NARAN.	CREMA	MARRP.	NARAP.	NEGRA	MARRON	CHANC.	MARCN.	CLDRO.	I.PEG.	I.G.PG
GRAMINEAS :													
BRACHIARIA	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GAYANUS	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HUMIDICO	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
DICTYONE	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEGUMINOSAS :													
GUIANENS	0.2	1.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.5	0.0
GUIANENS	0.6	1.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.5	0.0
OVALIFOL	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
PUBESCEN	0.0	1.5	0.3	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.3	2.3	0.0
GUIANENS	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.0
LATIFOLI	0.0	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0
GUIANENS	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
OVALIFOL	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
MACROCAR	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
MACROCAR	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
SP.	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
PUBESCEN	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
BRASILIA	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
GLABRA	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
HISTRIX	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
PHASEOLO	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
CAPITATA	0.0	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0

MAXIMA PRECIPITACION EVALUACION DE ENFERMEDADES LOCALIDAD: COPEROLTA II PERU

ECOTIPO	HOJA				TALLO			OTROS					
	NEGRA	MARRON	NARAN.	CREMA	MARRP.	NARAP.	NEGRA	MARRON	CHANC.	MARCN.	CLDRO.	I.PEG.	I.G.PG
GRAMINEAS :													
BRACHIARIA	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.5	0.0
ANDROPOGON	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
MUJIDICO	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
DICTYONE	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
LEGUMINOSAS :													
GUIANENS	0.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.5	0.0
GUIANENS	0.2	1.5	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
OVALIFOL	0.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
PUBESCEN	0.0	2.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0
GUIANENS	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.2	0.0
LATIFOLI	0.0	2.0	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	1.0	0.0
GUIANENS	0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
OVALIFOL	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
MACROCAR	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
MACROCAR	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
SP.	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
PUBESCEN	0.0	2.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
BRASILIA	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
GLABRA	0.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
HISTRIX	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
PHASEOLO	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAPITATA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

EVALUACION : 2
 PRODUCCION DE MATERIA SECA KG/HA
 LOCALIDAD: COPEROLTA II PERU

ECOTIPO	3 SEMANAS		6 SEMANAS		9 SEMANAS		12 SEMANAS	
	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN
GRAMINEAS :	MEDIA=219	D.E.=71	MEDIA=626	D.E.=211	MEDIA=1028	D.E.=74	MEDIA=1492	D.E.=239
BRACHIARIA	600	A	486	B	1062	B	1232	B
ANDROPAGON	621	A	944	A	1440	A	2539	A
BRACHIARIA	679	A	540	BA	789	C	1187	B
BRACHIARIA	6133	A	532	BA	622	C	1010	B
LEGUMINOSAS :	MEDIA=196	D.E.=86	MEDIA=426	D.E.=128	MEDIA=632	D.E.=169	MEDIA=934	D.E.=206
STYLOSANTHES	130	DE	484	BAC	664	BDC	900	DC
STYLOSANTHES	191	BAC	484	BAC	769	BAC	1197	BAC
DESODIUM	350	DEC	468	BAC	636	BDC	857	DC
CENTROSEMA	436	BDEC	419	BDEC	513	DC	951	BDC
STYLOSANTHES	644	BAC	472	BAC	939	BA	1129	BDAC
ZORNIA	728	E	501	BAC	336	D	800	DC
STYLOSANTHES	1283	A	490	BAC	992	A	1489	A
DESODIUM	3784	BDEC	393	DEC	393	D	650	E
CENTROSEMA	5062	BDEC	703	A	505	DC	650	DC
MACROCAR	5065	83	510	BAC	728	BAC	1306	BA
CENTROSEMA	5112	173	456	BDEC	632	BDC	1076	BDC
CENTROSEMA	5189	140	176	F	549	DC	779	D
CENTROSEMA	5234	163	336	BDEC	653	BDC	830	DC
ZORNIA	6471	280	475	BAC	607	DC	910	BDC
AESCHYOMENE	9690	300	220	DE	658	BDC	951	BDC
PUERARIA	9900	173	420	BDEC	551	DC	390	E
STYLOSANTHES	10280	250	186	BDC	620	BDC	1073	BDC

MAXIMA PRECIPITACION
 PRODUCCION DE MATERIA SECA KG/HA
 LOCALIDAD: COPEROLTA II PERU

ECOTIPO	3 SEMANAS		6 SEMANAS		9 SEMANAS		12 SEMANAS	
	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN	MS,KG/HA	DUNCAN
GRAMINEAS :	MEDIA=142	D.E.=12	MEDIA=656	D.E.=57	MEDIA=1183	D.E.=215	MEDIA=2317	D.E.=598
BRACHIARIA	606	B	629	B	1356	BC	2172	B
ANDROPAGON	621	A	1001	A	1701	A	3670	A
BRACHIARIA	679	B	316	C	694	C	1057	C
BRACHIARIA	6133	B	678	B	1282	BA	2370	B
LEGUMINOSAS :	MEDIA=111	D.E.=16	MEDIA=498	D.E.=125	MEDIA=923	D.E.=132	MEDIA=1245	D.E.=260
STYLOSANTHES	136	FUEG	932	A	1092	B	2399	A
STYLOSANTHES	191	FOEG	668	BC	901	CE9D	2048	A
DESODIUM	350	FDEG	482	ECD	771	CEFD	1095	DC
CENTROSEMA	436	FEG	356	E	978	CBD	1095	DC
STYLOSANTHES	644	G	794	BA	1402	A	1924	A
ZORNIA	728	A	483	ECD	902	CE9D	1160	DC
DESODIUM	1283	G	330	E	726	EFD	1095	DC
DESODIUM	3784	BAC	376	E	719	EF	958	DC
CENTROSEMA	5062	BDAC	446	ECO	974	CEBD	1077	DC
MACROCAR	5065	FDEC	326	E	1104	B	1323	BC
CENTROSEMA	5112	100	400	ED	542	B	1086	DC
CENTROSEMA	5189	83	400	ED	542	F	816	D
CENTROSEMA	5234	143	459	ECO	1009	CS	912	DC
ZORNIA	7847	123	662	BC	1099	R	685	D
AESCHYOMENE	9690	90	360	FG	690	CEBD	1688	BA
PUERARIA	9900	80	360	E	734	EFD	948	DC
STYLOSANTHES	10230	153	629	BAC	795	CEB	1149	DC

ECOTIPO	3 SEMANAS			6 SEMANAS			9 SEMANAS			12 SEMANAS		
	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN
GRAMINEAS :	MEDIA=61	D.E.=16	MEDIA=81	D.E.=7	MEDIA=97	D.E.=3	MEDIA=97	D.E.=4	MEDIA=97	D.E.=4	MEDIA=97	D.E.=4
BRACHIARIA	606	A	68	B	93	A	93	A	93	A	93	A
ANDROPOGON	621	A	81	BA	100	A	100	A	100	A	100	A
BRACHIARIA	679	A	86	A	96	A	96	A	96	A	96	A
BRACHIARIA	6133	A	90	A	100	A	100	A	100	A	100	A
LEGUMINOSAS :	MEDIA=63	D.E.=12	MEDIA=76	D.E.=14	MEDIA=87	D.E.=10	MEDIA=90	D.E.=12	MEDIA=90	D.E.=12	MEDIA=90	D.E.=12
STYLOSANTHES	136	BA	65	BAC	83	BA	91	A	91	A	91	A
STYLOSANTHES	191	DC	71	BDAC	86	BA	90	A	90	A	90	A
DESODIUM	350	BA	94	A	100	A	100	A	100	A	100	A
CENTROSEMA	439	BDAC	55	D	50	C	60	B	60	B	60	B
STYLOSANTHES	544	BDAC	75	BDAC	83	BA	89	A	89	A	89	A
ZORNIA	728	BDC	80	BDAC	86	BA	83	A	83	A	83	A
STYLOSANTHES	1283	BDAC	80	BDAC	96	A	100	A	100	A	100	A
DESODIUM	3784	BDAC	81	BDAC	100	A	100	A	100	A	100	A
CENTROSEMA	5062	BDAC	70	BDAC	85	BA	80	A	80	A	80	A
CENTROSEMA	5065	DC	60	DC	81	BA	90	A	90	A	90	A
CENTROSEMA	5112	BDAC	91	BDAC	100	A	100	A	100	A	100	A
CENTROSEMA	5189	BDAC	65	BDC	75	B	82	A	82	A	82	A
CENTROSEMA	5234	BDAC	80	BDAC	90	BA	96	A	96	A	96	A
ZORNIA	7847	A	91	BA	90	BA	97	A	97	A	97	A
AESCHYNOME	9690	BDAC	71	BDAC	96	A	98	A	98	A	98	A
PUERARIA	9900	BAC	90	BA	88	BA	88	A	88	A	88	A
STYLOSANTHES	10280	D	60	DC	91	BA	89	A	89	A	89	A

ECOTIPO	3 SEMANAS			6 SEMANAS			9 SEMANAS			12 SEMANAS		
	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN	COBERTU.	DUNCAN
GRAMINEAS :	MEDIA=57	D.E.=23	MEDIA=72	D.E.=8	MEDIA=90	D.E.=9	MEDIA=97	D.E.=5	MEDIA=97	D.E.=5	MEDIA=97	D.E.=5
BRACHIARIA	606	A	51	B	81	A	89	B	89	B	89	B
ANDROPOGON	621	A	58	B	93	A	100	A	100	A	100	A
BRACHIARIA	679	A	96	A	96	A	100	A	100	A	100	A
BRACHIARIA	6133	A	95	A	91	A	100	A	100	A	100	A
LEGUMINOSAS :	MEDIA=65	D.E.=12	MEDIA=75	D.E.=11	MEDIA=88	D.E.=11	MEDIA=94	D.E.=10	MEDIA=94	D.E.=10	MEDIA=94	D.E.=10
STYLOSANTHES	136	A	83	BDAC	93	BAC	100	A	100	A	100	A
STYLOSANTHES	191	A	70	EDFC	83	BDAC	83	A	83	A	83	A
DESODIUM	350	A	100	A	100	A	100	A	100	A	100	A
CENTROSEMA	438	A	73	EDFC	66	D	60	A	60	A	60	A
STYLOSANTHES	644	A	56	F	71	DC	96	A	96	A	96	A
ZORNIA	728	A	75	EDFC	95	BA	96	A	96	A	96	A
STYLOSANTHES	1283	A	60	F	95	BA	98	A	98	A	98	A
DESODIUM	3504	A	95	BA	100	A	100	A	100	A	100	A
DESODIUM	3784	A	95	BA	100	A	100	A	100	A	100	A
CENTROSEMA	5062	A	58	EF	86	BDAC	83	A	83	A	83	A
CENTROSEMA	5065	A	76	EDFC	95	BA	86	A	86	A	86	A
CENTROSEMA	5112	A	90	BAC	100	A	100	A	100	A	100	A
CENTROSEMA	5199	A	76	EDFC	76	BDC	90	A	90	A	90	A
CENTROSEMA	5234	A	90	BAC	96	BA	100	A	100	A	100	A
ZORNIA	7847	A	65	EDF	86	BDAC	100	A	100	A	100	A
AESCHYNOME	9690	A	65	EDF	78	BDAC	100	A	100	A	100	A
PUERARIA	9900	A	80	EDF	86	BDAC	100	A	100	A	100	A
STYLOSANTHES	10280	A	75	EDFC	93	BAC	98	A	98	A	98	A

EVALUACION : 2

MINIMA PRECIPITACION		EVALUACION DE INSECTOS				LOCALIDAD: CUPEROLTA II PERU				
ECOTIPO		TRIPS AC. PULGUILLA	COMEDOR	HEMIPTERO SALIVAZO	PERFCRAD. OTROI	TRIPS AC. PULGUILLA	COMEDOR	HEMIPTERO SALIVAZO	PERFCRAD. OTROI	OTROZ
GRAMINEAS :										
BRACHIARIA	606	0.17	2.08	1.17	0.25	0.00	0.00	0.00	0.00	0.00
ANDROPOGON	621	0.00	1.83	1.50	0.00	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	679	0.00	2.08	0.50	0.33	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	6133	0.00	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LEGUMINOSAS :										
STYLOSANTHES	136	1.67	2.08	1.50	0.00	0.00	0.33	0.00	0.00	0.00
STYLOSANTHES	191	1.17	2.09	1.58	0.00	0.00	0.17	0.00	0.00	0.00
DESODIUM	350	1.50	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	433	1.67	3.25	1.50	0.00	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	644	1.63	2.17	1.33	0.00	0.00	0.53	0.00	0.00	0.00
ZORNIA	728	1.17	2.17	2.00	0.00	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	1293	0.17	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DESODIUM	3784	0.67	2.33	0.67	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5062	0.83	3.50	1.92	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5065	1.00	3.50	1.83	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5112	1.33	3.58	1.67	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5189	1.50	3.67	1.42	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5234	1.50	2.83	1.17	0.00	0.00	0.00	0.00	0.00	0.00
ZORNIA	7647	0.50	2.25	2.03	0.00	0.00	0.00	0.00	0.00	0.00
ARCHYONOME	9690	2.00	2.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00
PURRARIA	9900	0.83	2.17	1.25	0.00	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	10280	1.67	2.00	2.17	0.00	0.00	0.33	0.00	0.00	0.00

MAXIMA PRECIPITACION		EVALUACION DE INSECTOS				LOCALIDAD: CUPEROLTA II PERU				
ECOTIPO		TRIPS AC. PULGUILLA	COMEDOR	HEMIPTERO SALIVAZO	PERFCRAD. OTROI	TRIPS AC. PULGUILLA	COMEDOR	HEMIPTERO SALIVAZO	PERFCRAD. OTROI	OTROZ
GRAMINEAS :										
BRACHIARIA	606	0.33	1.67	0.67	0.50	0.00	0.00	0.00	0.00	0.00
ANDROPOGON	621	0.00	1.17	1.33	0.17	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	679	0.17	1.50	0.33	0.00	0.00	0.00	0.00	0.00	0.00
BRACHIARIA	6133	0.17	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LEGUMINOSAS :										
STYLOSANTHES	136	0.50	2.00	1.75	0.00	0.00	0.17	0.00	0.00	0.00
STYLOSANTHES	191	0.00	1.08	1.67	0.00	0.00	0.17	0.00	0.00	0.00
DESODIUM	350	0.00	0.22	0.89	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	438	1.17	3.50	1.25	0.17	0.33	0.17	0.20	0.00	0.00
STYLOSANTHES	644	1.00	2.00	0.83	0.00	0.00	0.50	0.00	0.00	0.00
ZORNIA	728	0.50	1.92	1.50	0.00	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	1283	0.17	1.33	1.17	0.00	0.00	0.17	0.00	0.00	0.00
DESODIUM	3504	0.00	1.33	0.67	0.00	0.00	0.00	0.00	0.00	0.00
DESODIUM	3784	0.17	1.83	0.50	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5062	0.33	3.58	1.17	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5065	0.17	3.50	1.42	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5112	0.50	3.75	1.25	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5189	1.17	2.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00
CENTROSEMA	5234	0.67	2.83	1.67	0.00	0.00	0.00	0.00	0.00	0.00
ZORNIA	7847	0.50	1.50	1.83	0.00	0.00	0.00	0.00	0.00	0.00
ARCHYONOME	9690	0.75	1.50	1.83	0.00	0.00	0.00	0.00	0.00	0.00
PURRARIA	9900	0.30	1.92	1.42	0.00	0.00	0.00	0.00	0.00	0.00
STYLOSANTHES	10280	0.50	1.83	1.92	0.00	0.00	0.57	0.00	0.00	0.00

EVALUACION : 2

LOCALIDAD: COPEROLTA II PERU

EVALUACION DE ENFERMEDADES

MINIMA PRECIPITACION

ECOTIPO	HOJA				TALLO				OTROS				
	NEGRA	MARRON	NARAN.	CREMA	MARRP.	NARAP.	NEGRA	MARRON	CHANC.	MARRCN.	CLORC.	I.PEG.	I.G.PG
GRAMINEAS :													
BRACHIARIA	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
ANDROPOGON	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
BRACHIARIA	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
BRACHIARIA	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
LEGUMINOSAS :													
STYLOSANTHES	1.0	0.9	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.5	0.0	0.0
GUIANENS	0.5	1.7	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.2	0.0	0.0
DESODIUM	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
OVALIFOL	0.0	2.9	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	2.1	0.0	0.0
PUBESCENT	0.7	1.2	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.5	0.0	0.0
STYLOSANTHES	0.1	1.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.4	0.0	0.0
LATIFOLI	0.5	1.3	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.6	0.0	0.0
GUIANENS	0.4	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
OVALIFOL	0.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
MACROCAR	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
MACROCAR	0.0	2.5	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.0	2.1	0.0	0.0
PUBESCENT	0.0	0.6	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.6	0.0	0.0
BRASILIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GLABRA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HISTRIX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHASEOLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAPITATA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MAXIMA PRECIPITACION

EVALUACION DE ENFERMEDADES

LOCALIDAD: COPEROLTA II PERU

ECOTIPO	HOJA				TALLO				OTROS				
	NEGRA	MARRON	NARAN.	CREMA	MARRP.	NARAP.	NEGRA	MARRON	CHANC.	MARRCN.	CLORC.	I.PEG.	I.G.PG
GRAMINEAS :													
BRACHIARIA	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
ANDROPOGON	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
BRACHIARIA	0.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
BRACHIARIA	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
LEGUMINOSAS :													
STYLOSANTHES	0.1	1.4	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0	0.0
GUIANENS	0.2	1.5	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
DESODIUM	0.0	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.0	0.0
OVALIFOL	0.0	2.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
PUBESCENT	0.3	0.9	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.3	0.0	0.0
STYLOSANTHES	0.0	2.1	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
LATIFOLI	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
GUIANENS	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
INCANUM	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVALIFOL	0.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.1	0.0	0.0
MACROCAR	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
MACROCAR	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
SP.	0.0	2.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
PUBESCENT	0.0	2.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
STYLOSANTHES	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
BRASILIA	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
GLABRA	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
HISTRIX	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
PHASEOLO	0.0	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
CAPITATA	0.0	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0

