

ANEXO

| PLANILLA DE REGISTRO GERMINACION 2017 | | | | | | | | | | | | | | | | |
|---------------------------------------|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|
| TRAT. | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| DIAS | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | | | | | | | | | | | | | | | | |
| 7 | 10 | 13 | 8 | 9 | 13 | 15 | 12 | 15 | 11 | 13 | 15 | 6 | 15 | 12 | 13 | 12 |
| 14 | 25 | 28 | 29 | 26 | 41 | 40 | 38 | 41 | 49 | 51 | 47 | 51 | 28 | 25 | 32 | 35 |
| 21 | 40 | 48 | 42 | 37 | 46 | 50 | 47 | 52 | 53 | 53 | 55 | 53 | 38 | 42 | 43 | 41 |
| 28 | 48 | 52 | 45 | 47 | 57 | 61 | 63 | 64 | 55 | 58 | 57 | 58 | 52 | 56 | 58 | 58 |
| 35 | 56 | 60 | 57 | 58 | 67 | 65 | 69 | 67 | 65 | 60 | 62 | 62 | 60 | 66 | 62 | 68 |
| TOTAL | 231 | | | | 268 | | | | 249 | | | | 256 | | | |

ANEXO N° 1 plantones germinados

| Numero de plantones por unidad experimental | | | | | | | | | |
|---|-----|---------|-----------------|----------------------|----------------------|--------------|----------------------|-------|------------------|
| TRAT | REP | TUBETES | N° de plantones | Tubete doble plantón | Tubete con 1 plantón | Tubete vacío | Plantones eliminados | Total | Plantón evaluado |
| T-0 | I | 54 | 56 | 15 | 26 | 13 | 15 | 41 | 28 |
| | II | 54 | 60 | 18 | 24 | 12 | 18 | 42 | 28 |
| | III | 54 | 57 | 13 | 31 | 10 | 13 | 44 | 28 |
| | IV | 54 | 58 | 14 | 30 | 10 | 14 | 44 | 28 |
| T-1 | I | 54 | 67 | 16 | 35 | 3 | 16 | 51 | 28 |
| | II | 54 | 65 | 18 | 29 | 7 | 18 | 47 | 28 |
| | III | 54 | 69 | 20 | 29 | 4 | 20 | 49 | 28 |
| | IV | 54 | 67 | 16 | 35 | 3 | 16 | 51 | 28 |
| T-2 | I | 54 | 65 | 18 | 29 | 7 | 18 | 47 | 28 |
| | II | 54 | 60 | 18 | 24 | 12 | 18 | 42 | 28 |
| | III | 54 | 62 | 15 | 32 | 7 | 15 | 47 | 28 |
| | IV | 54 | 62 | 17 | 28 | 9 | 17 | 45 | 28 |
| T-3 | I | 54 | 60 | 18 | 24 | 7 | 18 | 42 | 28 |
| | II | 54 | 66 | 20 | 26 | 8 | 20 | 46 | 28 |
| | III | 54 | 62 | 20 | 22 | 12 | 20 | 42 | 28 |
| | IV | 54 | 68 | 18 | 26 | 10 | 18 | 50 | 28 |

ANEXO N° 2: Registro semilleros

| Planilla de registro arboles semilleros | | | | | | | | | | | |
|---|---------------------|---------|--------|--------------------------|--------------------|------------------------|--------------|------------|---------------|-----------------|-------|
| N° árbol y código | datos de referencia | | | Parámetros de evaluación | | | | | | total de puntos | clase |
| | HT (m) | DAP (m) | Hc (m) | forma fuste | altura bifurcación | Dominancia eje central | Angulo ramas | forma copa | diámetro copa | | |
| 1 | 10 | 0.7 | 6 | 6 | 6 | 1 | 3 | 6 | 7 | 29 | 1 |
| 2 | 14 | 1.8 | 6 | 6 | 6 | 2 | 3 | 6 | 7 | 30 | 1 |
| 3 | 15 | 1.5 | 7 | 6 | 6 | 1 | 3 | 6 | 7 | 29 | 1 |
| 4 | 12 | 0.9 | 7 | 6 | 6 | 2 | 3 | 6 | 7 | 30 | 1 |
| 5 | 12 | 1.8 | 8 | 5 | 4 | 1 | 3 | 6 | 7 | 26 | 1 |
| 6 | 10 | 0.8 | 6 | 5 | 4 | 1 | 3 | 6 | 7 | 26 | 1 |
| 7 | 12 | 0.9 | 8 | 5 | 4 | 1 | 3 | 6 | 7 | 26 | 1 |
| 8 | 15 | 1.5 | 9 | 5 | 4 | 1 | 3 | 6 | 7 | 26 | 1 |
| 9 | 16 | 1.3 | 7 | 6 | 6 | 1 | 3 | 6 | 7 | 29 | 1 |
| 10 | 17 | 1.5 | 7 | 6 | 6 | 1 | 3 | 6 | 7 | 29 | 1 |

ANEXO N° 3: Coordenadas semilleros

| N° ARBOL | x | y | ALTURA |
|----------|--------|---------|--------|
| 1 | 449904 | 7648188 | 359 m |
| 2 | 450565 | 7648740 | 355 m |
| 3 | 451493 | 7647933 | 354 m |
| 4 | 451964 | 7647800 | 350 m |
| 5 | 454524 | 7647744 | 345 m |
| 6 | 455110 | 7647744 | 354 m |
| 7 | 455119 | 7647759 | 352 m |
| 8 | 455133 | 7647773 | 352 m |
| 9 | 451281 | 7647984 | 352 m |
| 10 | 449251 | 7648459 | 364 m |

ANEXO N° 4: Planilla diámetro 1

| Planilla de registro de diámetros en mm. 20 de junio del 2017 | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | | 0.44 | 0.77 | 0.59 | 0.71 | 0.61 | 1.23 | 0.73 | | 0.53 | 0.93 | 0.85 | 0.62 | 0.38 | 0.83 | 0.71 |
| 2 | 0.51 | 0.56 | 0.70 | 0.65 | 0.66 | 0.79 | 1.29 | 0.67 | 0.48 | 0.34 | 0.77 | | 0.67 | 0.55 | 0.83 | 0.80 |
| 3 | 0.55 | | 0.93 | 0.73 | 0.60 | 0.71 | 1.01 | 1.03 | | 0.38 | | 0.73 | 0.80 | 0.61 | 0.90 | 0.79 |
| 4 | 0.62 | | 0.81 | 0.69 | 0.57 | 0.92 | 1.03 | 0.81 | 0.65 | 0.43 | 0.73 | 0.75 | 1.03 | 0.58 | 0.69 | 0.80 |
| 5 | 0.57 | | 0.83 | 0.58 | 0.47 | 0.84 | 1.03 | 0.67 | 0.67 | 0.41 | | 0.82 | 0.83 | 0.51 | 0.77 | 0.60 |
| 6 | 0.61 | 0.53 | 0.83 | 0.95 | 0.69 | 0.74 | 1.11 | 0.77 | 1.10 | 0.52 | | | 0.76 | 0.57 | 1.04 | 0.95 |
| 7 | | | 0.69 | 0.69 | 0.55 | 0.38 | 1.25 | 0.82 | 0.51 | 0.46 | | 0.83 | 0.87 | 0.62 | 0.81 | 0.71 |
| 8 | 0.73 | 0.41 | 0.55 | 0.59 | 0.71 | 0.66 | 1.03 | 0.93 | 0.57 | 0.73 | 0.73 | | 0.73 | 0.38 | 0.81 | 1.01 |
| 9 | 0.75 | | 1.07 | 0.79 | 0.65 | 0.47 | 1.02 | 0.85 | 0.72 | 0.58 | 0.86 | 0.69 | 0.83 | 0.63 | 0.73 | 0.73 |
| 10 | 0.75 | | 0.67 | 0.65 | 0.57 | 0.47 | 0.97 | 0.81 | 0.49 | 0.55 | | 0.63 | 0.73 | 0.50 | 0.75 | 0.81 |
| 11 | 0.69 | 0.47 | 1.09 | 0.75 | 0.63 | 0.54 | 0.69 | 1.15 | 0.65 | 0.53 | 0.99 | 0.72 | 0.49 | 0.65 | 0.97 | 0.57 |
| 12 | 0.54 | 0.40 | 0.80 | 0.69 | 0.48 | 0.67 | 1.07 | 0.83 | | 0.50 | 0.77 | 0.59 | 0.83 | 0.53 | 0.82 | 0.79 |
| 13 | | | 0.88 | 0.71 | 0.56 | 0.42 | 0.93 | 0.93 | 0.63 | 0.53 | 0.79 | 0.77 | 0.83 | 0.49 | 0.83 | 0.69 |
| 14 | 0.63 | 0.46 | 0.69 | 0.83 | 0.52 | 0.39 | 0.93 | 1.00 | | 0.41 | | | 0.62 | 0.84 | 0.73 | 0.84 |
| 15 | 0.48 | | 0.71 | 0.78 | 0.70 | 0.93 | 0.93 | 0.92 | 0.57 | 0.43 | 0.89 | | 0.72 | 0.54 | 0.74 | 0.58 |
| 16 | 0.65 | 0.49 | 0.81 | 0.46 | 0.57 | 0.56 | 1.01 | 0.79 | 0.50 | 0.51 | 0.81 | | 1.17 | 0.66 | 0.63 | 0.85 |
| 17 | | 0.51 | 0.88 | 0.65 | 0.56 | 0.50 | 1.07 | 0.79 | 0.73 | 0.55 | 0.77 | 0.91 | 0.49 | 0.54 | 0.79 | 0.67 |
| 18 | 0.51 | 0.32 | 0.94 | 0.74 | 0.72 | 0.58 | 0.72 | 0.75 | | 0.58 | 0.81 | | 0.61 | 0.51 | 0.63 | 0.95 |
| 19 | | 0.38 | 0.75 | 0.67 | 0.55 | 0.62 | 0.67 | 0.97 | | 0.46 | 0.89 | 0.65 | 0.71 | 0.38 | 0.96 | 0.92 |
| 20 | | 0.45 | 0.70 | 0.71 | 0.55 | 0.44 | 1.26 | 0.93 | 0.65 | 0.47 | 0.93 | 0.72 | 0.61 | 0.73 | 1.01 | 0.67 |
| 21 | 0.73 | | 1.23 | 0.59 | 0.62 | 0.78 | 0.81 | 0.93 | 0.45 | 0.54 | 0.69 | 0.79 | 0.67 | 0.43 | 0.93 | 0.91 |
| 22 | 0.38 | 0.44 | 0.95 | 0.61 | 0.48 | 0.59 | 1.22 | 0.73 | 0.74 | 0.78 | 0.79 | 0.57 | 0.71 | 0.54 | 0.87 | 0.87 |
| 23 | | 0.54 | 0.75 | 0.87 | 0.53 | 0.53 | 0.93 | 0.83 | | 0.53 | 0.89 | 0.67 | 0.51 | 0.45 | 0.89 | 0.60 |
| 24 | | 0.34 | 0.57 | 0.64 | 0.51 | 0.56 | 0.93 | 0.67 | 0.80 | 0.63 | | | 0.81 | 0.49 | 0.83 | 0.81 |
| 25 | | 0.56 | 1.20 | 0.68 | 0.59 | 1.01 | 1.03 | 0.66 | 0.60 | 0.83 | 0.73 | 0.67 | 0.43 | 0.69 | 0.67 | 0.85 |
| 26 | 0.56 | 0.60 | 0.99 | 0.71 | 0.65 | 0.85 | 1.05 | 0.69 | 0.00 | 0.32 | 0.83 | 0.68 | 0.47 | 0.56 | 0.93 | 0.87 |
| 27 | 0.49 | | 0.72 | 0.92 | 0.61 | 0.83 | 0.95 | 0.63 | 0.72 | 0.53 | 0.82 | 0.47 | 0.63 | 0.66 | 1.05 | 0.98 |
| 28 | 0.53 | 0.41 | 0.96 | 0.61 | 0.49 | 0.53 | 0.73 | 0.77 | | 0.58 | | | 0.77 | 0.70 | 0.00 | 0.67 |

ANEXO N° 5: Planilla diámetro 2

| Planilla de registro de diámetros en mm. 18 de julio del 2017 | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|-----|-----|------|-----|------|------|-----|-----|------|------|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | | 0.77 | 1.15 | 0.89 | 1.06 | 1.1 | 1.8 | 1.1 | | 0.93 | 1.4 | 1.3 | 0.9 | 0.66 | 1.25 | 1.07 |
| 2 | 0.76 | 0.98 | 1.05 | 0.97 | 0.99 | 1.4 | 1.9 | 1.01 | 0.7 | 0.59 | 1.15 | | 1 | 0.97 | 1.24 | 1.2 |
| 3 | 0.83 | | 1.4 | 1.1 | 0.9 | 1.3 | 1.5 | 1.55 | | 0.67 | | 1.1 | 1.2 | 1.07 | 1.35 | 1.18 |
| 4 | 0.93 | | 1.21 | 1.04 | 0.86 | 1.6 | 1.5 | 1.21 | 1 | 0.75 | 1.09 | 1.1 | 1.6 | 1.02 | 1.04 | 1.2 |
| 5 | 0.85 | | 1.24 | 0.87 | 0.7 | 1.5 | 1.6 | 1 | 1 | 0.71 | | 1.2 | 1.3 | 0.89 | 1.16 | 0.9 |
| 6 | 0.92 | 0.92 | 1.24 | 1.43 | 1.03 | 1.3 | 1.7 | 1.15 | 1.7 | 0.91 | | | 1.1 | 1 | 1.56 | 1.42 |
| 7 | | | 1.03 | 1.04 | 0.83 | 0.7 | 1.9 | 1.23 | 0.8 | 0.81 | | 1.2 | 1.3 | 1.09 | 1.22 | 1.06 |
| 8 | 1.09 | 0.71 | 0.83 | 0.89 | 1.06 | 1.2 | 1.5 | 1.4 | 0.9 | 1.27 | 1.09 | | 1.1 | 0.66 | 1.21 | 1.51 |
| 9 | 1.12 | | 1.6 | 1.18 | 0.98 | 0.8 | 1.5 | 1.28 | 1.1 | 1.01 | 1.29 | 1 | 1.2 | 1.11 | 1.09 | 1.1 |
| 10 | 1.13 | | 1 | 0.98 | 0.86 | 0.8 | 1.5 | 1.22 | 0.7 | 0.97 | | 1 | 1.1 | 0.88 | 1.13 | 1.21 |
| 11 | 1.04 | 0.83 | 1.63 | 1.13 | 0.95 | 1 | 1 | 1.73 | 1 | 0.92 | 1.49 | 1.1 | 0.7 | 1.14 | 1.46 | 0.86 |
| 12 | 0.81 | 0.7 | 1.2 | 1.04 | 0.72 | 1.2 | 1.6 | 1.24 | | 0.87 | 1.15 | 0.9 | 1.2 | 0.92 | 1.23 | 1.18 |
| 13 | | | 1.32 | 1.06 | 0.84 | 0.7 | 1.4 | 1.4 | 0.9 | 0.92 | 1.19 | 1.2 | 1.2 | 0.86 | 1.24 | 1.04 |
| 14 | 0.95 | 0.8 | 1.03 | 1.25 | 0.78 | 0.7 | 1.4 | 1.5 | | 0.72 | | | 0.9 | 1.47 | 1.1 | 1.26 |
| 15 | 0.72 | | 1.07 | 1.17 | 1.05 | 1.6 | 1.4 | 1.38 | 0.9 | 0.75 | 1.34 | | 1.1 | 0.95 | 1.11 | 0.87 |
| 16 | 0.98 | 0.86 | 1.21 | 0.69 | 0.86 | 1 | 1.5 | 1.19 | 0.8 | 0.9 | 1.22 | | 1.8 | 1.15 | 0.94 | 1.27 |
| 17 | | 0.89 | 1.32 | 0.98 | 0.84 | 0.9 | 1.6 | 1.18 | 1.1 | 0.96 | 1.16 | 1.4 | 0.7 | 0.95 | 1.19 | 1 |
| 18 | 0.76 | 0.56 | 1.41 | 1.11 | 1.08 | 1 | 1.1 | 1.13 | | 1.01 | 1.22 | | 0.9 | 0.9 | 0.94 | 1.42 |
| 19 | | 0.66 | 1.13 | 1.01 | 0.83 | 1.1 | 1 | 1.46 | | 0.81 | 1.33 | 1 | 1.1 | 0.66 | 1.44 | 1.38 |
| 20 | | 0.79 | 1.05 | 1.06 | 0.82 | 0.8 | 1.9 | 1.39 | 1 | 0.82 | 1.39 | 1.1 | 0.9 | 1.27 | 1.52 | 1 |
| 21 | 1.1 | | 1.85 | 0.89 | 0.93 | 1.4 | 1.2 | 1.4 | 0.7 | 0.94 | 1.03 | 1.2 | 1 | 0.75 | 1.4 | 1.36 |
| 22 | 0.57 | 0.77 | 1.42 | 0.92 | 0.72 | 1 | 1.8 | 1.09 | 1.1 | 1.36 | 1.19 | 0.9 | 1.1 | 0.95 | 1.3 | 1.3 |
| 23 | | 0.95 | 1.13 | 1.3 | 0.79 | 0.9 | 1.4 | 1.25 | | 0.92 | 1.33 | 1 | 0.8 | 0.78 | 1.33 | 0.9 |
| 24 | | 0.6 | 0.86 | 0.96 | 0.77 | 1 | 1.4 | 1 | 1.2 | 1.11 | | | 1.2 | 0.85 | 1.24 | 1.21 |
| 25 | | 0.98 | 1.8 | 1.02 | 0.89 | 1.8 | 1.5 | 0.99 | 0.9 | 1.45 | 1.1 | 1 | 0.6 | 1.2 | 1 | 1.27 |
| 26 | 0.84 | 1.05 | 1.48 | 1.07 | 0.97 | 1.5 | 1.6 | 1.03 | | 0.56 | 1.25 | 1 | 0.7 | 0.98 | 1.4 | 1.31 |
| 27 | 0.74 | | 1.08 | 1.38 | 0.91 | 1.5 | 1.4 | 0.95 | 1.1 | 0.93 | 1.23 | 0.7 | 1 | 1.16 | 1.58 | 1.47 |
| 28 | 0.79 | 0.71 | 1.44 | 0.91 | 0.73 | 0.9 | 1.1 | 1.15 | | 1.01 | | | 1.2 | 1.22 | | 1.01 |

ANEXO N° 6: Planilla diámetro 3

| Planilla de registro de diámetros en mm. 21 de agosto del 2017 | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|-----|-----|------|-----|------|------|-----|-----|------|------|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 1.05 | 0.81 | 1.63 | 1.28 | 1.41 | 1.8 | 2.1 | 2.16 | 1.4 | 0.98 | | 1.7 | 1.6 | 0.91 | 1.86 | 2.16 |
| 2 | 1.01 | 1.02 | 1.68 | 1.27 | 1.22 | 1.8 | 2 | 2.03 | 1.2 | | 1.28 | | 1.1 | 1.78 | 1.69 | 2.14 |
| 3 | 1.02 | 1.13 | 1.51 | 1.28 | 1.04 | 1.8 | 1.9 | 2.15 | 1.1 | 1.06 | 1.27 | | 1.8 | 1.73 | 1.57 | 2.16 |
| 4 | 1.21 | 1.06 | 1.6 | 1.27 | 0.91 | 2 | 2.1 | 2.26 | 1.1 | 1.08 | 1.73 | 1.5 | 1.7 | 1.46 | 1.93 | 2.1 |
| 5 | 0.96 | | 1.65 | 1.39 | 1.6 | 1.7 | 2.3 | 1.3 | 1.1 | 0.92 | 0.98 | 1.4 | 1.3 | 1.7 | 1.98 | 1.17 |
| 6 | 1.1 | 0.98 | 1.67 | 1.45 | 1.28 | 1.9 | 2.4 | 1.65 | 1.7 | 0.93 | | 1.4 | 1.2 | 1.56 | 1.59 | 2.39 |
| 7 | 1.37 | | 1.73 | 1.45 | 1.59 | 0.9 | 2.5 | 1.63 | | 0.97 | | | 1.4 | 1.4 | 2.07 | 1.62 |
| 8 | 1.15 | 0.77 | 1.42 | 1.31 | 1.57 | 1.7 | 1.9 | 1.8 | 1.1 | 1.29 | 1.17 | 1.1 | 1.3 | 1.34 | 1.46 | 2.36 |
| 9 | 1.18 | | 1.73 | 1.41 | 1.2 | 0.9 | 1.7 | 1.3 | 1.3 | 1.14 | 0.83 | | 1.3 | 1.22 | 1.72 | 2.51 |
| 10 | 1.19 | | 1.77 | 1.73 | 1.06 | 1.1 | 1.9 | 1.91 | 1.1 | 1 | | 1.2 | 1.1 | 1.45 | 1.36 | 1.96 |
| 11 | 1.07 | 0.96 | 2.42 | 1.27 | 1.57 | 1 | 1.6 | 2.2 | 1.3 | 0.98 | 1.74 | 1.2 | 0.8 | 1.74 | 1.61 | 2.5 |
| 12 | 0.87 | 0.88 | 2.37 | 1.3 | 2.52 | 1.2 | 2.2 | 2.21 | 1 | 1.04 | 1.07 | 1.1 | 1.7 | 1.6 | 2.49 | 2.61 |
| 13 | 1.17 | | 1.22 | 1.7 | 1.7 | 0.9 | 1.8 | 2.23 | | 1.12 | 1.35 | 1.8 | 1.6 | 1.37 | 1.82 | 1.35 |
| 14 | 1.08 | 0.88 | 1.69 | 1.52 | 1.06 | 0.9 | 1.8 | 2.4 | 1 | 0.88 | 1.40 | 2.4 | 1.5 | 1.61 | 1.83 | 2.36 |
| 15 | 0.96 | | 1.43 | 1.18 | 1.62 | 1.6 | 1.8 | 1.98 | | 0.79 | 1.36 | | 1.2 | 1.02 | 1.18 | 1.5 |
| 16 | 1.04 | 0.92 | 1.88 | 1.83 | 1.93 | 1.2 | 1.9 | 1.76 | 1 | 1.51 | 1.62 | | 1.8 | 1.22 | 2 | 2.19 |
| 17 | 1.02 | 0.9 | 1.58 | 1.47 | 1.31 | 1.2 | 2 | 1.98 | 1.1 | 1.25 | 1.34 | | 1 | 1.68 | 1.21 | 1.65 |
| 18 | 1.12 | 0.96 | 1.88 | 1.91 | 2.26 | 1.1 | 2 | 1.77 | 1.5 | 1.16 | 1.57 | 2 | 1 | 1.61 | 1.69 | 1.7 |
| 19 | 1.27 | 0.93 | 1.63 | 1.97 | 1.15 | 1.5 | 2 | 2.41 | | 0.99 | 1.33 | 1.6 | 1.1 | 0.9 | 1.46 | 2.4 |
| 20 | 1.34 | 0.98 | 1.83 | 1.95 | 1.23 | 1.4 | 2 | 2.22 | | 0.84 | 1.79 | 1.1 | 1.7 | 1.3 | 2.36 | 2.42 |
| 21 | 1.2 | | 1.88 | 1.31 | 1.66 | 1.5 | 2 | 1.96 | 1 | 1.06 | 1.32 | 1.8 | 1.1 | 1.01 | 1.95 | 2.87 |
| 22 | 0.84 | 0.83 | 1.45 | 1.1 | 1.96 | 1.7 | 2.7 | 1.56 | 1.2 | 1.41 | 1.36 | 1.3 | 1.3 | 1.08 | 1.98 | 2.6 |
| 23 | 1.38 | 1.13 | 1.52 | 1.79 | 1.34 | 1.5 | 1.8 | 1.99 | 0.7 | 0.98 | 1.4 | 1 | 1.2 | 1.32 | 1.63 | 1.6 |
| 24 | 1.01 | 0.88 | 1.78 | 1.97 | 0.98 | 1.1 | 1.9 | 1.83 | | 1.15 | | | 1.3 | 1.02 | 2.17 | 1.93 |
| 25 | 1.24 | 1.05 | 2.51 | 1.36 | 1.63 | 1.8 | 1.9 | 1.92 | 1.2 | 1.49 | 1.46 | 1.5 | 1 | 1.55 | 1.74 | 1.46 |
| 26 | 0.97 | 1.12 | 1.92 | 1.94 | 1.25 | 1.5 | 1.6 | 1.67 | 1 | 0.71 | 1.22 | 1 | 0.8 | 1.17 | 1.37 | 1.9 |
| 27 | 1.01 | | 1.49 | 1.47 | 1.24 | 1.7 | 1.7 | 1.86 | 1.1 | 1.03 | 1.31 | 0.9 | 1.4 | 1.29 | 1.61 | 2.44 |
| 28 | 1.6 | 1.08 | 1.61 | | 1.95 | 1 | 1.9 | 1.64 | | 1.36 | 1.13 | 0.9 | 1.2 | 1.24 | 1.75 | 1.88 |

ANEXO N° 7: Planilla diámetro 4

| Planilla de registro de diámetros en mm. 22 de septiembre del 2017 | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-----|------|------|------|------|-----|------|------|------|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 1.68 | 1.13 | 2.21 | 1.89 | 1.92 | 1.89 | 2.5 | 2.51 | 1.43 | 1.08 | | 1.1 | 2.14 | 1.35 | 2.46 | 2.26 |
| 2 | 1.45 | 1.09 | 2.34 | 2.2 | 1.75 | 1.92 | 2.2 | 2.49 | 2.29 | | 1.62 | | 1.76 | 1.80 | 2.28 | 2.23 |
| 3 | 1.34 | 2.16 | 2.15 | 2.36 | 1.56 | 2.61 | 2 | 2.47 | 1.30 | 1.06 | 1.22 | | 2.05 | 2.16 | 2.02 | 2.11 |
| 4 | 1.82 | 1.25 | 2.42 | 1.94 | 1.58 | 2.36 | 2.8 | 2.65 | 1.20 | 2.03 | 1.51 | 2.1 | 2.62 | 2.47 | 2.73 | 2.14 |
| 5 | 1.40 | | 2.15 | 2.26 | 1.49 | 2.43 | 2.4 | 2.49 | 2.08 | 1.84 | | 1.6 | 1.95 | 2.10 | 2.78 | 1.33 |
| 6 | 1.35 | 1.28 | 2.35 | 1.72 | 1.59 | 2.65 | 2.4 | 2.24 | 1.75 | 1.51 | | | 1.90 | 1.94 | 1.96 | 2.17 |
| 7 | 1.96 | | 2.2 | 2.02 | 1.66 | 1.88 | 3.3 | 2.17 | | 1.45 | 1.03 | 1.6 | 1.85 | 2.29 | 2.61 | 1.68 |
| 8 | 1.62 | 1.02 | 1.65 | 1.96 | 1.88 | 2.04 | 2.3 | 2.61 | 1.89 | 1.36 | 1.54 | 1.3 | 2.14 | 1.70 | 2.56 | 2.87 |
| 9 | 1.30 | | 1.83 | 2.07 | 1.58 | 1.50 | 2.6 | 1.52 | 1.61 | 1.47 | 0.83 | 2.1 | 2.13 | 2.00 | 2.48 | 2.66 |
| 10 | 1.49 | | 1.68 | 1.89 | 1.70 | 1.73 | 2.5 | 2.54 | 1.40 | 1.19 | | 2.1 | 1.80 | 2.18 | 1.89 | 2.01 |
| 11 | 1.53 | 1.27 | 1.62 | 2.11 | 1.67 | 2.10 | 2.5 | 2.46 | 1.98 | | 2.02 | 1.9 | 1.21 | 2.36 | 1.99 | 2.3 |
| 12 | 1.06 | 0.94 | 2.29 | 1.41 | 2.49 | 2.16 | 2.8 | 2.49 | 1.78 | 1.37 | 1.24 | 1.7 | 1.47 | 2.32 | 3.05 | 1.52 |
| 13 | 1.29 | | 1.83 | 1.81 | 1.91 | 2.55 | 2.6 | 2.43 | 1.06 | 1.20 | 1.46 | 2.5 | 2.03 | 2.45 | 2.39 | 1.96 |
| 14 | 1.47 | 1.39 | 1.76 | 1.88 | 1.80 | 1.58 | 2.6 | 2.88 | 1.54 | 1.49 | 1.5 | 1 | 2.14 | 2.31 | 2.41 | 2.42 |
| 15 | 1.13 | | 2.11 | 2.12 | 1.98 | 2.84 | 2.3 | 2.62 | | 1.40 | 1.29 | 1.2 | 1.62 | 1.87 | 2.31 | 1.88 |
| 16 | 1.19 | 1.28 | 1.95 | 2.33 | 2.31 | 2.09 | 2.2 | 2.48 | 1.90 | 1.51 | 1.6 | 1.3 | 1.87 | 1.52 | 2.12 | 2.44 |
| 17 | 1.72 | 1.22 | 1.64 | 1.56 | 1.90 | 1.94 | 3.1 | 2.13 | 1.81 | 1.37 | 1.6 | 2.8 | 1.52 | 2.30 | 1.98 | 2.53 |
| 18 | 1.74 | 1.44 | 2.31 | 2.63 | 2.43 | 1.56 | 2.2 | 2.28 | 0.96 | 1.17 | 1.66 | | 1.41 | 1.90 | 2.59 | 1.69 |
| 19 | 2.32 | 1.18 | 2.04 | 2.54 | 1.81 | 2.26 | 2.6 | 2.85 | 0.96 | 1.52 | 1 | 1.9 | 1.78 | 1.53 | 1.8 | 2.88 |
| 20 | 1.75 | 1.50 | 1.75 | 2.07 | 1.95 | 1.92 | 2.9 | 2.57 | | 1.15 | 2.56 | 2.3 | 1.95 | 1.94 | 2.65 | 2.04 |
| 21 | 1.48 | | 1.63 | 2.26 | 2.21 | 2.28 | 2.6 | 2.43 | 1.91 | 1.61 | 1.12 | 2.5 | 1.76 | 1.35 | 2.65 | 2.89 |
| 22 | 1.34 | 1.03 | 1.82 | 1.32 | 2.08 | 2.00 | 2.6 | 2.41 | 1.48 | 1.92 | 1.6 | 2.2 | 2.43 | 1.73 | 2.31 | 2.77 |
| 23 | 2.32 | 1.46 | 2.15 | 2.28 | 1.63 | 1.82 | 2.8 | 2.88 | 0.95 | 0.12 | | 1.8 | 1.45 | 1.86 | 2.71 | 1.89 |
| 24 | 1.53 | 1.40 | 2.2 | 1.36 | 1.61 | 2.17 | 2.7 | 2.51 | | 1.48 | 1.12 | | 2.24 | 1.75 | 2.98 | 2.41 |
| 25 | 2.16 | 1.53 | 3.11 | 1.64 | 1.74 | 2.38 | 2.4 | 2.3 | 0.99 | 1.73 | 0.86 | 2.7 | 1.48 | 1.59 | 2.02 | 1.67 |
| 26 | 1.57 | 0.89 | 2.72 | 2.19 | 1.38 | 2.17 | 2.3 | 2.52 | 1.83 | 1.49 | 1.22 | | 1.84 | 1.99 | 2.11 | 2.25 |
| 27 | 1.25 | | 2.08 | 2.14 | 1.69 | 2.56 | 2.8 | 1.69 | 1.20 | 0.86 | 1.58 | 2.1 | 1.48 | 2.16 | 2.06 | 2.46 |
| 28 | 2.45 | 1.47 | 2.33 | 1.86 | 2.42 | 1.75 | 2.9 | 2.24 | | 1.59 | 1.25 | | 1.89 | 2.01 | 2.57 | 2.3 |

ANEXO N° 8: Planilla diámetro 5

| Planilla de registro de diámetros en mm. 20 de octubre del 2017 | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|
| TRAT. | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 2.04 | 2.2 | 2.78 | 1.97 | 2.63 | 2.84 | 3.26 | 3.07 | 2.25 | 1.43 | | | 2.85 | 2.9 | 2.64 | 3.04 |
| 2 | 1.82 | 1.11 | 2.84 | 2.41 | 2.15 | 3.05 | 3.02 | 3.67 | 2.8 | | 1.98 | 2.8 | 2.65 | 2.45 | 3.24 | 2.86 |
| 3 | 2.05 | 2.77 | 2.75 | 2.64 | 2.11 | 3.07 | 2.86 | 3.2 | 1.86 | 1.71 | 1.84 | | 3.08 | 2.51 | 3.04 | 2.93 |
| 4 | 2.51 | 1.88 | 2.68 | 1.96 | 2.3 | 2.86 | 3.15 | 3.06 | 2.49 | 2.95 | 1.65 | 2.7 | 2.77 | 2.63 | 3.35 | 3.01 |
| 5 | 2.05 | | 2.71 | 2.56 | 2.38 | 2.82 | 3.15 | 3.16 | 2.43 | 2.19 | 1.60 | | 2.88 | 2.35 | 3.45 | 1.85 |
| 6 | 1.95 | 1.72 | 3.14 | 2.66 | 2.15 | 3.08 | 3.09 | 2.86 | 1.95 | 2.34 | | 1.2 | 2.41 | 2.61 | 2.74 | 3.2 |
| 7 | 2.58 | | 2.8 | 2.85 | 2.43 | 2.55 | 3.74 | 3.03 | | 1.46 | 2.3 | 1.9 | 2.51 | 2.99 | 3.16 | 2.61 |
| 8 | 1.63 | 1.74 | 2.41 | 2.38 | 2.62 | 2.53 | 3.24 | 3.05 | 2.64 | 1.6 | 2.09 | 2.2 | 2.87 | 2.52 | 3.05 | 3.02 |
| 9 | 1.67 | 1.51 | 2.59 | 2.37 | 2.1 | 2.31 | 3.4 | 2.64 | 1.81 | 1.81 | 2.98 | 3.2 | 2.72 | 2.35 | 2.92 | 3.21 |
| 10 | 1.89 | | 2.41 | 2.7 | 2.34 | 2.72 | 3.51 | 3.12 | 2.31 | 1.79 | | | 2.62 | 2.46 | 2.72 | 3.2 |
| 11 | 2.27 | 1.44 | 3.64 | 3 | 2.13 | 2.89 | 3.66 | 3.78 | 1.91 | | 1.75 | | 2.51 | 2.7 | 2.7 | 2.97 |
| 12 | 1.76 | 1.43 | 2.63 | 1.96 | 3.34 | 2.54 | 3.73 | 3.2 | 2.15 | 2.39 | 2 | 3.3 | 2.57 | 2.64 | 3.58 | 3.3 |
| 13 | 2.22 | | 2.89 | 1.87 | 2.53 | 2.61 | 3.15 | 3.18 | 0.95 | 1.4 | 1 | 1.3 | 2.93 | 2.88 | 2.94 | 2.3 |
| 14 | 2.48 | 1.55 | 2.3 | 2.17 | 2.32 | 2.5 | 3.14 | 3.42 | 2.32 | 2 | | | 2.7 | 2.78 | 3.1 | 2.65 |
| 15 | 1.91 | | 2.76 | 1.99 | 2.61 | 2.86 | 3.06 | 3.2 | | 1.68 | 2 | | 2.73 | 2.07 | 3.13 | 2.34 |
| 16 | 1.86 | 1.35 | 2.8 | 2.85 | 2.97 | 2.87 | 2.87 | 3.18 | 2.95 | 2.41 | 1.81 | | 2.45 | 1.57 | 2.64 | 2.64 |
| 17 | 2.95 | 2.23 | 2.31 | 2.45 | 2.2 | 2.86 | 3.61 | 2.88 | 2.28 | 2.38 | 1 | 2.4 | 2.97 | 2.4 | 2.55 | 2.86 |
| 18 | 2.5 | 2.42 | 3.47 | 2.26 | 2.62 | 2.65 | 2.5 | 2.53 | | 1.8 | 2.95 | | 2.4 | 2.8 | 3.01 | 2.62 |
| 19 | 2.99 | 1.78 | 2.58 | 2.19 | 2.58 | 2.65 | 3.37 | 3.42 | | 1.25 | 2 | 2.8 | 2.63 | 2.8 | 2.68 | 3.18 |
| 20 | 2.48 | 2.34 | 2.5 | 2.73 | 2.2 | 2.8 | 3.33 | 3.31 | | 2.21 | 1 | 2.5 | 2.73 | 1.95 | 2.98 | 3.07 |
| 21 | 1.64 | 1.41 | 2.47 | 2.77 | 2.8 | 3.12 | 3.06 | 3.09 | 2.3 | 2.48 | 1.75 | 1.5 | 2.76 | 1.85 | 3.5 | 3.36 |
| 22 | 1.65 | 1.87 | 2.27 | 2.52 | 2.75 | 2.88 | 3.62 | 3.08 | 1.63 | 2.62 | 1.55 | 2.3 | 3.21 | 2.58 | 3.17 | 3.02 |
| 23 | 2.62 | 2.37 | 2.98 | 2.04 | 2.42 | 2.59 | 3.5 | 3.35 | 1.5 | 1.47 | 2 | 1.6 | 2.78 | 2.94 | 3.09 | 2.57 |
| 24 | 2.03 | 2.44 | 2.92 | 2.6 | 2.27 | 2.43 | 3.44 | 3.03 | | 2.34 | 1 | | 2.74 | 2.58 | 3.76 | 2.73 |
| 25 | 2.29 | 1.53 | 3.15 | 2.34 | 2.6 | 2.7 | 3.35 | 2.84 | 1.98 | 2.6 | 2.1 | 2.8 | 2.57 | 2.33 | 2.91 | 2.88 |
| 26 | 1.85 | 1.9 | 3.08 | 2.56 | 2.17 | 2.63 | 3.32 | 2.86 | 2.8 | 2.46 | 1.78 | | 2.34 | 2.13 | 2.93 | 2.94 |
| 27 | 1.49 | 1.62 | 2.42 | 2.3 | 2.46 | 2.57 | 3.2 | 2.58 | 1.65 | 1.34 | 1.77 | | 2.42 | 3 | 3.07 | 3.1 |
| 28 | 2.46 | 1.87 | 3.07 | 2.28 | 2.6 | 2.34 | 3.18 | 2.99 | | 2.18 | 1.26 | | 2.42 | 2.32 | 3.3 | 3.56 |

ANEXO N° 9: Planilla altura 1

| Planilla de registro de altura en cm 21 de mayo del 2017 | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 1.2 | 1.5 | 3.2 | 1.6 | 1.6 | 1.3 | 3.0 | 2.8 | 3.2 | 0.4 | | 1.7 | 2.2 | 1.9 | 2.5 | 3.0 |
| 2 | 1.2 | 1.5 | 1.9 | 1.3 | 1.7 | 1.4 | 3.2 | 1.7 | 1.9 | 0.6 | 1.3 | 0.8 | 1.7 | 1.5 | 2.5 | 2.3 |
| 3 | 1.8 | 1.3 | 1.7 | 2.2 | 2.0 | 1.3 | 2.2 | 1.7 | 1.7 | 0.5 | 0.7 | 1.0 | 2.9 | 2.4 | 3.3 | 1.7 |
| 4 | 0.8 | 0.7 | 3.3 | 2.3 | 2.8 | 2.0 | 3.4 | 2.7 | 3.3 | 1.3 | 1.0 | 1.3 | 2.0 | 1.7 | 3.7 | 1.7 |
| 5 | 1.3 | | 2.5 | 1.7 | 2.3 | | 1.7 | 1.7 | 2.5 | 1.3 | | 1.4 | 2.0 | 1.7 | 1.6 | 2.8 |
| 6 | 1.2 | 1.0 | 2.3 | 2.7 | 2.3 | 1.7 | 4.1 | 2.2 | 2.3 | 1.0 | | 1.7 | 1.6 | 1.4 | 1.8 | 2.4 |
| 7 | 0.8 | 1.0 | 1.8 | 2.0 | 1.7 | 2.3 | 2.9 | 2.0 | 1.8 | 1.0 | | 1.8 | 1.4 | 1.2 | 1.9 | 2.2 |
| 8 | 1.6 | 1.2 | 2.8 | 0.7 | 1.5 | 2.6 | 3.2 | 2.7 | 2.8 | 1.2 | 0.7 | | 1.9 | 1.6 | 2.4 | 3.0 |
| 9 | 1.2 | 1.2 | 3.3 | 1.8 | 1.3 | 2.0 | 2.9 | 3.0 | 3.3 | 1.5 | 1.2 | 1.3 | 2.4 | 2.0 | 1.3 | 2.3 |
| 10 | 1.4 | | 2.3 | 1.8 | 1.3 | 1.7 | 3.0 | 3.3 | 2.3 | 0.5 | | 1.1 | 2.1 | 1.8 | 2.0 | 2.3 |
| 11 | 1.0 | 1.2 | 2.3 | 2.1 | 2.2 | 1.7 | 3.1 | 2.2 | 2.3 | 1.2 | 2.0 | 1.7 | 1.8 | 1.5 | 2.1 | 1.5 |
| 12 | 1.7 | 1.7 | 3.0 | 2.1 | 1.9 | 0.7 | 2.8 | 2.3 | 3.0 | 0.9 | 1.5 | 1.8 | 2.1 | 1.8 | 3.2 | 2.3 |
| 13 | 1.1 | 1.0 | 1.5 | 2.0 | 1.8 | 1.8 | 3.2 | 2.3 | 1.5 | 1.1 | 2.2 | 1.6 | 2.1 | 1.8 | 1.7 | 3.0 |
| 14 | 1.9 | 1.4 | 1.0 | 2.3 | 1.9 | 2.4 | 2.5 | 2.8 | 1.0 | 1.1 | | 2.5 | 2.6 | 2.2 | 2.0 | 3.0 |
| 15 | 1.7 | | 1.8 | 2.8 | 2.6 | | 2.8 | 3.4 | 1.8 | 1.2 | 1.3 | | 1.3 | 1.1 | 2.6 | 2.3 |
| 16 | 1.7 | 1.7 | 3.0 | 1.3 | 2.5 | 1.3 | 2.9 | 3.0 | 3.0 | 1.2 | 1.4 | 0.9 | 0.9 | 0.7 | 1.3 | 3.0 |
| 17 | 1.5 | 1.7 | 2.0 | 1.7 | 2.7 | 1.5 | 3.1 | 3.3 | 2.0 | 1.8 | 1.3 | | 1.4 | 1.2 | 2.5 | 3.0 |
| 18 | 1.8 | 2.0 | 2.2 | 2.3 | 2.5 | 2.2 | 2.7 | 1.3 | 2.2 | 1.6 | 1.3 | 2.4 | 1.7 | 1.5 | 2.7 | 1.3 |
| 19 | 1.2 | 2.1 | 2.7 | 2.7 | 1.5 | 1.3 | 2.2 | 3.4 | 2.7 | 1.6 | 2.0 | 1.0 | 2.1 | 1.8 | 2.5 | 2.8 |
| 20 | 0.5 | 1.0 | 2.7 | 2.1 | 1.7 | 1.7 | 3.5 | 3.7 | 2.7 | 0.9 | 1.3 | 1.3 | 1.3 | 1.1 | 2.0 | 1.8 |
| 21 | 1.5 | 1.3 | 2.2 | 1.3 | 1.4 | 1.0 | 2.9 | 2.5 | 2.2 | 1.1 | 2.0 | 1.3 | 1.6 | 1.3 | 2.5 | 3.5 |
| 22 | 1.6 | 1.2 | 2.2 | 2.0 | 1.8 | 1.0 | 3.2 | 2.3 | 2.2 | 1.6 | 2.2 | 0.4 | 1.6 | 1.3 | 3.3 | 2.2 |
| 23 | 1.2 | 1.1 | 2.3 | 1.5 | 1.4 | | 2.0 | 2.7 | 2.3 | 1.0 | 1.3 | 1.0 | 1.4 | 1.2 | 2.3 | 1.7 |
| 24 | 1.4 | 1.3 | 2.2 | 2.1 | 1.4 | | 1.7 | 2.3 | 2.2 | 1.3 | 1.7 | 1.2 | 1.7 | 1.5 | 3.3 | 3.0 |
| 25 | 0.7 | 1.7 | 2.7 | 2.2 | 1.6 | | 1.7 | 1.3 | 2.7 | 1.5 | 1.7 | 0.3 | 1.7 | 1.5 | 2.7 | 1.7 |
| 26 | 1.6 | 0.7 | 1.0 | 2.3 | 1.8 | 2.0 | 2.5 | 2.0 | 1.0 | 0.9 | | 1.8 | 1.7 | 1.5 | 2.3 | 2.8 |
| 27 | 1.6 | | 1.7 | 1.9 | 2.0 | 0.3 | 2.6 | 2.3 | 1.7 | 1.0 | 1.7 | 1.5 | 2.0 | 1.7 | 2.8 | 2.8 |
| 28 | 1.5 | 1.2 | 2.7 | 2.2 | 1.6 | | 2.5 | 2.8 | 2.7 | 1.3 | | | 1.3 | 1.1 | 3.0 | 2.8 |

ANEXO N° 10: Planilla altura 2

| Planilla de registro de altura en cm 19 de junio del 2017 | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 6.3 | 5.9 | 0.0 | 5.1 | 2.3 | 3.2 | 1.7 | 4.4 | 3.0 | 2.7 | 0.9 | 9.1 | 3.2 | 5.7 | 3.3 | 6.0 |
| 2 | 3.7 | 6.3 | 2.7 | 5.0 | 2.3 | 3.3 | 2.0 | 1.7 | 3.0 | 2.9 | 1.2 | 7.3 | 2.7 | 3.3 | 1.7 | 4.7 |
| 3 | 3.3 | 4.5 | 1.3 | 6.7 | 3.7 | 4.0 | 1.3 | 5.8 | 2.5 | 2.5 | 1.0 | 6.6 | 4.3 | 3.3 | 2.0 | 3.5 |
| 4 | 6.7 | 6.8 | 2.0 | 7.5 | 1.7 | 5.7 | 3.3 | 2.7 | 1.3 | 4.0 | 2.6 | 2.0 | 4.5 | 5.3 | 2.7 | 3.5 |
| 5 | 5.0 | 3.3 | | 3.2 | 2.7 | 4.7 | 1.2 | 1.7 | | | 2.7 | | 3.3 | 3.3 | 2.9 | 5.7 |
| 6 | 4.7 | 8.1 | | 3.6 | 2.4 | 4.7 | 3.3 | 2.4 | 2.0 | 3.3 | 2.0 | 3.4 | 5.3 | 4.3 | 3.3 | 4.8 |
| 7 | 3.5 | 5.7 | | 3.7 | 1.7 | 3.5 | 1.9 | 2.7 | 2.0 | 4.7 | 2.0 | 4.6 | 4.0 | 4.0 | 3.5 | 4.3 |
| 8 | 5.7 | 6.4 | 1.3 | 4.8 | 3.1 | 3.0 | 2.7 | 4.3 | 2.3 | 5.1 | 2.4 | 4.9 | 1.3 | 5.3 | | 6.0 |
| 9 | 6.7 | 5.9 | 2.3 | 2.7 | 2.4 | 2.7 | 2.3 | 2.3 | 2.3 | 4.0 | 3.0 | 3.1 | 3.7 | 6.0 | 2.7 | 4.5 |
| 10 | 4.7 | 6.0 | | 4.1 | 2.8 | 2.5 | 1.3 | 1.7 | | 3.3 | 1.0 | | 3.7 | 6.7 | 2.1 | 4.7 |
| 11 | 4.7 | 6.2 | 4.0 | 4.2 | 2.0 | 4.3 | 2.0 | 2.7 | 2.3 | 3.3 | 2.5 | 3.1 | 4.1 | 4.3 | 3.3 | 3.0 |
| 12 | 6.0 | 5.5 | 3.0 | 6.3 | 3.3 | 3.9 | 2.0 | 2.6 | 3.3 | 1.3 | 1.9 | 2.4 | 4.1 | 4.7 | 3.7 | 4.7 |
| 13 | 3.0 | 6.3 | 4.3 | 3.3 | 2.3 | 3.7 | 2.7 | 5.1 | 2.0 | 3.5 | 2.3 | 3.1 | 4.0 | 4.7 | 3.2 | 6.0 |
| 14 | 2.0 | 5.0 | 0.0 | 4.0 | 3.8 | 3.7 | 2.0 | 3.3 | 2.8 | 4.8 | 2.2 | 6.1 | 4.7 | 5.7 | 5.0 | 6.0 |
| 15 | 3.7 | 5.7 | 2.7 | 5.2 | 3.3 | 5.2 | 1.3 | 1.7 | | | 2.4 | | 5.7 | 6.8 | | 4.7 |
| 16 | 6.0 | 5.9 | 2.8 | 2.7 | 3.3 | 5.0 | 2.3 | 1.7 | 3.3 | 2.7 | 2.4 | 3.6 | 2.7 | 6.0 | 1.9 | 6.0 |
| 17 | 4.0 | 6.1 | 2.5 | 5.0 | 3.0 | 5.3 | 2.3 | 2.2 | 3.3 | 3.0 | 3.6 | 2.8 | 3.3 | 6.7 | | 6.0 |
| 18 | 4.3 | 5.3 | 2.7 | 5.3 | 3.7 | 5.0 | 1.7 | 1.1 | 4.0 | 4.3 | 3.2 | 5.4 | 4.7 | 2.7 | 4.8 | 2.7 |
| 19 | 5.3 | 4.3 | 4.0 | 5.0 | 2.3 | 3.0 | 1.7 | 2.3 | 4.2 | 2.7 | 3.2 | 3.5 | 5.3 | 6.8 | 2.0 | 5.7 |
| 20 | 5.3 | 7.0 | 2.7 | 4.0 | 1.0 | 3.5 | 2.0 | 3.5 | 2.0 | 3.3 | 1.7 | 3.9 | 4.2 | 7.3 | 2.7 | 3.7 |
| 21 | 4.3 | 5.7 | 4.0 | 5.0 | 3.0 | 2.8 | 2.1 | 2.0 | 2.7 | 2.0 | 2.3 | 2.4 | 2.5 | 5.0 | 2.7 | 7.0 |
| 22 | 4.3 | 6.3 | 4.3 | 6.7 | 3.2 | 3.7 | 1.3 | 2.1 | 2.3 | 2.0 | 3.2 | 1.4 | 4.0 | 4.7 | 0.8 | 4.3 |
| 23 | 4.7 | 4.0 | 2.7 | 4.7 | 2.3 | 2.8 | 2.7 | 1.4 | 2.1 | | 2.0 | | 3.0 | 5.3 | 2.0 | 3.3 |
| 24 | 4.5 | 3.3 | 3.3 | 6.7 | 2.9 | 2.9 | 0.0 | 3.0 | 2.7 | | 2.6 | | 4.1 | 4.7 | 2.3 | 6.0 |
| 25 | 5.3 | 3.3 | 3.3 | 5.3 | 1.5 | 3.2 | 2.1 | 2.9 | 3.3 | | 3.0 | | 4.5 | 2.7 | 0.7 | 3.3 |
| 26 | 2.0 | 5.0 | | 4.7 | 3.2 | 3.7 | 1.9 | 2.3 | 1.3 | 4.0 | 1.7 | 3.1 | 4.7 | 4.0 | 3.7 | 5.7 |
| 27 | 3.3 | 5.2 | 3.3 | 5.7 | 3.3 | 4.0 | 4.7 | 2.3 | | 0.7 | 2.0 | | 3.8 | 4.7 | 3.0 | 5.7 |
| 28 | 5.3 | 5.0 | | 6.0 | 2.9 | 3.2 | 2.0 | 2.4 | 2.3 | | 2.7 | | 4.3 | 5.7 | | 5.7 |

ANEXO N° 11: Planilla altura 3

| Planilla de registro de altura en cm 22 de julio del 2017 | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|------|-----|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 4.6 | 4.8 | 2.5 | 7.7 | 4.5 | 4 | 1.5 | 6.7 | 9.5 | 8.9 | | 7.6 | 4.8 | 8.5 | 5 | 9 |
| 2 | 3.5 | 5 | 3 | 2.9 | 4.5 | 4.3 | 2.1 | 5.1 | 5.6 | 9.5 | 4 | 7.5 | 4 | 5 | 2.5 | 7 |
| 3 | 5.5 | 6 | 2 | 10.1 | 3.8 | 3.8 | 1.7 | 8.6 | 5 | 6.7 | 2 | 10 | 6.5 | 5 | 3 | 5.2 |
| 4 | 2.5 | 8.5 | 5 | 4.8 | 2 | 6 | 4.6 | 6.0 | 10 | 10.2 | 3 | 11 | 6.8 | 8 | 4 | 5.2 |
| 5 | 4 | 7 | 1.8 | 3 | 2 | 3 | 4.7 | 6.0 | 7.5 | 5 | | 4.8 | 5 | 5 | 4.3 | 8.5 |
| 6 | 3.6 | 7 | 5 | 4.2 | 3 | 5 | 3.4 | 4.8 | 7 | 12.2 | | 5.4 | 8 | 6.5 | 5 | 7.2 |
| 7 | 2.5 | 5.2 | 2.8 | 4.8 | 3 | 7 | 3.5 | 4.3 | 5.3 | 8.6 | | 5.6 | 6 | 6 | 5.3 | 6.5 |
| 8 | 4.7 | 4.5 | 4 | 7.5 | 3.5 | 7.7 | 4.3 | 5.6 | 8.5 | 9.6 | 2 | 7.2 | 2 | 8 | | 9 |
| 9 | 3.6 | 4 | 3.5 | 4 | 3.5 | 6 | 5.3 | 7.1 | 10 | 8.8 | 3.5 | 4 | 5.5 | 9 | 4 | 6.8 |
| 10 | 4.2 | 3.8 | 2 | 3 | 4 | 5 | 1.8 | 6.4 | 7 | 9 | | 6.1 | 5.5 | 10 | 3.2 | 7 |
| 11 | 3 | 6.5 | 3 | 4.7 | 3.5 | 5 | 4.4 | 5.4 | 7 | 9.3 | 6 | 6.3 | 6.2 | 6.5 | 5 | 4.5 |
| 12 | 5 | 5.8 | 3 | 4.5 | 5 | 2 | 3.3 | 6.4 | 9 | 8.3 | 4.5 | 9.5 | 6.2 | 7 | 5.5 | 7 |
| 13 | 3.4 | 5.5 | 4 | 9 | 3 | 5.3 | 3.9 | 6.4 | 4.5 | 9.5 | 6.5 | 5 | 6 | 7 | 4.8 | 9 |
| 14 | 5.7 | 5.6 | 3 | 5.7 | 4.2 | 7.2 | 3.9 | 7.7 | 3 | 7.5 | | 6 | 7 | 8.5 | 7.5 | 9 |
| 15 | 5 | 7.8 | 2 | 3 | 4 | 5 | 4.3 | 3.9 | 5.5 | 8.5 | 4 | 7.8 | 8.5 | 10.2 | | 7 |
| 16 | 5 | 7.5 | 3.5 | 3 | 5 | 4 | 4.3 | 2.6 | 9 | 8.8 | 4.2 | 4 | 4 | 9 | 2.8 | 9 |
| 17 | 4.5 | 8 | 3.5 | 3.8 | 5 | 4.5 | 6.3 | 4.2 | 6 | 9.2 | 3.8 | 7.5 | 5 | 10 | | 9 |
| 18 | 5.5 | 7.5 | 2.5 | 2 | 6 | 6.5 | 5.6 | 5.2 | 6.5 | 8 | 4 | 8 | 7 | 4 | 7.2 | 4 |
| 19 | 3.5 | 4.5 | 2.5 | 4 | 6.3 | 4 | 5.6 | 6.4 | 8 | 6.5 | 6 | 7.5 | 8 | 10.2 | 3 | 8.5 |
| 20 | 1.5 | 5.2 | 3 | 6.2 | 3 | 5 | 3.0 | 3.9 | 8 | 10.5 | 4 | 6 | 6.3 | 11 | 4 | 5.5 |
| 21 | 4.5 | 4.2 | 3.2 | 3.5 | 4 | 3 | 3.9 | 4.7 | 6.5 | 8.6 | 6 | 7.5 | 3.8 | 7.5 | 4 | 10.5 |
| 22 | 4.8 | 5.5 | 2 | 3.6 | 3.5 | 3 | 5.7 | 4.7 | 6.5 | 9.5 | 6.5 | 10 | 6 | 7 | 1.2 | 6.5 |
| 23 | 3.5 | 4.2 | 4 | 2.5 | 3.2 | 4 | 3.4 | 4.3 | 7 | 6 | 4 | 7 | 4.5 | 8 | 3 | 5 |
| 24 | 4.3 | 4.3 | | 5.2 | 4 | 3 | 4.6 | 5.1 | 6.7 | 5 | 5 | 10 | 6.2 | 7 | 3.5 | 9 |
| 25 | 2.2 | 4.8 | 3.2 | 5 | 5 | 5 | 5.3 | 5.1 | 8 | 5 | 5 | 8 | 6.7 | 4 | 1 | 5 |
| 26 | 4.8 | 5.5 | 2.8 | 4 | 2 | 6 | 3.0 | 5.2 | 3 | 7.5 | | 7 | 7 | 6 | 5.5 | 8.5 |
| 27 | 4.9 | 6 | 7 | 4 | | 1 | 3.4 | 6.0 | 5 | 7.8 | 5 | 8.5 | 5.7 | 7 | 4.5 | 8.5 |
| 28 | 4.4 | 4.8 | 3 | 4.2 | 3.5 | | 4.7 | 3.9 | 8 | 7.5 | | 9 | 6.5 | 8.5 | | 8.5 |

ANEXO N° 12: Planilla altura 4

| Planilla de registro de altura en cm 23 de agosto del 2017 | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 5.9 | 10.1 | 7.5 | 13.0 | 4.0 | 10.0 | 2.0 | 8.0 | 8.0 | 24.0 | | 18.0 | 10.3 | 17.5 | 7.0 | 16.5 |
| 2 | 5.1 | 10.7 | 8.5 | 8.0 | 6.0 | 11.0 | 10 | 8.5 | 10.0 | 27.7 | 4.5 | 18.0 | 9.4 | 10.0 | | 15.5 |
| 3 | 8.0 | 8.0 | 6.0 | 15.6 | 6 | 14.5 | 2.5 | 14.6 | 12.0 | 19.0 | 4.5 | 14.0 | 12.5 | 17.1 | | 14.5 |
| 4 | 9.0 | 11.5 | 8.0 | 12.5 | 5 | 10.8 | 9.0 | 11.0 | 14.0 | 22.0 | 6.5 | 21.0 | 5.0 | 16.2 | 9.0 | 13.6 |
| 5 | 7.5 | 8.5 | 4.5 | 8.5 | 10 | 10.5 | 8.0 | 10.2 | 10.5 | 22.5 | | 19.0 | 9.5 | 13.3 | 7.0 | 10.5 |
| 6 | 4.0 | 12.4 | 5.5 | 6.0 | 4.7 | 13.5 | 7.0 | 8.5 | 15.3 | 25.5 | | 13.5 | 9.5 | 12.8 | 6.0 | 15.0 |
| 7 | 9.0 | 8.1 | | 6.5 | 6 | 9.4 | 4.0 | 8.2 | 11.5 | 20.2 | | 19.5 | 9.5 | 13.5 | | 13.7 |
| 8 | 6.6 | 8.5 | 10.0 | 13.0 | 5.0 | 14.5 | 5.2 | 9.0 | 10.0 | 19.0 | 5.0 | 15.0 | 7.6 | 15.5 | 5.0 | 19.5 |
| 9 | 6.0 | 6.5 | 5.0 | 8.5 | 7 | 8.0 | 8.5 | 10.1 | 11.0 | 16.0 | 5.0 | 17.0 | 9.5 | 10.0 | | 19.3 |
| 10 | 8.0 | 10.0 | 4.8 | 6.8 | 8 | 9.0 | 5.6 | 11.0 | 13.5 | 22.2 | | 13.0 | 10.0 | 19.2 | 9.0 | 15.0 |
| 11 | 7.0 | 11.0 | 9.0 | 4.0 | 6.7 | 12.5 | 5.5 | 9.0 | 15.0 | 17.0 | 11.5 | 12.0 | 10.5 | 14.5 | 7.0 | 15.0 |
| 12 | 7.8 | 14.0 | 7.5 | 5.0 | 7 | 9.5 | 5.6 | 11.0 | 9.0 | 21.0 | 8.0 | 24.1 | 9.8 | 12.0 | 7.5 | 13.0 |
| 13 | 8.0 | 12.6 | 3.0 | 13.0 | 6 | 7.0 | 6.2 | 10.3 | 9.5 | 19.8 | 6.0 | 13.0 | 10.3 | 14.0 | 6.0 | 11.5 |
| 14 | 6.5 | 7.3 | 5.0 | 8.3 | 6.2 | 8.5 | 7.0 | 11.5 | 6.8 | 16.5 | | 12.2 | 9.0 | 15.6 | | 20.4 |
| 15 | 5.0 | 9.5 | | 5.2 | 5 | 13.5 | 6.4 | 6.5 | 15.6 | 16.4 | 6.0 | 11.0 | 12.0 | 19.0 | | 9.0 |
| 16 | 6.0 | 11.5 | 8.5 | 7.2 | 6.0 | 10.5 | 6.1 | 4.8 | 11.6 | 19.5 | 5.0 | 13.0 | 7.5 | 16.6 | | 18.0 |
| 17 | 9.0 | 12.2 | 6.2 | 6.6 | 6.5 | 7.0 | 7.7 | 8.1 | 10.8 | 25.6 | 5.5 | 11.1 | 7.0 | 14.5 | 13.8 | 20.4 |
| 18 | 8.0 | 14.1 | 4.1 | 4.0 | 10.0 | 12.0 | 5.4 | 9.5 | 13.3 | 19.8 | 8.0 | 14.8 | 10.2 | 14.3 | | 9.5 |
| 19 | 12.0 | 10.2 | | 6.0 | 9.5 | 17.0 | 5.5 | 9.5 | 11.0 | 18.9 | | 12.5 | 11.5 | 24.2 | 4.0 | 19.5 |
| 20 | 8.5 | 11.0 | | 11.6 | 7.7 | 9.5 | 3.3 | 6.3 | 9.4 | 23.0 | 15.0 | 17.5 | 8.0 | 20.5 | 8.0 | 13.0 |
| 21 | 6.0 | 9.6 | 6.5 | 7.5 | 6 | 13.7 | 7.0 | 7.3 | 8.5 | 22.0 | 6.0 | 11.0 | 8.0 | 18.0 | 11.0 | 24.5 |
| 22 | 8.0 | 11.3 | 6.5 | 9.5 | 4.6 | 8.0 | 9.0 | 8.4 | 8.6 | 28.5 | 7.5 | 14.5 | 9.0 | 16.0 | 7.5 | 17.0 |
| 23 | 11.0 | 8.5 | 3.0 | 5.5 | 9.5 | 9.5 | 3.4 | 8.1 | 10.2 | 18.0 | 7.5 | 21.0 | 9.5 | 16.3 | 7.0 | 11.0 |
| 24 | 7.6 | 10.0 | | 8.5 | 8.1 | 12.5 | 6.3 | 8.5 | 12.0 | 16.5 | | 17.5 | 9.5 | 18.0 | | 20.4 |
| 25 | 10.5 | 7.5 | 4.8 | 9.5 | 6.0 | 9.0 | 8.5 | 8.2 | 15.0 | 15.5 | 8.3 | 15.5 | 8.5 | 9.7 | 10.5 | 11.0 |
| 26 | 6.6 | 8.5 | 8.0 | 7.6 | 5.1 | 11.0 | 6.0 | 8.5 | 11.0 | 15.0 | 8.0 | 16.5 | 8.0 | 13.0 | 4.0 | 15.5 |
| 27 | 7.1 | 9.8 | 7.0 | 6.5 | | 12.0 | 4.0 | 10.0 | 9.0 | 16.7 | 7.8 | 11.0 | 13.0 | 12.5 | 6.0 | 20.0 |
| 28 | 8.5 | 9.7 | | 8.0 | 7.5 | 6.2 | 7.9 | 6.9 | 11.5 | 19.0 | 4.0 | 17.5 | 9.0 | 13.3 | | 10.5 |

ANEXO 13: Planilla altura 5

| Planilla de registro de altura en cm 21 de septiembre del 2017 | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| TRAT | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 13.5 | 12.5 | 12.4 | 11.0 | 18.2 | 22.1 | 32.0 | 31.5 | 14.0 | 6.5 | | 8.0 | 25.0 | 16.5 | 32.0 | 30.7 |
| 2 | 10.0 | 6.5 | 19.8 | 12.0 | 18.8 | 21.1 | 32.0 | 25.5 | 23.0 | 8.0 | 6.5 | | 28.0 | 19.0 | 34.0 | 32.3 |
| 3 | 12.0 | 13.0 | 18.0 | 17.5 | 17.9 | 25.1 | 27.5 | 34.3 | 12.5 | 11.5 | 9.0 | | 30.5 | 29.0 | 31.0 | 31.0 |
| 4 | 20.0 | 8.5 | 14.5 | 15.0 | 21.5 | 24.0 | 28.5 | 30.0 | 12.6 | 12.0 | 15.0 | 19.0 | 27.0 | 25.0 | 34.0 | 25.0 |
| 5 | 14.0 | | 15.2 | 16.0 | 20.5 | 22.0 | 29.2 | 27.0 | 13.5 | 19.0 | | 9.0 | 23.0 | 28.0 | 35.0 | 23.0 |
| 6 | 10.0 | 11.5 | 22.4 | 15.5 | 21.0 | 27.0 | 31.0 | 27.0 | 7.0 | 17.0 | | | 21.0 | 19.0 | 25.0 | 28.0 |
| 7 | 16.7 | | 15.0 | 16.0 | 26.0 | 21.0 | 39.0 | 27.8 | | 4.0 | 5.0 | 17.0 | 18.0 | 22.0 | 30.0 | 26.0 |
| 8 | 9.5 | 10.0 | 13.6 | 16.0 | 15.5 | 22.2 | 38.0 | 26.0 | 26.6 | 7.0 | 5.0 | 8.0 | 26.5 | 21.2 | 30.5 | 34.1 |
| 9 | 13.4 | 8.3 | 17.2 | 16.0 | 23.0 | 16.0 | 39.5 | 24.0 | 5.0 | 20.0 | 5.0 | 26.0 | 24.0 | 26.0 | 31.0 | 34.0 |
| 10 | 10.6 | 7.3 | 21.5 | 14.5 | 17.0 | 21.0 | 34.0 | 41.0 | 15.0 | 13.5 | | 15.0 | 24.0 | 26.0 | 31.5 | 30.6 |
| 11 | 14.0 | 9.0 | 18.0 | 15.0 | 22.5 | 29.5 | 34.5 | 29.0 | 9.0 | | 16.5 | 6.0 | 16.0 | 23.0 | 30.5 | 27.8 |
| 12 | 8.8 | 11.8 | 13.0 | 13.0 | 28.8 | 22.5 | 43.5 | 29.5 | 14.5 | 13.0 | | 9.0 | 20.5 | 27.0 | 35.1 | 28.4 |
| 13 | 13.5 | 7.0 | 11.0 | 13.5 | 26.0 | 17.5 | 37.0 | 30.0 | 3.0 | 15.5 | 6.5 | 11.0 | 27.0 | 22.0 | 26.0 | 26.5 |
| 14 | 10.5 | 9.3 | 10.6 | 13.0 | 19.0 | 18.0 | 32.5 | 29.5 | 16.0 | 18.0 | | 6.0 | 20.0 | 21.5 | 30.0 | 39.0 |
| 15 | 10.0 | | 32.6 | 23.0 | 19.0 | 26.0 | 29.0 | 35.0 | | 18.0 | | | 18.0 | 17.5 | 19.0 | 20.0 |
| 16 | 10.0 | 7.4 | 17.0 | 9.0 | 22.0 | 23.0 | 28.0 | 31.5 | 17.0 | 13.0 | 6.0 | | 23.5 | 8.0 | 30.0 | 33.0 |
| 17 | 16.0 | 13.5 | 15.0 | 9.0 | 23.5 | 15.0 | 37.5 | 27.5 | 17.0 | 17.0 | | 28.0 | 14.0 | 19.5 | 28.5 | 34.0 |
| 18 | 14.0 | 12.8 | 16.0 | 13.0 | 29.0 | 24.0 | 33.5 | 30.0 | | 12.2 | | | 17.0 | 27.0 | 28.5 | 27.0 |
| 19 | 25.6 | 15.0 | 13.5 | 14.5 | 25.0 | 21.0 | 35.0 | 40.0 | | 9.9 | | 6.0 | 19.0 | 22.0 | 27.6 | 27.0 |
| 20 | 17.2 | 13.0 | 13.5 | 14.5 | 18.8 | 23.5 | 30.5 | 37.0 | | 12.5 | 18.5 | 18.5 | 23.5 | 10.0 | 35.2 | 42.0 |
| 21 | 8.0 | 6.0 | 12.0 | 8.5 | 19.0 | 23.5 | 32.7 | 34.0 | 18.0 | 20.5 | 8.0 | 14.0 | 18.0 | 14.5 | 23.0 | 31.0 |
| 22 | 12.0 | 10.0 | 12.0 | 13.0 | 21.5 | 22.0 | 35.1 | 28.5 | 14.0 | 12.5 | 9.0 | 12.0 | 24.8 | 19.3 | 29.5 | 21.5 |
| 23 | 23.0 | 16.0 | 16.5 | 14.0 | 19.0 | 20.2 | 40.5 | 31.0 | 10.0 | 11.0 | | 15.5 | 16.0 | 24.5 | 39.0 | 31.0 |
| 24 | 17.6 | 13.0 | 13.8 | 14.0 | 19.0 | 24.0 | 40.3 | 35.5 | | 16.6 | 5.0 | | 23.0 | 21.5 | 33.0 | 37.0 |
| 25 | 23.0 | 9.0 | 24.5 | 17.0 | 20.0 | 23.0 | 40.0 | 36.0 | 8.5 | 21.0 | 8.5 | 24.0 | 23.3 | 22.5 | 33.0 | 21.5 |
| 26 | 11.0 | 14.0 | 15.0 | 10.0 | 18.8 | 28.0 | 36.0 | 35.5 | 18.5 | 21.2 | 9.5 | | 22.6 | 17.0 | 28.0 | 30.0 |
| 27 | 10.5 | 9.0 | 15.0 | 21.0 | 20.5 | 23.0 | 44.0 | 35.5 | 11.0 | 7.0 | 9.0 | 17.0 | 19.2 | 22.5 | 23.0 | 37.5 |
| 28 | 19.0 | 9.0 | 17.0 | 10.0 | 22.0 | 19.0 | 37.0 | 37.5 | | 15.0 | 10.0 | | 19.8 | 16.5 | 32.8 | 23.0 |

ANEXO 14: Planilla altura 6

| Planilla de registro de altura en cm. 22 de octubre del 2017 | | | | | | | | | | | | | | | | |
|---|------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
| TRAT. | T-0 | | | | T-1 | | | | T-2 | | | | T-3 | | | |
| N° | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 | R1 | R2 | R3 | R4 |
| 1 | 15 | 14 | 15 | 17.5 | 19.05 | 24.6 | 35.2 | 46.5 | 21 | 10 | | 15 | 27.6 | 21.6 | 33.5 | 34.8 |
| 2 | 12.5 | 8 | 21.5 | 19 | 24 | 26.2 | 34 | 45.3 | 25 | 19 | 10 | 22 | 31.5 | 28.2 | 34.8 | 35.8 |
| 3 | 14.6 | 18 | 19.2 | 18 | 23.5 | 28.3 | 31.5 | 40.2 | 20 | 16 | 16 | 33 | 33.5 | 31.5 | 32.5 | 44.3 |
| 4 | 22 | 14.5 | 17 | 16 | 24.5 | 26.7 | 33.2 | 39 | 21 | 25 | 16 | 33 | 36 | 28.4 | 38.6 | 42.3 |
| 5 | 21 | | 18 | 23.5 | 24 | 25.6 | 33.5 | 39 | 28 | 24 | | | 27 | 34 | 40 | 39.5 |
| 6 | 13.8 | 16.3 | 26 | 18 | 26 | 32.2 | 34.4 | 38.2 | 12 | 24 | | 25 | 26 | 23 | 30 | 35 |
| 7 | 19.7 | | 16.5 | 14 | 29 | 24.5 | 41 | 38.2 | | 6 | 16 | | 21.5 | 24 | 35 | 35 |
| 8 | 12 | 11 | 20.2 | 23 | 25.5 | 28.5 | 35 | 38 | 29 | 10 | 13 | | 30 | 26 | 36.4 | 25.8 |
| 9 | 18 | 13 | 24.5 | 23 | 24 | 26 | 41.5 | 37.5 | 11 | 27 | 28 | 15 | 30 | 29 | 34.6 | 42.3 |
| 10 | 13.8 | 14 | 24.5 | 22 | 27 | 27 | 38 | 37 | 22 | 16 | | | 35.2 | 28.5 | 33.3 | 42 |
| 11 | 18 | 15 | 19 | 18 | 24 | 36 | 36 | 37 | 20 | | 17 | | 24 | 27 | 32 | 33 |
| 12 | 9.5 | 12 | 23.6 | 21 | 30.5 | 27 | 45 | 36.7 | 24 | 24 | | 17 | 29.7 | 29.5 | 48.3 | 42 |
| 13 | 20.5 | 10 | 14 | 15 | 28 | 24 | 42 | 35.4 | 10 | 20 | 6.5 | | 29 | 25 | 36.5 | 35.7 |
| 14 | 13.5 | 10 | 14 | 16 | 27 | 23.6 | 37.5 | 35 | 18 | 21 | | | 22.5 | 25.2 | 31.2 | 35 |
| 15 | 13 | | 39 | 12 | 26.5 | 28.5 | 31.5 | 34 | | 20 | | | 26 | 23 | 28.6 | 34.8 |
| 16 | 16.2 | 11 | 22.5 | 18 | 26 | 27 | 32 | 34 | 22 | 20 | 8 | | 28 | 16 | 33 | 31 |
| 17 | 21.5 | 17 | 19.5 | 22.3 | 27.5 | 19.5 | 40 | 33.6 | 22 | 24 | | 15.5 | 24.2 | 24 | 32.6 | 35.3 |
| 18 | 18 | 14 | 20 | 16.5 | 30.5 | 29.5 | 41.2 | 33 | | 24 | | | 28.4 | 28 | 34 | 30 |
| 19 | 29.4 | 18.5 | 15 | 14 | 33 | 33 | 40 | 32.6 | | 15 | | 11.8 | 25.5 | 25.5 | 36 | 30.6 |
| 20 | 21 | 14.5 | 17 | 20.1 | 21.4 | 24.8 | 33 | 32.1 | | 20 | 19 | 21.1 | 25 | 20 | 40 | 40 |
| 21 | 9.5 | 12 | 13 | 22 | 21.1 | 25 | 34.2 | 32 | 24 | 26 | 9.5 | 28 | 21.5 | 21.5 | 28 | 35.4 |
| 22 | 18.5 | 15.5 | 13 | 25 | 23.5 | 24 | 36.6 | 32 | 19 | 26 | 14 | | 27 | 24 | 32.5 | 34.7 |
| 23 | 24 | 18.6 | 19.5 | 25 | 23 | 23 | 44 | 31.4 | 23 | 21 | | | 23.5 | 28 | 42.6 | 40 |
| 24 | 19.5 | 17 | 12 | 17 | 24.4 | 29.5 | 43 | 31 | | 17 | | | 27.2 | 27 | 37 | 36.4 |
| 25 | 26 | 10 | 26.5 | 16 | 25.5 | 31 | 44 | 30.2 | 18 | 25 | 23 | 28 | 26.2 | 24 | 39 | 38.6 |
| 26 | 15.5 | 17 | 18.5 | 20 | 22.8 | 32 | 41.3 | 30 | 26 | 24 | 13 | 26.5 | 27 | 22 | 32 | 38 |
| 27 | 15 | 15 | 15 | 17 | 24 | 25.5 | 49 | 29.6 | 18 | 15 | 10 | 18 | 24 | 23.5 | 28 | 30.6 |
| 28 | 22 | 12 | 18 | 17 | 25 | 19.8 | 40.5 | 28 | | 19 | 9 | 21 | 23 | 20 | 37 | 35 |

ANEXO 15: Resultados de germinación en almacigo

| Semanas | N° de semillas germinadas | Porcentaje de germinación | Capacidad germinativa (%) |
|---------|---------------------------|---------------------------|---------------------------|
| 1 | 28 | 14 | 14 |
| 2 | 68 | 34 | 34 |
| 3 | 52 | 26 | 26 |
| 4 | 15 | 7.5 | 7.5 |
| total | 163 | 81.5 | |

ANEXO N° 16: Clase dimétricas T-1

| CLASE DIAMETRICA | Xi | Frecuencia absoluta | Frecuencia acumulada | Frecuencia acumulada absoluta | Frecuencia acumulada relativa |
|------------------|------|---------------------|----------------------|-------------------------------|-------------------------------|
| 2.10 - 2.26 | 2.1 | 8 | 0.07 | 8 | 0.07 |
| 2.20 - 2.42 | 2.34 | 7 | 0.06 | 15 | 0.13 |
| 2.42 - 2.58 | 2.5 | 11 | 0.10 | 26 | 0.23 |
| 2.58 - 2.74 | 2.66 | 14 | 0.13 | 40 | 0.36 |
| 2.74 - 2.90 | 2.82 | 17 | 0.15 | 57 | 0.51 |
| 2.90 - 3.06 | 2.98 | 10 | 0.09 | 67 | 0.60 |
| 3.06 - 3.22 | 3.14 | 23 | 0.21 | 90 | 0.80 |
| 3.22 - 3.38 | 3.3 | 9 | 0.08 | 99 | 0.88 |
| 3.38 - 3.54 | 3.46 | 6 | 0.05 | 105 | 0.94 |
| 3.54 - 3.70 | 3.62 | 4 | 0.04 | 109 | 0.97 |
| 3.70 - 3.85 | 3.78 | 3 | 0.03 | 112 | 1.00 |
| TOTAL | | 112 | 1.00 | | |

ANEXO N° 17: Clase dimétricas T-2

| CLASE DIAMETRICA | Xi | frecuencia absoluta | frecuencia acumulada | fr acumulada absoluta | fr acumulada relativa |
|------------------|-----|---------------------|----------------------|-----------------------|-----------------------|
| 1 - 1.27 | 1.1 | 3 | 0.04 | 3 | 0.04 |
| 1.27 - 1.54 | 1.4 | 7 | 0.09 | 10 | 0.13 |
| 1.54 - 1.81 | 1.7 | 14 | 0.18 | 24 | 0.32 |
| 1.81 - 2.08 | 1.9 | 11 | 0.14 | 35 | 0.46 |
| 2.08 - 2.08 | 2.2 | 16 | 0.21 | 51 | 0.67 |
| 2.35 - 2.62 | 2.5 | 11 | 0.14 | 62 | 0.82 |
| 2.62 - 2.89 | 2.8 | 8 | 0.11 | 70 | 0.92 |
| 2.89 - 3.16 | 3.0 | 5 | 0.07 | 75 | 0.99 |
| 3.16 - 3.43 | 3.3 | 1 | 0.01 | 76 | 1.00 |
| TOTAL | | 76 | 1 | | |

ANEXO N° 18: Clase dimétricas T-3

| CLASE DIAMETRICA | Xi | frecuencia absoluta | frecuencia acumulada | Fr acumulada absoluta | Fr acumulada relativa |
|------------------|------|---------------------|----------------------|-----------------------|-----------------------|
| 1.57 - 1.81 | 1.81 | 1 | 0.01 | 1 | 0.01 |
| 1.81 - 2.02 | 2.02 | 3 | 0.03 | 4 | 0.04 |
| 2.02 - 2.23 | 2.23 | 2 | 0.02 | 6 | 0.05 |
| 2.23 - 2.44 | 2.44 | 12 | 0.11 | 18 | 0.16 |
| 2.44 - 2.65 | 2.65 | 23 | 0.21 | 41 | 0.37 |
| 2.65 - 2.86 | 2.86 | 20 | 0.18 | 61 | 0.54 |
| 2.86 - 3.07 | 3.07 | 27 | 0.24 | 88 | 0.79 |
| 3.07 - 3.28 | 3.28 | 15 | 0.13 | 103 | 0.92 |
| 3.28 - 3.49 | 3.49 | 5 | 0.04 | 108 | 0.96 |
| 3.49 - 3.70 | 3.7 | 3 | 0.03 | 111 | 0.99 |
| 3.70 - 3.91 | 3.91 | 1 | 0.01 | 112 | 1.00 |
| TOTAL | | 112 | 1.00 | | |

ANEXO N° 20: Labores culturales

| cronograma de fumigación y deshierbes | | | | | |
|---------------------------------------|-------------|-------------|-------------------|------------|------------------|
| siembra 11 de abril 2017 | | | | | |
| N° | fecha | insecticida | solución | deshierbes | fechas |
| 1 | 17 de abril | Maxim | 20ml/10litros H2O | 1 | 18 de mayo |
| 2 | 24 de abril | Maxim | 20ml/10litros H2O | 2 | 30 de mayo |
| 3 | 2 de mayo | Maxim | 20ml/10litros H2O | 3 | 30 de junio |
| 4 | 9 de mayo | Maxim | 20ml/10litros H2O | 4 | 28 d julio |
| 5 | 16 de mayo | Maxim | 20ml/10litros H2O | 5 | 9 de agosto |
| 6 | 24 de mayo | Maxim | 20ml/10litros H2O | 6 | 22 de agosto |
| 7 | 31 de mayo | Maxim | 20ml/10litros H2O | 7 | 31 de agosto |
| 8 | 7 de junio | Maxim | 20ml/10litros H2O | 8 | 8 de septiembre |
| | | | | 9 | 19 de septiembre |
| | | | | 10 | 30 de septiembre |
| | | | | 11 | 7 de octubre |
| | | | | 12 | 12 de octubre |
| | | | | 13 | 19 de octubre |

ANEXO N° 19: Selección de semilleros



ANEXO N° 20: Vainas de algarrobo blanco prosopis alba griseb



ANEXO N° 21: Selección de semillas



ANEXO N° 22: Desinfección de semillas con MAXIM



ANEXO N° 23: Pesaje de semillas y pureza



ANEXO N° 25: Preparación de almacigo en el vivero



ANEXO N° 24: Germinación en almacigo



ANEXO N° 26: Tierra vegetal (T-0)



ANEXO N° 27: Cascarrilla de girasol (T-1)



ANEXO N° 29: Gallinaza (T-2)



ANEXO N° 28: Lodo residual (T-3)



ANEXO N° 30: Desinfección de sustratos



ANEXO N° 31: MAXIM insecticida para semillas



ANEXO N° 33: ATARA insecticida para sustratos



ANEXO N° 32: Llenado de tubetes



ANEXO N° 35: Sorteo de las unidades experimentales



ANEXO N° 34: Ubicación de las unidades experimentales



ANEXO N° 36: Planta de aguas y sedimento residual



ANEXO N° 37: Germinación en las bandejas



ANEXO N° 38: Doble germinación en los tubetes



ANEXO N° 39: Codificación de unidades experimentales



ANEXO N° 40: Unidades experimentales codificadas



ANEXO N° 41: Crecimiento en altura



ANEXO N° 42: Registro de plantón muerto



ANEXO N° 43: Deshierbes



ANEXO N° 45: Eliminación del segundo plantón



ANEXO N° 44 Regadera utilizada 5 litros



ANEXO N° 47: Riego de plántones



ANEXO N° 46: Medición de alturas

