

ESTABLECIMIENTO Y PRODUCCION DE GRAMINEAS Y LEGUMINOSAS FORRAJERAS
EN TARAPOTO (ESEP II), PERU

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E R B

INIPA-CIPA X

El ensayo se realiza en los campos experimentales de la Escuela Superior de Educación Profesional (ESEP). Está localizado en el Distrito de Tarapoto, provincia y departamento de San Martín, a 6°31' de latitud sur y a 7°21' de longitud oeste, a una altura de 280 msnm. La precipitación media anual es de 1230 mm y la temperatura media anual de 26.6°C (Figura 1). La zona está localizada dentro del ecosistema de bosque tropical semi-siempreverde estacional y los suelos corresponden al orden de los ultisoles. Las características físicas y químicas del suelo aparecen en el Cuadro 1.

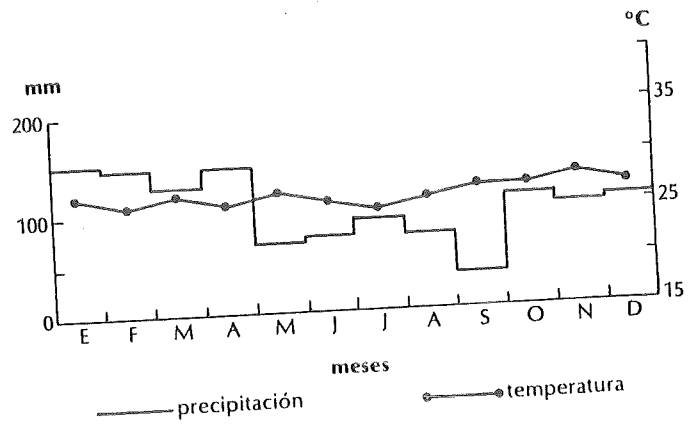


Figura 1. Características climáticas de la región de Tarapoto, Perú.

Cuadro 1. Características físicas y químicas del suelo en Tarapoto, Perú.

| Profundidad (cm) | Arena (%) | Limo (%) | Arcilla (%) | pH | MO (%) | P (ppm) | Cl ^a (meq/100 g) | | | | |
|---------------------|--------------|-------------|----------------|-----|-----------|------------|-----------------------------|------|------|------|------|
| | | | | | | | Ca | Mg | Na | K | Al |
| 0-20 | 80 | 10 | 10 | 6.0 | 1.2 | 4.0 | 2.12 | 0.42 | 0.14 | 0.22 | 0.05 |

a. Cationes intercambiables.

Los períodos de evaluación realizadas se incluyen en el Cuadro 2. Se evalúan 17 ecotipos de leguminosas y 5 de gramíneas, cuya identificación y resultados se presentan en los siguientes cuadros.

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

| | Siembra | | En establecimiento | | | En producción | |
|--|--------------|---------------|----------------------|----------------------|----------------------|----------------------|--|
| | Desde | Hasta | Mínima precipitación | Máxima precipitación | Mínima precipitación | Máxima precipitación | |
| | 5 Enero 1983 | 5 Enero 1983 | 5 Julio 1983 | 2 Agto. 1984 | 17 Enero 1984 | | |
| | | 25 Abril 1983 | 27 Sept. 1983 | 25 Oct. 1984 | 10 Abril 1984 | | |

PERIODO DE ESTABLECIMIENTO PROMEDIO Y COEFICIENTE DE VARIACION DE ALTURA LOCALIDAD:TAPAPOTO ESEP IIPERU

| ECOTIPO | SEMANTAS | 9 SEMANAS | | 12 SEMANAS | | 15 SEMANAS | |
|---------------|----------|-------------|--------|-------------|--------|-------------|--------|
| | | ALTURA (CM) | CV (%) | ALTURA (CM) | CV (%) | ALTURA (CM) | CV (%) |
| GRAMINEAS : | | | | | | | |
| BRACHIARIA | 606 | 10 | | 24 | | 25 | |
| ANDROPOGON | 521 | 17 | | 25 | | 54 | |
| BRACHIARIA | 579 | 5 | | 7 | | 10 | |
| BRACHIARIA | 6133 | 6 | | 13 | | 10 | |
| LEGUMINOSAS : | | | | | | | |
| STYLOSANTHES | 136 | 10 | | 15 | | 26 | |
| GUIANENS | 191 | 7 | | 13 | | 18 | |
| STYLOSANTHES | 350 | 2 | | 5 | | 7 | |
| DESODIUM | 438 | 15 | | 13 | | 18 | |
| PUBESCEN | 644 | 8 | | 16 | | 22 | |
| STYLOSANTHES | 728 | 3 | | 9 | | 6 | |
| LATIFOLI | 1283 | 6 | | 8 | | 6 | |
| GUIANENS | 3784 | 3 | | 4 | | 6 | |
| DESODIUM | 5062 | 12 | | 16 | | 17 | |
| MACROCAR | 5065 | 21 | | 26 | | 28 | |
| MACROCAR | 5112 | 15 | | 13 | | 18 | |
| SP. | 5189 | 13 | | 11 | | 14 | |
| CENTROSEMA | 5234 | 10 | | 14 | | 12 | |
| BRASILIA | 7847 | 2 | | 10 | | 15 | |
| GLABRA | 9690 | 23 | | 40 | | 78 | |
| AESCHYMONENE | 9900 | 10 | | 16 | | 14 | |
| PUERARIA | 10280 | 3 | | 11 | | 19 | |
| STYLOSANTHES | | | | | | | |

PERIODO DE ESTABLECIMIENTO PORCENTAJE DE COBERTURA LOCALIDAD:TAPAPOTO ESEP IIPERU

| ECOTIPO | SEMANTAS | 9 SEMANAS | | 12 SEMANAS | | 15 SEMANAS | |
|---------------|----------|-----------|--------|------------|--------|------------|--------|
| | | COBERTURA | DUNCAN | COBERTURA | DUNCAN | COBERTURA | DUNCAN |
| GRAMINEAS : | | | | | | | |
| BRACHIARIA | 606 | 8 | BA | 20 | A | 61 | A |
| ANDROPOGON | 521 | 13 | A | 26 | A | 65 | A |
| BRACHIARIA | 579 | 10 | BA | 17 | A | 70 | A |
| BRACHIARIA | 6133 | 6 | E | 10 | A | 50 | A |
| LEGUMINOSAS : | | | | | | | |
| STYLOSANTHES | 136 | 15 | E | 25 | DE | 70 | BA |
| GUIANENS | 191 | 8 | E | 12 | E | 53 | BC |
| STYLOSANTHES | 350 | 5 | E | 6 | E | 18 | D |
| DESODIUM | 438 | 50 | BA | 100 | A | 100 | A |
| PUBESCEN | 644 | 7 | E | 12 | E | 39 | DC |
| STYLOSANTHES | 728 | 5 | E | 4 | E | 15 | D |
| LATIFOLI | 1283 | 6 | E | 9 | E | 8 | D |
| GUIANENS | 3784 | 5 | E | 5 | E | 8 | D |
| DESODIUM | 5062 | 23 | CCO | 36 | DC | 65 | BC |
| MACROCAR | 5065 | 41 | BC | 71 | E | 93 | A |
| MACROCAR | 5112 | 35 | BCD | 81 | BA | 98 | A |
| SP. | 5189 | 36 | BCD | 81 | BA | 98 | A |
| CENTROSEMA | 5234 | 65 | A | 100 | A | 100 | A |
| BRASILIA | 7847 | 4 | E | 13 | E | 36 | DC |
| GLABRA | 9690 | 51 | BA | 95 | A | 100 | A |
| AESCHYMONENE | 9900 | 20 | ED | 50 | C | 100 | A |
| PUERARIA | 10280 | 6 | E | 11 | E | 21 | D |
| STYLOSANTHES | | | | | | | |

| ESTABLECIMIENTO | | EVALUACION DE INSECTOS | | | | | LOCALIDAD: TARAPOTO ESEP IIPERU | | | | |
|-----------------|-------|------------------------|-----------|---------|-----------|----------|---------------------------------|-----------|-------|-------|--|
| ECOTIPI | | TRIPS AC. | PULGUILLA | COMEDOR | HEMIPTERO | SALIVAZO | BARENANO, | PEREGRAD, | OTRO1 | OTRO2 | |
| GRAMINEAS : | | | | | | | | | | | |
| BRACHIARIA | 605 | 0.00 | 0.67 | 1.33 | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| ANDROPOGON | 621 | 0.00 | 0.00 | 0.57 | 0.89 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | |
| BRACHIARIA | 679 | 0.00 | 0.57 | 0.86 | 0.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| DICTYONE | 6133 | 0.22 | 0.67 | 1.11 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| LEGUMINOSAS : | | | | | | | | | | | |
| STYLOSANTHES | 136 | 0.76 | 0.89 | 1.79 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| GUIANENS | 191 | 0.22 | 0.44 | 1.11 | 1.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| DESODIUM | 350 | 0.22 | 0.00 | 0.67 | 0.89 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| OVALIFOL | 438 | 1.56 | 0.44 | 3.11 | 2.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| PUBESCENT | 644 | 0.44 | 0.67 | 1.11 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| STYLOSANTHES | 728 | 0.00 | 0.00 | 0.44 | 0.89 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| ZORNIA | 1283 | 0.00 | 0.00 | 0.33 | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| STYLOSANTHES | 1293 | 0.00 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| DESODIUM | 3794 | 0.00 | 0.22 | 2.11 | 2.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| OVALIFOL | 5062 | 1.11 | 0.22 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| MACROCAR | 5065 | 1.56 | 0.22 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| MACROCAR | 5112 | 2.00 | 0.67 | 2.67 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| CENTROSEMA | 5189 | 1.79 | 0.89 | 3.00 | 2.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| PUBESCENT | 5234 | 2.33 | 0.44 | 1.76 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| CENTROSEMA | 5234 | 0.00 | 0.00 | 0.67 | 1.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| GLABRA | 7347 | 0.00 | 0.22 | 1.56 | 2.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| HISTRIX | 9690 | 0.67 | 0.00 | 1.56 | 1.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| ACECHYNOMENE | 9900 | 0.67 | 0.00 | 0.67 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| PHASEOLO | 10280 | 0.67 | 0.00 | 0.67 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| CAPITATA | 10280 | 0.67 | 0.00 | 0.67 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

| ESTABLECIMIENTO | | EVALUACION DE ENFERMEDADES | | | | | | | | | | LOCALIDAD: TARAPOTO ESEP IIPERU | | | | |
|-----------------|-------|----------------------------|-------|--------|-------|--------|--------|-------|--------|--------|--------|---------------------------------|--------|-------|-------|--|
| ECOTIPI | | NEGRA | MAREN | NARAN. | CREMA | MARRP. | NARAP. | NEGRA | MARRON | TALLO- | CHANC. | MARCN. | CLJFO. | OTROS | OTROS | |
| GRAMINEAS : | | | | | | | | | | | | | | | | |
| BRACHIARIA | 605 | 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 | 0.0 | |
| ANDROPOGON | 621 | 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 | 0.0 | |
| BRACHIARIA | 679 | 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 | 0.0 | |
| DICTYONE | 6133 | 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 | 0.0 | |
| LEGUMINOSAS : | | | | | | | | | | | | | | | | |
| STYLOSANTHES | 136 | 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 | 0.0 | |
| GUIANENS | 191 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| DESODIUM | 350 | 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 | 0.0 | |
| OVALIFOL | 438 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PUBESCENT | 644 | 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 | 0.0 | |
| STYLOSANTHES | 728 | 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 | 0.0 | |
| ZORNIA | 1293 | 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 | 0.0 | |
| STYLOSANTHES | 1293 | 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 | 0.0 | |
| DESODIUM | 3794 | 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 | 0.0 | |
| OVALIFOL | 5062 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| MACROCAR | 5065 | 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 | 0.0 | |
| MACROCAR | 5112 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| CENTROSEMA | 5189 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PUBESCENT | 5234 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| CENTROSEMA | 5234 | 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 | 0.0 | |
| GLABRA | 7347 | 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 | 0.0 | |
| HISTRIX | 9690 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| ACECHYNOMENE | 9900 | 0.0 | 0.5 | 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 | 10280 | 0.0 | 0.1 | 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 | 10280 | 0.0 | 0.1 | 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 : 1

MINIMA PRECIPITACION PRODUCCION DE MATERIA SECA KG/HA LOCALIDAD:TARAPOTO ESEP IIPERU

| 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 : | | | | | | | | |
| BRACHARIA | 606 | A | 1152 | A | 1174 | A | 1359 | GA |
| ANDROPAGON | 621 | A | 1455 | A | 2293 | A | 2000 | A |
| BRACHARIA | 679 | A | 660 | A | 1231 | A | 752 | B |
| BRACHARIA | 6133 | A | 588 | A | 1299 | A | 835 | B |
| LEGUMINOSAS : | | | | | | | | |
| GUIANENS | 136 | BC | 473 | EBDC | 1087 | BA | 1320 | A |
| STYLOSANTHES | 191 | BAC | 617 | BDAC | 857 | BAC | 898 | BAC |
| DESMODIUM | 350 | BC | 290 | F | 374 | DC | 644 | BC |
| OVALIFOL | 436 | BC | 303 | F | 466 | BDC | 555 | DC |
| PUBESCEN | 644 | A | 722 | BA | 773 | BDAC | 937 | BAC |
| BRACHARIA | 728 | RA | 540 | EBDAC | 506 | BDC | 708 | BC |
| GUIANENS | 1293 | RA | 560 | EBDAC | 150 | D | 965 | BAC |
| DESMODIUM | 3784 | BC | 785 | A | 1124 | BA | 150 | D |
| MACROCAR | 5062 | BAC | 420 | EDC | 914 | BAC | 544 | DC |
| MACROCAR | 5065 | BC | 707 | BAC | 790 | BDAC | 754 | BC |
| CENTROSEMA | 5112 | BC | 406 | ED | 390 | DC | 977 | BAC |
| SP. | 5189 | BC | 406 | ED | 320 | DC | 615 | BDC |
| PUBESCEN | 5189 | BC | 406 | ED | 320 | DC | 615 | BDC |
| CENTROSEMA | 5234 | BC | 406 | ED | 320 | DC | 615 | BDC |
| CENTROSEMA | 5234 | BC | 406 | ED | 320 | DC | 615 | BDC |
| ZORNIA | 7847 | C | 406 | ED | 320 | DC | 615 | BDC |
| GLABRA | 7847 | C | 406 | ED | 320 | DC | 615 | BDC |
| HISTRIX | 9690 | BC | 453 | EBDC | 691 | BDC | 626 | BC |
| AESCHYNOMENE | 9690 | BC | 453 | EBDC | 691 | BDC | 626 | BC |
| PUERRARIA | 9900 | BC | 453 | EBDC | 691 | BDC | 626 | BC |
| PHASELU | 9900 | BC | 453 | EBDC | 691 | BDC | 626 | BC |

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MAXIMA PRECIPITACION PRODUCCION DE MATERIA SECA KG/HA LOCALIDAD:TARAPOTO ESEP IIPERU

| 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 : | | | | | | | | |
| BRACHARIA | 606 | A | 999 | A | 1983 | A | 2339 | A |
| ANDROPAGON | 621 | A | 1324 | A | 1372 | A | 2813 | A |
| BRACHARIA | 679 | A | 1273 | A | 1439 | A | 2410 | A |
| BRACHARIA | 6133 | A | 1254 | A | 1741 | A | 2225 | A |
| LEGUMINOSAS : | | | | | | | | |
| GUIANENS | 136 | BAC | 1064 | BC | 2137 | BAC | 2397 | A |
| STYLOSANTHES | 191 | BDC | 1003 | BC | 2269 | BA | 2346 | A |
| DESMODIUM | 350 | D | 914 | BC | 1141 | EF | 1621 | BA |
| OVALIFOL | 438 | D | 559 | DC | 1442 | EDF | 1875 | BA |
| PUBESCEN | 644 | BAC | 1170 | BC | 2388 | A | 2374 | A |
| BRACHARIA | 728 | BAC | 1478 | BA | 1773 | EBDAC | 1996 | A |
| GUIANENS | 1263 | A | 973 | GC | 1067 | F | 1563 | BA |
| STYLOSANTHES | 1263 | A | 704 | DC | 370 | G | 430 | B |
| DESMODIUM | 3784 | BA | 905 | BC | 1672 | EBDFC | 2563 | A |
| MACROCAR | 5052 | BAC | 1016 | BDAC | 1519 | EDFC | 2291 | A |
| MACROCAR | 5065 | BAC | 766 | BDAC | 1647 | EBDFC | 2396 | A |
| SP. | 5112 | BDAC | 628 | OC | 1351 | EDF | 1508 | BA |
| PUBESCEN | 5189 | BDAC | 628 | OC | 1351 | EDF | 1508 | BA |
| BRACHARIA | 5234 | DC | 1996 | BC | 2125 | EDF | 1293 | BA |
| CENTROSEMA | 5234 | BC | 1996 | BC | 2125 | BAC | 1945 | A |
| GLABRA | 7847 | BAC | 1002 | BC | 1919 | BDAC | 2305 | A |
| HISTRIX | 9690 | BC | 521 | DC | 1275 | EDF | 1970 | A |
| PUERRARIA | 9900 | D | 245 | D | | | | |
| PHASELU | 9900 | D | 245 | D | | | | |
| CAPITATA | 10280 | 150 | | | | | | |

EVALUACION : 1 LOCALIDAD: TARAPOTO ESEP IIPERU

MINIMA PRECIPITACION PORCENTAJE DE COBERTURA

| ECOTIPO | 3 SEMANAS | | 6 SEMANAS | | 9 SEMANAS | | 12 SEMANAS | |
|---------------|-----------|--------|-----------|--------|-----------|--------|------------|--------|
| | COBERTU. | DUNCAN | COBERTU. | DUNCAN | COBERTU. | DUNCAN | COBERTU. | DUNCAN |
| GRAMINEAS : | | | | | | | | |
| BRACHIARIA | 506 | A | 85 | BA | 91 | A | 96 | A |
| ANDROPOGON | 621 | A | 71 | B | 85 | A | 100 | A |
| BRACHIARIA | 679 | A | 95 | A | 100 | A | 100 | A |
| BRACHIARIA | 6133 | A | 91 | A | 96 | A | 96 | A |
| LEGUMINOSAS : | | | | | | | | |
| STYLOSANTHES | 136 | BAC | 63 | BC | 90 | A | 98 | A |
| STYLOSANTHES | 191 | A | 90 | A | 95 | A | 100 | A |
| DESODIUM | 350 | BAC | 56 | C | 60 | BAC | 73 | BAC |
| CENTROSEMA | 438 | BAC | 86 | A | 91 | A | 98 | A |
| STYLOSANTHES | 644 | A | 83 | BA | 86 | BA | 96 | BA |
| ZORNIA | 728 | | | | | | 70 | C |
| STYLOSANTHES | 1293 | C | 56 | C | 56 | EDC | 73 | BC |
| DESODIUM | 3784 | | | | 30 | E | 35 | D |
| CENTROSEMA | 5342 | BA | 60 | BA | 100 | A | 100 | A |
| MACROCAR | 5065 | A | 95 | A | 100 | A | 100 | A |
| CENTROSEMA | 5112 | A | 96 | A | 100 | A | 100 | A |
| CENTROSEMA | 5149 | BA | 100 | A | 80 | BAC | 100 | A |
| CENTROSEMA | 5234 | BAC | 65 | A | 100 | A | 100 | A |
| ZORNIA | 7847 | BC | 50 | C | 50 | ED | 73 | BC |
| AESCHYNOME | 9690 | | | | | | 65 | C |
| PUERARIA | 9900 | BAC | 61 | BA | 85 | BA | 100 | A |

MAXIMA PRECIPITACION PORCENTAJE DE COBERTURA LOCALIDAD: TARAPOTO ESEP IIPERU

| ECOTIPO | 3 SEMANAS | | 6 SEMANAS | | 9 SEMANAS | | 12 SEMANAS | |
|---------------|-----------|--------|-----------|--------|-----------|--------|------------|--------|
| | COBERTU. | DUNCAN | COBERTU. | DUNCAN | COBERTU. | DUNCAN | COBERTU. | DUNCAN |
| GRAMINEAS : | | | | | | | | |
| BRACHIARIA | 506 | A | 100 | A | 100 | A | 100 | A |
| ANDROPOGON | 621 | B | 85 | B | 100 | A | 100 | A |
| BRACHIARIA | 679 | A | 100 | A | 85 | A | 100 | A |
| BRACHIARIA | 6133 | BA | 98 | A | 100 | A | 100 | A |
| LEGUMINOSAS : | | | | | | | | |
| STYLOSANTHES | 136 | BA | 100 | A | 100 | A | 100 | A |
| STYLOSANTHES | 191 | A | 98 | BA | 100 | A | 100 | A |
| DESODIUM | 350 | BA | 100 | A | 100 | A | 100 | A |
| CENTROSEMA | 438 | BAC | 90 | BA | 100 | A | 100 | A |
| STYLOSANTHES | 644 | BAC | 96 | BA | 100 | A | 100 | A |
| ZORNIA | 728 | BAC | 90 | BA | 93 | A | 98 | A |
| STYLOSANTHES | 1293 | BAC | 83 | BA | 70 | B | 95 | B |
| DESODIUM | 3784 | BAC | 92 | BA | 100 | A | 100 | A |
| CENTROSEMA | 5342 | BAC | 100 | A | 98 | A | 100 | A |
| MACROCAR | 5065 | BAC | 100 | BA | 100 | A | 100 | A |
| CENTROSEMA | 5112 | BA | 90 | BA | 100 | A | 100 | A |
| CENTROSEMA | 5149 | DC | 98 | BA | 100 | A | 100 | A |
| CENTROSEMA | 5234 | BAC | 85 | BA | 83 | BA | 90 | B |
| ZORNIA | 7847 | BC | 81 | B | 100 | A | 96 | A |
| AESCHYNOME | 9690 | DC | 95 | BA | 95 | A | 100 | A |
| PUERARIA | 9900 | D | 55 | C | | | | |

EVALUACION : 1

MINIMA PRECIPITACION REGRESIONES DE PRODUCCION MEDIA DE MATERIA SECA VS. EDAD LOCALIDAD:TARAPOTO ESEP IIPERU

| ECOTIPO | R | LINEAL | | NIVEL DE SIGNIFI. | R | CUADRADO | | NIVEL DE SIGNIFI. | C U A D R A T I C O | | NIVEL DE SIGNIFI. |
|---------------|------|---------|--------|-------------------|------|----------|--------|-------------------|---------------------|----------|-------------------|
| | | CONSTA. | LINEAL | | | LINEAL | LINEAL | | CONSTA. | CUADRAT. | |
| GRAMINEAS : | | | | | | | | | | | |
| BRACHIARIA | 0.93 | 131.7 | 0.001 | 0.001 | 0.97 | 238.4 | 0.001 | 0.001 | -10.67 | 0.001 | 0.001 |
| ANDROPOGON | 0.85 | 202.9 | 0.001 | 0.001 | 0.87 | 307.4 | 0.010 | 0.010 | -10.45 | 0.330 | 0.330 |
| HUMIDICO | 0.84 | 96.1 | 0.001 | 0.001 | 0.93 | 227.6 | 0.001 | 0.001 | -13.14 | 0.030 | 0.030 |
| DICTYONE | 0.75 | 98.2 | 0.001 | 0.001 | 0.70 | 165.8 | 0.023 | 0.023 | -8.76 | 0.220 | 0.220 |
| LEGUMINOSAS : | | | | | | | | | | | |
| STYLOSANTHES | 0.93 | 107.5 | 0.001 | 0.001 | 0.93 | 62.9 | 0.160 | 0.160 | 4.43 | 0.290 | 0.290 |
| GUANENS | 0.89 | 65.1 | 0.001 | 0.001 | 0.90 | 123.5 | 0.010 | 0.010 | -3.84 | 0.310 | 0.310 |
| OVALIFOL | 0.74 | 49.9 | 0.001 | 0.001 | 0.74 | 46.7 | 0.250 | 0.250 | 0.32 | 0.933 | 0.933 |
| PURSCEN | 0.95 | 48.7 | 0.001 | 0.001 | 0.95 | 50.9 | 0.010 | 0.010 | -0.22 | 0.890 | 0.890 |
| GUANENS | 0.81 | 87.7 | 0.001 | 0.001 | 0.83 | 152.6 | 0.030 | 0.030 | -6.43 | 0.280 | 0.280 |
| STYLOSANTHES | 0.93 | 59.0 | 0.170 | 0.170 | 0.93 | -133.0 | 1.000 | 1.000 | 0.0 | 1984.000 | 1984.000 |
| MACRUCAR | 0.99 | 14.5 | 0.070 | 0.070 | 1.00 | 25.7 | 1.000 | 1.000 | 0.0 | 1984.000 | 1984.000 |
| MACRUCAR | 0.86 | 84.7 | 0.001 | 0.001 | 0.91 | 168.2 | 0.001 | 0.001 | -6.36 | 0.040 | 0.040 |
| SP. | 0.93 | 86.9 | 0.001 | 0.001 | 0.93 | 112.2 | 0.001 | 0.001 | -2.53 | 0.410 | 0.410 |
| PURSCEN | 0.92 | 50.7 | 0.001 | 0.001 | 0.92 | 58.2 | 0.020 | 0.020 | -0.75 | 0.710 | 0.710 |
| BRASILIA | 0.82 | 112.4 | 0.001 | 0.001 | 0.83 | 150.0 | 0.050 | 0.050 | -3.75 | 0.580 | 0.580 |
| GLABRA | 0.89 | 44.0 | 0.001 | 0.001 | 0.89 | 53.6 | 0.020 | 0.020 | -0.96 | 0.630 | 0.630 |
| HISTRIX | 0.95 | 52.2 | 0.030 | 0.030 | 0.95 | -43.5 | 1.000 | 1.000 | 8.00 | 1.000 | 1.000 |
| ALSCYHOMENE | 0.89 | 69.4 | 0.001 | 0.001 | 0.95 | 75.5 | 0.040 | 0.040 | -0.61 | 0.850 | 0.850 |
| PUERARIA | 0.89 | 69.4 | 0.001 | 0.001 | 0.95 | 75.5 | 0.040 | 0.040 | -0.61 | 0.850 | 0.850 |

MAXIMA PRECIPITACION REGRESIONES DE PRODUCCION MEDIA DE MATERIA SECA VS. EDAD LOCALIDAD:TARAPOTO ESEP IIPERU

| ECOTIPO | P | LINEAL | | NIVEL DE SIGNIFI. | R | CUADRADO | | NIVEL DE SIGNIFI. | C U A D R A T I C O | | NIVEL DE SIGNIFI. |
|---------------|------|---------|--------|-------------------|------|----------|--------|-------------------|---------------------|----------|-------------------|
| | | CONSTA. | LINEAL | | | LINEAL | LINEAL | | CONSTA. | CUADRAT. | |
| GRAMINEAS : | | | | | | | | | | | |
| BRACHIARIA | 0.89 | 194.1 | 0.001 | 0.001 | 0.89 | 161.4 | 0.100 | 0.100 | 3.27 | 0.720 | 0.720 |
| ANDROPOGON | 0.91 | 205.9 | 0.001 | 0.001 | 0.91 | 129.9 | 0.150 | 0.150 | 7.80 | 0.370 | 0.370 |
| HUMIDICO | 0.86 | 186.2 | 0.001 | 0.001 | 0.86 | 170.6 | 0.210 | 0.210 | 1.59 | 0.900 | 0.900 |
| DICTYONE | 0.96 | 192.1 | 0.001 | 0.001 | 0.96 | 229.0 | 0.001 | 0.001 | -3.69 | 0.460 | 0.460 |
| LEGUMINOSAS : | | | | | | | | | | | |
| STYLOSANTHES | 0.92 | 203.7 | 0.001 | 0.001 | 0.93 | 153.0 | 0.070 | 0.070 | 5.07 | 0.500 | 0.500 |
| GUANENS | 0.95 | 204.2 | 0.001 | 0.001 | 0.95 | 155.0 | 0.030 | 0.030 | 4.83 | 0.440 | 0.440 |
| OVALIFOL | 0.87 | 135.5 | 0.001 | 0.001 | 0.87 | 114.1 | 0.120 | 0.120 | 2.14 | 0.750 | 0.750 |
| PURSCEN | 0.90 | 144.8 | 0.001 | 0.001 | 0.93 | 43.2 | 0.430 | 0.430 | 10.16 | 0.050 | 0.050 |
| GUANENS | 0.86 | 215.0 | 0.001 | 0.001 | 0.95 | 214.3 | 0.001 | 0.001 | 0.07 | 0.590 | 0.590 |
| LATIFOLI | 0.90 | 184.6 | 0.001 | 0.001 | 0.90 | 247.6 | 0.050 | 0.050 | -6.32 | 0.550 | 0.550 |
| GUANENS | 0.94 | 131.3 | 0.001 | 0.001 | 0.95 | 156.1 | 0.001 | 0.001 | -2.48 | 0.540 | 0.540 |
| OVALIFOL | 0.70 | 57.6 | 0.010 | 0.010 | 0.86 | 139.4 | 0.010 | 0.010 | -8.92 | 0.070 | 0.070 |
| MACRUCAR | 0.86 | 194.3 | 0.001 | 0.001 | 0.88 | 91.5 | 0.360 | 0.360 | 10.34 | 0.290 | 0.290 |
| MACRUCAR | 0.91 | 178.3 | 0.001 | 0.001 | 0.92 | 113.4 | 0.130 | 0.130 | 6.49 | 0.360 | 0.360 |
| SP. | 0.89 | 181.1 | 0.001 | 0.001 | 0.91 | 66.3 | 0.400 | 0.400 | 11.48 | 0.150 | 0.150 |
| PURSCEN | 0.83 | 141.5 | 0.001 | 0.001 | 0.94 | 58.9 | 0.160 | 0.160 | 7.26 | 0.130 | 0.130 |
| BRASILIA | 0.93 | 125.4 | 0.001 | 0.001 | 0.93 | 157.6 | 0.001 | 0.001 | -3.22 | 0.460 | 0.460 |
| GLABRA | 0.78 | 202.9 | 0.001 | 0.001 | 0.80 | 349.7 | 0.033 | 0.033 | -14.68 | 0.293 | 0.293 |
| HISTRIX | 0.83 | 190.6 | 0.001 | 0.001 | 0.84 | 128.4 | 0.270 | 0.270 | 6.22 | 0.590 | 0.590 |
| PUERARIA | 0.92 | 142.6 | 0.001 | 0.001 | 0.96 | 13.5 | 0.730 | 0.730 | 12.91 | 0.010 | 0.010 |
| ALSCYHOMENE | 0.92 | 142.6 | 0.001 | 0.001 | 0.96 | 13.5 | 0.730 | 0.730 | 12.91 | 0.010 | 0.010 |
| STYLOSANTHES | 0.98 | 41.9 | 0.010 | 0.010 | 0.98 | 59.2 | 0.330 | 0.330 | -3.06 | 0.890 | 0.890 |

EVALUACION : 1

| MINIMA PRECIPITACION | | EVALUACION DE INSECTOS | | | | LOCALIDAD: TARAPOTO ESEP IIPERU | | | | |
|----------------------|------|------------------------|-----------|---------|-----------|---------------------------------|-----------|-----------|-------|-------|
| ECOTIPO | | TRIPS AC. | PULGUILLA | COMEDOR | HEMIPTERO | SALIVAZO | BARRENAD. | PERFORAD. | OTRO1 | OTRO2 |
| GRAMINEAS : | | | | | | | | | | |
| BRACHIARIA | 606 | 0.00 | 1.09 | 1.91 | 0.36 | 0.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| ANDROPOGON | 621 | 0.00 | 0.00 | 0.50 | 1.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BRACHIARIA | 679 | 0.00 | 0.50 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DICTYONE | 6133 | 0.17 | 0.33 | 1.17 | 0.67 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 |
| LEGUMINOSAS : | | | | | | | | | | |
| GUIANENS | 136 | 0.00 | 1.09 | 2.09 | 1.09 | 0.00 | 0.00 | 0.73 | 0.00 | 0.00 |
| STYLOSANTHES | 191 | 0.67 | 1.25 | 1.50 | 1.92 | 0.00 | 0.00 | 0.67 | 0.00 | 0.00 |
| STYLOSANTHES | 350 | 0.17 | 0.17 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DESODIUM | 438 | 0.67 | 1.50 | 2.25 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 644 | 0.42 | 1.27 | 1.73 | 1.45 | 0.00 | 0.00 | 0.35 | 0.00 | 0.00 |
| STYLOSANTHES | 728 | 0.00 | 0.00 | 2.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ZORNIA | 1283 | 0.18 | 0.36 | 0.36 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 3784 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DESODIUM | 5052 | 0.50 | 0.17 | 2.00 | 1.33 | 0.17 | 0.17 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5065 | 0.50 | 0.50 | 1.92 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5112 | 1.00 | 1.42 | 2.17 | 1.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5189 | 0.58 | 1.08 | 2.17 | 0.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5234 | 0.50 | 1.42 | 1.17 | 1.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| GLABRA | 7847 | 0.17 | 0.75 | 2.08 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AESCHYNOMENE | 9690 | 0.00 | 0.67 | 0.57 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PUERARIA | 9900 | 0.17 | 0.50 | 1.92 | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| MAXIMA PRECIPITACION | | EVALUACION DE INSECTOS | | | | LOCALIDAD: TARAPOTO ESEP IIPERU | | | | |
|----------------------|-------|------------------------|-----------|---------|-----------|---------------------------------|-----------|-----------|-------|-------|
| ECOTIPO | | TRIPS AC. | PULGUILLA | COMEDOR | HEMIPTERO | SALIVAZO | BARRENAD. | PERFORAD. | OTRO1 | OTRO2 |
| GRAMINEAS : | | | | | | | | | | |
| BRACHIARIA | 606 | 0.33 | 2.08 | 1.67 | 0.17 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| ANDROPOGON | 521 | 0.00 | 0.00 | 1.33 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BRACHIARIA | 679 | 0.00 | 0.89 | 1.33 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 |
| DICTYONE | 6133 | 0.00 | 0.33 | 1.42 | 0.33 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 |
| LEGUMINOSAS : | | | | | | | | | | |
| GUIANENS | 136 | 0.67 | 1.67 | 1.75 | 0.83 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| STYLOSANTHES | 191 | 0.50 | 1.08 | 1.92 | 2.08 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 |
| DESODIUM | 350 | 0.67 | 0.33 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 438 | 0.63 | 1.67 | 3.00 | 1.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 644 | 0.67 | 0.53 | 1.93 | 1.17 | 0.00 | 0.00 | 0.67 | 0.00 | 0.00 |
| ZORNIA | 728 | 0.75 | 1.38 | 1.75 | 2.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 1233 | 0.23 | 1.17 | 1.50 | 1.17 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 |
| DESODIUM | 3784 | 0.57 | 1.14 | 1.71 | 1.71 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5062 | 0.17 | 0.67 | 2.57 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5065 | 1.33 | 1.92 | 2.83 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5112 | 1.17 | 1.42 | 3.08 | 2.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5189 | 0.50 | 0.42 | 1.67 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 5234 | 0.33 | 0.92 | 1.67 | 1.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ZORNIA | 7847 | 0.83 | 0.83 | 1.50 | 1.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AESCHYNOMENE | 9690 | 0.83 | 0.67 | 2.25 | 1.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PUERARIA | 9900 | 2.00 | 2.00 | 2.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 10280 | 2.00 | 2.00 | 2.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

EVALUACION DE ENFERMEDADES LOCALIDAD:TARAPOTO ESEP IIPERU

EVALUACION DE ENFERMEDADES

MINIMA PRECIPITACION

| ECOTIPO | HOJA | | | | TALLO | | | | OTROS | | | | | |
|---------------|-------|--------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| | NEGRA | MARRON | NARAN. | CREMA | MARRP. | NARAP. | NEGRA | MARRON | CHANC. | MARRN. | CHANC. | CLORO. | I.PEG. | I.G.PG |
| GRAMINEAS : | | | | | | | | | | | | | | |
| BRACHIAIRIA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| ANDROPOGON | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| BRACHIAIRIA | 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 | 0.0 |
| BRACHIAIRIA | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| LEGUMINOSAS : | | | | | | | | | | | | | | |
| STYLOSANTHES | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STYLOSANTHES | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DESODDIUM | 0.0 | 0.9 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| STYLOSANTHES | 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 | 0.0 |
| ZORNIA | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| STYLOSANTHES | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| DESODDIUM | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| CENTROSEMA | 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 | 0.0 |
| CENTROSEMA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| ZORNIA | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ASCYNOUMENE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| PUERARIA | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 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 | 0.3 | 0.0 | 0.0 |

MAXIMA PRECIPITACION LOCALIDAD:TARAPOTO ESEP IIPERU

EVALUACION DE ENFERMEDADES

MINIMA PRECIPITACION

| ECOTIPO | HOJA | | | | TALLO | | | | OTROS | | | | | |
|---------------|-------|--------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| | NEGRA | MARRON | NARAN. | CREMA | MARRP. | NARAP. | NEGRA | MARRON | CHANC. | MARRN. | CHANC. | CLORO. | I.PEG. | I.G.PG |
| GRAMINEAS : | | | | | | | | | | | | | | |
| BRACHIAIRIA | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| ANDROPOGON | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| BRACHIAIRIA | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| BRACHIAIRIA | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| LEGUMINOSAS : | | | | | | | | | | | | | | |
| STYLOSANTHES | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| STYLOSANTHES | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DESODDIUM | 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 | 0.0 |
| CENTROSEMA | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| STYLOSANTHES | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| ZORNIA | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| STYLOSANTHES | 0.1 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| DESODDIUM | 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 | 0.0 |
| CENTROSEMA | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| CENTROSEMA | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 |
| ZORNIA | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| ASCYNOUMENE | 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 | 0.0 |
| PUERARIA | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 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 | 0.0 |
| STYLOSANTHES | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 |

| 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 : | | | | | | | | |
| BRACHIARIA | 606 | A | 594 | 9 | 1771 | B | 1485 | B |
| ANDROPOGON | 621 | A | 1017 | A | 2810 | A | 2525 | A |
| BRACHIARIA | 679 | A | 699 | B | 1761 | B | 1022 | C |
| BRACHIARIA | 6133 | A | 974 | A | 1891 | B | 1411 | B |
| LEGUMINOSAS : | | | | | | | | |
| STYLOSANTHES | 136 | BA | 653 | DC | 1135 | 8C | 1479 | A |
| STYLOSANTHES | 191 | B | 662 | BDC | 1120 | 9C | 1232 | BA |
| DESODIUM | 350 | BA | 290 | E | 1048 | 8C | 901 | 80C |
| CENTROSEMA | 438 | BA | 590 | D | 1007 | C | 812 | DC |
| STYLOSANTHES | 644 | BA | 670 | BDC | 1071 | 8C | 1385 | DC |
| ZORNIA | 726 | BA | 607 | BDC | 1109 | 8C | 435 | DC |
| STYLOSANTHES | 1293 | BA | 715 | 9DC | 990 | C | 1289 | BA |
| DESODIUM | 3784 | BA | 350 | E | 1299 | BA | 335 | F |
| CENTROSEMA | 5062 | BA | 919 | BA | 1239 | BA | 1190 | BAC |
| CENTROSEMA | 5065 | BA | 649 | DC | 1435 | A | 964 | 80C |
| CENTROSEMA | 5112 | BA | 663 | BDC | 1144 | 8C | 966 | 80C |
| CENTROSEMA | 5189 | BA | 809 | DC | 1297 | BA | 982 | 90C |
| CENTROSEMA | 5234 | BA | 316 | BDAC | 1285 | BA | 1449 | A |
| ZORNIA | 7847 | BA | 973 | A | 1176 | 8C | 804 | O |
| AESCHYNOME | 9590 | B | 355 | E | 1001 | C | 701 | ED |
| PUERARIA | 9900 | A | 864 | BAC | 1195 | 8C | 657 | EDF |
| STYLOSANTHES | 10280 | | | | | | 410 | EF |

| ECOTIPO | 3 SEMANAS | | 6 SEMANAS | | 9 SEMANAS | | 12 SEMANAS | |
|---------------|-----------|--------|-----------|--------|-----------|--------|------------|--------|
| | COBERTU. | DUNCAN | COBERTU. | DUNCAN | COBERTU. | DUNCAN | COBERTU. | DUNCAN |
| GRAMINEAS : | | | | | | | | |
| BRACHIARIA | 91 | A | 88 | A | 100 | A | 100 | A |
| ANDROPOGON | 70 | B | 85 | A | 100 | A | 100 | A |
| BRACHIARIA | 100 | A | 98 | A | 100 | A | 100 | A |
| BRACHIARIA | 6133 | A | 99 | A | 100 | A | 100 | A |
| LEGUMINOSAS : | | | | | | | | |
| STYLOSANTHES | 70 | BA | 76 | BA | 100 | A | 100 | A |
| STYLOSANTHES | 191 | A | 87 | A | 93 | A | 98 | BA |
| DESODIUM | 350 | A | 98 | A | 91 | A | 98 | BA |
| CENTROSEMA | 438 | A | 91 | A | 100 | A | 100 | A |
| STYLOSANTHES | 644 | A | 83 | A | 100 | A | 100 | A |
| ZORNIA | 726 | BC | 96 | A | 96 | A | 91 | BA |
| STYLOSANTHES | 1293 | A | 78 | BA | 93 | A | 100 | A |
| DESODIUM | 3784 | A | 89 | A | 80 | B | 90 | B |
| CENTROSEMA | 5062 | A | 96 | A | 100 | A | 100 | A |
| CENTROSEMA | 5065 | BA | 91 | A | 100 | A | 100 | A |
| CENTROSEMA | 5112 | A | 86 | A | 96 | A | 96 | BA |
| CENTROSEMA | 5189 | A | 96 | A | 100 | A | 100 | A |
| CENTROSEMA | 5234 | A | 90 | A | 100 | A | 100 | A |
| ZORNIA | 7847 | BA | 80 | BA | 76 | B | 90 | B |
| AESCHYNOME | 9690 | C | 57 | B | 76 | B | 70 | C |
| PUERARIA | 9900 | A | 95 | A | 91 | A | 96 | BA |
| STYLOSANTHES | 10280 | | | | | | 70 | C |

EVALUACION : 2

MINIMA PRECIPITACION REGRESIONES DE PRODUCCION M.S.O.I.A DE MATERIA SECA VS. E.OAD LOCALIDAD:TARAPOTO ESEF IIPERU

| ECOTIPO | R | LINEAL | | NIVEL DE SIGNIFI. | R | CUADRADO LINEAL | | NIVEL DE SIGNIFI. | CUADRADO LINEAL | NIVEL DE SIGNIFI. |
|---------------|------|---------|--------|-------------------|------|-----------------|--------|-------------------|-----------------|-------------------|
| | | CONSTA. | LINEAL | | | CONSTA. | LINEAL | | | |
| GRAMINEAS : | | | | | | | | | | |
| BRACHIARIA | 0.93 | 143.1 | 0.001 | 0.001 | 0.93 | 176.2 | 0.010 | 0.010 | -3.51 | 0.490 |
| ANDROPOGON | 0.95 | 235.3 | 0.001 | 0.001 | 0.95 | 246.1 | 0.010 | 0.010 | -1.08 | 0.280 |
| BRACHIARIA | 0.86 | 125.8 | 0.001 | 0.001 | 0.90 | 242.6 | 0.001 | 0.001 | -11.70 | 0.050 |
| BRACHIARIA | 0.93 | 152.9 | 0.001 | 0.001 | 0.95 | 254.1 | 0.001 | 0.001 | -10.12 | 0.050 |
| LEGUMINOSAS : | | | | | | | | | | |
| STYLOSANTHES | 0.99 | 121.7 | 0.001 | 0.001 | 0.99 | 102.9 | 0.001 | 0.001 | 1.67 | 0.240 |
| STYLOSANTHES | 0.97 | 109.2 | 0.001 | 0.001 | 0.97 | 116.0 | 0.001 | 0.001 | -0.66 | 0.610 |
| DESMODIUM | 0.92 | 86.0 | 0.001 | 0.001 | 0.93 | 96.5 | 0.010 | 0.010 | -1.05 | 0.740 |
| CENTROSEMA | 0.94 | 86.1 | 0.001 | 0.001 | 0.97 | 145.8 | 0.001 | 0.001 | -5.97 | 0.010 |
| STYLOSANTHES | 0.95 | 115.7 | 0.001 | 0.001 | 0.95 | 109.5 | 0.020 | 0.020 | 0.61 | 0.280 |
| ZORNIA | 0.92 | 92.2 | 0.001 | 0.001 | 0.96 | 130.4 | 0.001 | 0.001 | -3.68 | 0.020 |
| STYLOSANTHES | 0.95 | 104.8 | 0.001 | 0.001 | 0.95 | 124.1 | 0.010 | 0.010 | -1.51 | 0.750 |
| DESMODIUM | 0.85 | 68.9 | 0.001 | 0.001 | 0.73 | 150.3 | 0.040 | 0.040 | -9.37 | 0.190 |
| CENTROSEMA | 0.95 | 118.2 | 0.001 | 0.001 | 0.97 | 186.1 | 0.001 | 0.001 | -6.79 | 0.020 |
| MACROCAR | 0.70 | 108.4 | 0.001 | 0.001 | 0.92 | 177.2 | 0.001 | 0.001 | -6.88 | 0.120 |
| MACROCAR | 0.95 | 99.5 | 0.001 | 0.001 | 0.97 | 161.2 | 0.001 | 0.001 | -6.15 | 0.030 |
| PUBESCEN | 0.93 | 104.6 | 0.001 | 0.001 | 0.95 | 171.2 | 0.001 | 0.001 | -0.61 | 0.070 |
| BRASILIA | 0.97 | 128.9 | 0.001 | 0.001 | 0.97 | 145.8 | 0.001 | 0.001 | -1.70 | 0.540 |
| GLABRA | 0.97 | 101.2 | 0.001 | 0.001 | 0.97 | 240.9 | 0.001 | 0.001 | -13.96 | 0.001 |
| ZORNIA | 0.90 | 75.5 | 0.001 | 0.001 | 0.92 | 127.9 | 0.020 | 0.020 | -5.06 | 0.250 |
| AESCHYNOME | 0.82 | 94.4 | 0.001 | 0.001 | 0.95 | 251.5 | 0.001 | 0.001 | -15.71 | 0.001 |
| PUERARIA | | | | | | | | | | |

EVALUACION : 2

MINIMA PRECIPITACION LOCALIDAD:TARAPOTO ESEF IIPERU

| ECOTIPO | R | PULGUILLA COMEDOR | | MEMIPTERO SALIVAZG | BAREMAD. PERFORAD. | OTRO1 | OTRO2 |
|---------------|------|-------------------|------|--------------------|--------------------|-------|-------|
| | | TRIPS | AC. | | | | |
| GRAMINEAS : | | | | | | | |
| BRACHIARIA | 0.00 | 2.00 | 1.83 | 0.67 | 0.00 | 0.00 | 0.00 |
| ANDROPOGON | 0.17 | 0.87 | 1.83 | 1.67 | 0.00 | 0.00 | 0.00 |
| BRACHIARIA | 0.00 | 0.50 | 1.83 | 0.83 | 0.00 | 0.00 | 0.00 |
| BRACHIARIA | 0.00 | 0.83 | 1.50 | 0.83 | 0.00 | 0.00 | 0.00 |
| LEGUMINOSAS : | | | | | | | |
| STYLOSANTHES | 1.84 | 2.00 | 2.09 | 1.91 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 0.91 | 1.75 | 1.27 | 1.19 | 0.00 | 0.00 | 0.00 |
| DESMODIUM | 1.67 | 0.83 | 2.33 | 1.50 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 1.67 | 2.75 | 3.33 | 1.50 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 1.45 | 2.19 | 2.00 | 1.82 | 0.00 | 0.00 | 0.00 |
| ZORNIA | 0.80 | 1.20 | 2.00 | 2.80 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 1.60 | 1.00 | 1.90 | 1.10 | 0.00 | 0.00 | 0.00 |
| DESMODIUM | 1.56 | 1.11 | 2.00 | 1.56 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 1.07 | 1.83 | 3.17 | 1.33 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 1.00 | 1.50 | 2.83 | 1.75 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 1.57 | 2.83 | 3.50 | 1.67 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 2.07 | 2.82 | 3.91 | 2.09 | 0.00 | 0.00 | 0.00 |
| CENTROSEMA | 1.67 | 1.75 | 2.42 | 1.83 | 0.00 | 0.00 | 0.00 |
| ZORNIA | 0.67 | 1.17 | 2.00 | 2.25 | 0.00 | 0.00 | 0.00 |
| AESCHYNOME | 2.00 | 2.00 | 2.22 | 2.69 | 0.00 | 0.00 | 0.00 |
| PUERARIA | 0.83 | 1.83 | 2.33 | 1.67 | 0.00 | 0.00 | 0.00 |
| STYLOSANTHES | 0.00 | 2.00 | 2.00 | 3.00 | 0.00 | 0.00 | 0.00 |

EVALUACION : 2

EVALUACION DE ENFERMEDADES

LOCALIDAD: TARAPOTO ESFP IIPERU

| MINIMA PRECIPITACION | EVALUACION DE ENFERMEDADES | | | | | | | | | | OTROS | | |
|----------------------|----------------------------|-------|--------|-------|--------|--------|-------|--------|--------|--------|-------|--------|--------|
| | NEGRO | MARON | NARAN. | CREMA | MARRP. | NARAP. | NEGRA | MARRON | CHANC. | MARCN. | | GLORO. | I.PEG. |
| ECOT IPO | | | | | | | | | | | | | |
| GRAMINEAS : | | | | | | | | | | | | | |
| BRACHIARIA | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 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 | 0.6 | 0.0 |
| BRACHIARIA | 0.0 | 0.5 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 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 | 0.6 | 0.0 |
| LEGUMINOSAS : | | | | | | | | | | | | | |
| GUIANENS | 0.1 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TYLOSANTHES | 0.1 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 |
| VALIFOL | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| PUBESCENT | 0.0 | 2.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 |
| GUIANENS | 0.3 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| ZORNIA | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 |
| GUIANENS | 0.2 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 |
| VALIFOL | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 0.0 |
| DESMODIUM | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 |
| MACROCAR | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 |
| SP. | 0.0 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 |
| PUBESCENT | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 |
| BRASILIA | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 |
| GLARRA | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 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 |