# LAMPIRAN

## Lampiran 1. Data Januari – Mei 2026

| Januari | | | |
|---|---|---|---|
| **Hari** | **Tanggal** | **Total kecambah yang di periksa(n)** | **Kecambah cacat (d)** |
| 1 | 02/01/2026 | 7.261 | 218 |
| 2 | 03/01/2026 | 11.463 | 242 |
| 3 | 05/01/2026 | 15.813 | 182 |
| 4 | 06/01/2026 | 14.422 | 133 |
| 5 | 07/01/2026 | 14.792 | 76 |
| 6 | 08/01/2026 | 19.812 | 661 |
| 7 | 09/01/2026 | 8.277 | 666 |
| 8 | 10/01/2026 | 10.570 | 734 |
| 9 | 12/01/2026 | 14.860 | 603 |
| 10 | 13/01/2026 | 17.144 | 411 |
| 11 | 14/01/2026 | 17.315 | 86 |
| 12 | 15/01/2026 | 9.601 | 663 |
| 13 | 17/01/2026 | 19.092 | 220 |
| 14 | 19/01/2026 | 14.295 | 276 |
| 15 | 20/01/2026 | 12.020 | 488 |
| 16 | 21/01/2026 | 10.743 | 454 |
| 17 | 22/01/2026 | 16.942 | 79 |
| 18 | 23/01/2026 | 7.277 | 112 |
| 19 | 24/01/2026 | 12.853 | 176 |
| 20 | 26/01/2026 | 17.533 | 250 |
| 21 | 27/01/2026 | 15.265 | 1.355 |
| 22 | 28/01/2026 | 11.446 | 1.039 |
| 23 | 29/01/2026 | 11.619 | 501 |
| 24 | 30/01/2026 | 4.051 | 639 |
| 25 | 31/01/2026 | 11.887 | 1.062 |
| Total | | 326.353 | 11.326 |

| Maret | | | |
|---|---|---|---|
| **Hari** | **Tanggal** | **Total kecambah yang di periksa(n)** | **Kecambah cacat (d)** |
| 1 | 02/03/2026 | 6.686 | 880 |
| 2 | 03/03/2026 | 9.123 | 52 |
| 3 | 04/03/2026 | 6.110 | 515 |
| 4 | 05/03/2026 | 6.264 | 805 |
| 5 | 06/03/2026 | 6.978 | 363 |
| 6 | 07/03/2026 | 11.064 | 165 |
| 7 | 09/03/2026 | 12.791 | 423 |
| 8 | 10/03/2026 | 12.417 | 1.130 |
| 9 | 11/03/2026 | 6.406 | 527 |
| 10 | 12/03/2026 | 3.012 | 335 |
| 11 | 13/03/2026 | 6.507 | 308 |
| 12 | 14/03/2026 | 10.129 | 816 |
| 13 | 16/03/2026 | 8.591 | 1.294 |
| 14 | 17/03/2026 | 8.769 | 579 |
| 15 | 18/03/2026 | 8.464 | 589 |
| 16 | 24/03/2026 | 6.123 | 978 |
| 17 | 25/03/2026 | 10.269 | 2.079 |
| 18 | 26/03/2026 | 8.131 | 991 |
| 19 | 27/03/2026 | 4.930 | 625 |
| 20 | 28/03/2026 | 5.315 | 433 |
| 21 | 30/03/2026 | 4.041 | 723 |
| 22 | 31/03/2026 | 3.799 | 649 |
| Total | | 165.919 | 15.259 |

| Februari | | | |
|---|---|---|---|
| **Hari** | **Tanggal** | **Total kecambah yang di periksa(n)** | **Kecambah cacat (d)** |
| 1 | 02/02/2026 | 7.599 | 718 |
| 2 | 03/02/2026 | 10.564 | 107 |
| 3 | 04/02/2026 | 15.979 | 52 |
| 4 | 05/02/2026 | 16.890 | 40 |
| 5 | 06/02/2026 | 9.314 | 59 |
| 6 | 07/02/2026 | 17.482 | 302 |
| 7 | 09/02/2026 | 16.021 | 692 |
| 8 | 10/02/2026 | 17.904 | 240 |
| 9 | 11/02/2026 | 14.448 | 168 |
| 10 | 12/02/2026 | 13.908 | 236 |
| 11 | 13/02/2026 | 5.546 | 561 |
| 12 | 14/02/2026 | 13.142 | 719 |
| 13 | 18/02/2026 | 11.768 | 402 |
| 14 | 19/02/2026 | 9.404 | 584 |
| 15 | 20/02/2026 | 6.948 | 491 |
| 16 | 21/02/2026 | 15.167 | 573 |
| 17 | 23/02/2026 | 13.694 | 832 |
| 18 | 24/02/2026 | 12.551 | 907 |
| 19 | 25/02/2026 | 10.548 | 743 |
| 20 | 26/02/2026 | 10.232 | 636 |
| 21 | 27/02/2026 | 7.559 | 550 |
| 22 | 28/02/2026 | 8.943 | 911 |
| Total | | 265.611 | 10.523 |

| April | | | |
|---|---|---|---|
| **Hari** | **Tanggal** | **Total kecambah yang di periksa(d)** | **Kecambah cacat (n)** |
| 1 | 01/04/2026 | 6.866 | 288 |
| 2 | 02/04/2026 | 7.837 | 330 |
| 3 | 04/04/2026 | 11.103 | 47 |
| 4 | 06/04/2026 | 18.109 | 903 |
| 5 | 07/04/2026 | 8.556 | 1.521 |
| 6 | 08/04/2026 | 6.922 | 433 |
| 7 | 09/04/2026 | 8.189 | 126 |
| 8 | 10/04/2026 | 5.408 | 579 |
| 9 | 13/04/2026 | 11.699 | 1.433 |
| 10 | 14/04/2026 | 8.460 | 953 |
| 11 | 18/04/2026 | 17.583 | 719 |
| 12 | 20/04/2026 | 11.303 | 93 |
| 13 | 21/04/2026 | 6.088 | 1512 |
| 14 | 22/04/2026 | 12.001 | 84 |
| 15 | 23/04/2026 | 12.541 | 1.507 |
| 16 | 24/04/2026 | 6.575 | 275 |
| 17 | 25/04/2026 | 9.777 | 212 |
| 18 | 27/04/2026 | 15.030 | 385 |
| 19 | 28/04/2026 | 9.142 | 556 |
| Total | | 193.189 | 11.956 |

**Mei**

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) |
|---|---|---|---|
| 1 | 02/05/2026 | 11.008 | 656 |
| 2 | 04/05/2026 | 13.560 | 583 |
| 3 | 05/05/2026 | 10.772 | 378 |
| 4 | 06/05/2026 | 6.583 | 683 |
| 5 | 07/05/2026 | 9.159 | 130 |
| 6 | 08/05/2026 | 3.259 | 109 |
| 7 | 09/05/2026 | 9.852 | 402 |
| 8 | 11/05/2026 | 20.650 | 628 |
| 9 | 12/05/2026 | 17.184 | 279 |
| 10 | 13/05/2026 | 12.065 | 95 |
| 13 | 16/05/2026 | 18.215 | 566 |
| 14 | 18/05/2026 | 9.077 | 520 |
| 15 | 19/05/2026 | 6.980 | 1.040 |
| 16 | 20/05/2026 | 10.025 | 575 |
| 17 | 21/05/2026 | 6.175 | 369 |
| 20 | 25/05/2026 | 11.800 | 903 |
| 21 | 26/05/2026 | 3.693 | 417 |
| 24 | 29/05/2026 | 9.204 | 254 |
| 25 | 30/05/2026 | 5.997 | 380 |
| Total | | 195.258 | 8.967 |

## Lampiran 2. Data Rekapitulasi / *Check sheet*

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) |
|---|---|---|---|
| 1 | 02/01/2026 | 7.261 | 218 |
| 2 | 03/01/2026 | 11.463 | 242 |
| 3 | 05/01/2026 | 15.813 | 182 |
| 4 | 06/01/2026 | 14.422 | 133 |
| 5 | 07/01/2026 | 14.792 | 76 |
| 6 | 08/01/2026 | 19.812 | 661 |
| 7 | 09/01/2026 | 8.277 | 666 |
| 8 | 10/01/2026 | 10.570 | 734 |
| 9 | 12/01/2026 | 14.860 | 603 |
| 10 | 13/01/2026 | 17.144 | 411 |
| 11 | 14/01/2026 | 17.315 | 86 |
| 12 | 15/01/2026 | 9.601 | 663 |
| 13 | 17/01/2026 | 19.092 | 220 |
| 14 | 19/01/2026 | 14.295 | 276 |
| 15 | 20/01/2026 | 12.020 | 488 |

**Lampiran 2. Data Rekapitulasi / *Check sheet***

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) |
|---|---|---|---|
| 16 | 21/01/2026 | 10.743 | 454 |
| 17 | 22/01/2026 | 16.942 | 79 |
| 18 | 23/01/2026 | 7.277 | 112 |
| 19 | 24/01/2026 | 12.853 | 176 |
| 20 | 26/01/2026 | 17.533 | 250 |
| 21 | 27/01/2026 | 15.265 | 1.355 |
| 22 | 28/01/2026 | 11.446 | 1.039 |
| 23 | 29/01/2026 | 11.619 | 501 |
| 24 | 30/01/2026 | 4.051 | 639 |
| 25 | 31/01/2026 | 11.887 | 1.062 |
| 26 | 02/02/2026 | 7.599 | 718 |
| 27 | 03/02/2026 | 10.564 | 107 |
| 28 | 04/02/2026 | 15.979 | 52 |
| 29 | 05/02/2026 | 16.890 | 40 |
| 30 | 06/02/2026 | 9.314 | 59 |
| 31 | 07/02/2026 | 17.482 | 302 |
| 32 | 09/02/2026 | 16.021 | 692 |
| 33 | 10/02/2026 | 17.904 | 240 |
| 34 | 11/02/2026 | 14.448 | 168 |
| 35 | 12/02/2026 | 13.908 | 236 |
| 36 | 13/02/2026 | 5.546 | 561 |
| 37 | 14/02/2026 | 13.142 | 719 |
| 38 | 18/02/2026 | 11.768 | 402 |
| 39 | 19/02/2026 | 9.404 | 584 |
| 40 | 20/02/2026 | 6.948 | 491 |
| 41 | 21/02/2026 | 15.167 | 573 |
| 42 | 23/02/2026 | 13.694 | 832 |
| 43 | 24/02/2026 | 12.551 | 907 |
| 44 | 25/02/2026 | 10.548 | 743 |
| 45 | 26/02/2026 | 10.232 | 636 |
| 46 | 27/02/2026 | 7.559 | 550 |
| 47 | 28/02/2026 | 8.943 | 911 |
| 48 | 02/03/2026 | 6.686 | 880 |
| 49 | 03/03/2026 | 9.123 | 52 |
| 50 | 04/03/2026 | 6.110 | 515 |
| 51 | 05/03/2026 | 6.264 | 805 |
| 52 | 06/03/2026 | 6.978 | 363 |
| 53 | 07/03/2026 | 11.064 | 165 |
| 54 | 09/03/2026 | 12.791 | 423 |
| 55 | 10/03/2026 | 12.417 | 1.130 |
| 56 | 11/03/2026 | 6.406 | 527 |

**Lampiran 2. Data Rekapitulasi / *Check sheet***

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) |
|---|---|---|---|
| 57 | 12/03/2026 | 3.012 | 335 |
| 58 | 13/03/2026 | 6.507 | 308 |
| 59 | 14/03/2026 | 10.129 | 816 |
| 60 | 16/03/2026 | 8.591 | 1.294 |
| 61 | 17/03/2026 | 8.769 | 579 |
| 62 | 18/03/2026 | 8.464 | 589 |
| 63 | 24/03/2026 | 6.123 | 978 |
| 64 | 25/03/2026 | 10.269 | 2.079 |
| 65 | 26/03/2026 | 8.131 | 991 |
| 66 | 27/03/2026 | 4.930 | 625 |
| 67 | 28/03/2026 | 5.315 | 433 |
| 68 | 30/03/2026 | 4.041 | 723 |
| 69 | 31/03/2026 | 3.799 | 649 |
| 70 | 01/04/2026 | 6.866 | 288 |
| 71 | 02/04/2026 | 7.837 | 330 |
| 72 | 04/04/2026 | 11.103 | 47 |
| 73 | 06/04/2026 | 18.109 | 903 |
| 74 | 07/04/2026 | 8.556 | 1.521 |
| 75 | 08/04/2026 | 6.922 | 433 |
| 76 | 09/04/2026 | 8.189 | 126 |
| 77 | 10/04/2026 | 5.408 | 579 |
| 78 | 13/04/2026 | 11.699 | 1.433 |
| 79 | 14/04/2026 | 8.460 | 953 |
| 80 | 18/04/2026 | 17.583 | 719 |
| 81 | 20/04/2026 | 11.303 | 93 |
| 82 | 21/04/2026 | 6.088 | 1512 |
| 83 | 22/04/2026 | 12.001 | 84 |
| 84 | 23/04/2026 | 12.541 | 1.507 |
| 85 | 24/04/2026 | 6.575 | 275 |
| 86 | 25/04/2026 | 9.777 | 212 |
| 87 | 27/04/2026 | 15.030 | 385 |
| 88 | 28/04/2026 | 9.142 | 556 |
| 89 | 02/05/2026 | 11.008 | 656 |
| 90 | 04/05/2026 | 13.560 | 583 |
| 91 | 05/05/2026 | 10.772 | 378 |
| 92 | 06/05/2026 | 6.583 | 683 |
| 93 | 07/05/2026 | 9.159 | 130 |
| 94 | 08/05/2026 | 3.259 | 109 |
| 95 | 09/05/2026 | 9.852 | 402 |
| 96 | 11/05/2026 | 20.650 | 628 |
| 97 | 12/05/2026 | 17.184 | 279 |

## Lampiran 2. Data Rekapitulasi / *Check sheet*

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) |
|---|---|---|---|
| 98 | 13/05/2026 | 12.065 | 95 |
| 99 | 16/05/2026 | 18.215 | 566 |
| 100 | 18/05/2026 | 9.077 | 520 |
| 101 | 19/05/2026 | 6.980 | 1.040 |
| 102 | 20/05/2026 | 10.025 | 575 |
| 103 | 21/05/2026 | 6.175 | 369 |
| 104 | 25/05/2026 | 11.800 | 903 |
| 105 | 26/05/2026 | 3.693 | 417 |
| 106 | 29/05/2026 | 9.204 | 254 |
| 107 | 30/05/2026 | 5.997 | 380 |
| **Total** | | 1.146.330 | 58.031 |

## Lampiran 3. Data Perhitungan *Statistical Process Control*

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) | p | CL | UCL | LCL |
|---|---|---|---|---|---|---|---|
| 1 | 02/01/2026 | 7.261 | 218 | 0,0300 | 0,0506 | 0,0583 | 0,0429 |
| 2 | 03/01/2026 | 11.463 | 242 | 0,0211 | 0,0506 | 0,0568 | 0,0445 |
| 3 | 05/01/2026 | 15.813 | 182 | 0,0115 | 0,0506 | 0,0559 | 0,0454 |
| 4 | 06/01/2026 | 14.422 | 133 | 0,0092 | 0,0506 | 0,0561 | 0,0451 |
| 5 | 07/01/2026 | 14.792 | 76 | 0,0051 | 0,0506 | 0,0560 | 0,0452 |
| 6 | 08/01/2026 | 19.812 | 661 | 0,0334 | 0,0506 | 0,0553 | 0,0460 |
| 7 | 09/01/2026 | 8.277 | 666 | 0,0805 | 0,0506 | 0,0579 | 0,0434 |
| 8 | 10/01/2026 | 10.570 | 734 | 0,0694 | 0,0506 | 0,0570 | 0,0442 |
| 9 | 12/01/2026 | 14.860 | 603 | 0,0406 | 0,0506 | 0,0560 | 0,0452 |
| 10 | 13/01/2026 | 17.144 | 411 | 0,0240 | 0,0506 | 0,0556 | 0,0456 |
| 11 | 14/01/2026 | 17.315 | 86 | 0,0050 | 0,0506 | 0,0556 | 0,0456 |
| 12 | 15/01/2026 | 9.601 | 663 | 0,0691 | 0,0506 | 0,0573 | 0,0439 |
| 13 | 17/01/2026 | 19.092 | 220 | 0,0115 | 0,0506 | 0,0554 | 0,0459 |
| 14 | 19/01/2026 | 14.295 | 276 | 0,0193 | 0,0506 | 0,0561 | 0,0451 |
| 15 | 20/01/2026 | 12.020 | 488 | 0,0406 | 0,0506 | 0,0566 | 0,0446 |
| 16 | 21/01/2026 | 10.743 | 454 | 0,0423 | 0,0506 | 0,0570 | 0,0443 |
| 17 | 22/01/2026 | 16.942 | 79 | 0,0047 | 0,0506 | 0,0557 | 0,0456 |
| 18 | 23/01/2026 | 7.277 | 112 | 0,0154 | 0,0506 | 0,0583 | 0,0429 |
| 19 | 24/01/2026 | 12.853 | 176 | 0,0137 | 0,0506 | 0,0564 | 0,0448 |
| 20 | 26/01/2026 | 17.533 | 250 | 0,0143 | 0,0506 | 0,0556 | 0,0457 |
| 21 | 27/01/2026 | 15.265 | 1.355 | 0,0888 | 0,0506 | 0,0559 | 0,0453 |

**Lampiran 3. Data Perhitungan *Statistical Process Control***

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) | p | CL | UCL | LCL |
|---|---|---|---|---|---|---|---|
| 22 | 28/01/2026 | 11.446 | 1.039 | 0,0908 | 0,0506 | 0,0568 | 0,0445 |
| 23 | 29/01/2026 | 11.619 | 501 | 0,0431 | 0,0506 | 0,0567 | 0,0445 |
| 24 | 30/01/2026 | 4.051 | 639 | 0,1577 | 0,0506 | 0,0610 | 0,0403 |
| 25 | 31/01/2026 | 11.887 | 1.062 | 0,0893 | 0,0506 | 0,0567 | 0,0446 |
| 26 | 02/02/2026 | 7.599 | 718 | 0,0945 | 0,0506 | 0,0582 | 0,0431 |
| 27 | 03/02/2026 | 10.564 | 107 | 0,0101 | 0,0506 | 0,0570 | 0,0442 |
| 28 | 04/02/2026 | 15.979 | 52 | 0,0033 | 0,0506 | 0,0558 | 0,0454 |
| 29 | 05/02/2026 | 16.890 | 40 | 0,0024 | 0,0506 | 0,0557 | 0,0456 |
| 30 | 06/02/2026 | 9.314 | 59 | 0,0063 | 0,0506 | 0,0574 | 0,0438 |
| 31 | 07/02/2026 | 17.482 | 302 | 0,0173 | 0,0506 | 0,0556 | 0,0456 |
| 32 | 09/02/2026 | 16.021 | 692 | 0,0432 | 0,0506 | 0,0558 | 0,0454 |
| 33 | 10/02/2026 | 17.904 | 240 | 0,0134 | 0,0506 | 0,0555 | 0,0457 |
| 34 | 11/02/2026 | 14.448 | 168 | 0,0116 | 0,0506 | 0,0561 | 0,0452 |
| 35 | 12/02/2026 | 13.908 | 236 | 0,0170 | 0,0506 | 0,0562 | 0,0450 |
| 36 | 13/02/2026 | 5.546 | 561 | 0,1012 | 0,0506 | 0,0595 | 0,0418 |
| 37 | 14/02/2026 | 13.142 | 719 | 0,0547 | 0,0506 | 0,0564 | 0,0449 |
| 38 | 18/02/2026 | 11.768 | 402 | 0,0342 | 0,0506 | 0,0567 | 0,0446 |
| 39 | 19/02/2026 | 9.404 | 584 | 0,0621 | 0,0506 | 0,0574 | 0,0438 |
| 40 | 20/02/2026 | 6.948 | 491 | 0,0707 | 0,0506 | 0,0585 | 0,0427 |
| 41 | 21/02/2026 | 15.167 | 573 | 0,0378 | 0,0506 | 0,0560 | 0,0453 |
| 42 | 23/02/2026 | 13.694 | 832 | 0,0608 | 0,0506 | 0,0562 | 0,0450 |
| 43 | 24/02/2026 | 12.551 | 907 | 0,0723 | 0,0506 | 0,0565 | 0,0448 |
| 44 | 25/02/2026 | 10.548 | 743 | 0,0704 | 0,0506 | 0,0570 | 0,0442 |
| 45 | 26/02/2026 | 10.232 | 636 | 0,0622 | 0,0506 | 0,0571 | 0,0441 |
| 46 | 27/02/2026 | 7.559 | 550 | 0,0728 | 0,0506 | 0,0582 | 0,0431 |
| 47 | 28/02/2026 | 8.943 | 911 | 0,1019 | 0,0506 | 0,0576 | 0,0437 |
| 48 | 02/03/2026 | 6.686 | 880 | 0,1316 | 0,0506 | 0,0587 | 0,0426 |
| 49 | 03/03/2026 | 9.123 | 52 | 0,0057 | 0,0506 | 0,0575 | 0,0437 |
| 50 | 04/03/2026 | 6.110 | 515 | 0,0843 | 0,0506 | 0,0590 | 0,0422 |
| 51 | 05/03/2026 | 6.264 | 805 | 0,1285 | 0,0506 | 0,0589 | 0,0423 |
| 52 | 06/03/2026 | 6.978 | 363 | 0,0520 | 0,0506 | 0,0585 | 0,0428 |
| 53 | 07/03/2026 | 11.064 | 165 | 0,0149 | 0,0506 | 0,0569 | 0,0444 |
| 54 | 09/03/2026 | 12.791 | 423 | 0,0331 | 0,0506 | 0,0564 | 0,0448 |
| 55 | 10/03/2026 | 12.417 | 1.130 | 0,0910 | 0,0506 | 0,0565 | 0,0447 |
| 56 | 11/03/2026 | 6.406 | 527 | 0,0823 | 0,0506 | 0,0588 | 0,0424 |
| 57 | 12/03/2026 | 3.012 | 335 | 0,1112 | 0,0506 | 0,0626 | 0,0386 |
| 58 | 13/03/2026 | 6.507 | 308 | 0,0473 | 0,0506 | 0,0588 | 0,0425 |
| 59 | 14/03/2026 | 10.129 | 816 | 0,0806 | 0,0506 | 0,0572 | 0,0441 |
| 60 | 16/03/2026 | 8.591 | 1.294 | 0,1506 | 0,0506 | 0,0577 | 0,0435 |
| 61 | 17/03/2026 | 8.769 | 579 | 0,0660 | 0,0506 | 0,0576 | 0,0436 |

**Lampiran 3. Data Perhitungan *Statistical Process Control***

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) | p | CL | UCL | LCL |
|---|---|---|---|---|---|---|---|
| 62 | 18/03/2026 | 8.464 | 589 | 0,0696 | 0,0506 | 0,0578 | 0,0435 |
| 63 | 24/03/2026 | 6.123 | 978 | 0,1597 | 0,0506 | 0,0590 | 0,0422 |
| 64 | 25/03/2026 | 10.269 | 2.079 | 0,2025 | 0,0506 | 0,0571 | 0,0441 |
| 65 | 26/03/2026 | 8.131 | 991 | 0,1219 | 0,0506 | 0,0579 | 0,0433 |
| 66 | 27/03/2026 | 4.930 | 625 | 0,1268 | 0,0506 | 0,0600 | 0,0413 |
| 67 | 28/03/2026 | 5.315 | 433 | 0,0815 | 0,0506 | 0,0596 | 0,0416 |
| 68 | 30/03/2026 | 4.041 | 723 | 0,1789 | 0,0506 | 0,0610 | 0,0403 |
| 69 | 31/03/2026 | 3.799 | 649 | 0,1708 | 0,0506 | 0,0613 | 0,0400 |
| 70 | 01/04/2026 | 6.866 | 288 | 0,0419 | 0,0506 | 0,0586 | 0,0427 |
| 71 | 02/04/2026 | 7.837 | 330 | 0,0421 | 0,0506 | 0,0581 | 0,0432 |
| 72 | 04/04/2026 | 11.103 | 47 | 0,0042 | 0,0506 | 0,0569 | 0,0444 |
| 73 | 06/04/2026 | 18.109 | 903 | 0,0499 | 0,0506 | 0,0555 | 0,0457 |
| 74 | 07/04/2026 | 8.556 | 1.521 | 0,1778 | 0,0506 | 0,0577 | 0,0435 |
| 75 | 08/04/2026 | 6.922 | 433 | 0,0626 | 0,0506 | 0,0585 | 0,0427 |
| 76 | 09/04/2026 | 8.189 | 126 | 0,0154 | 0,0506 | 0,0579 | 0,0434 |
| 77 | 10/04/2026 | 5.408 | 579 | 0,1071 | 0,0506 | 0,0596 | 0,0417 |
| 78 | 13/04/2026 | 11.699 | 1.433 | 0,1225 | 0,0506 | 0,0567 | 0,0445 |
| 79 | 14/04/2026 | 8.460 | 953 | 0,1126 | 0,0506 | 0,0578 | 0,0435 |
| 80 | 18/04/2026 | 17.583 | 719 | 0,0409 | 0,0506 | 0,0556 | 0,0457 |
| 81 | 20/04/2026 | 11.303 | 93 | 0,0082 | 0,0506 | 0,0568 | 0,0444 |
| 82 | 21/04/2026 | 6.088 | 1512 | 0,2484 | 0,0506 | 0,0591 | 0,0422 |
| 83 | 22/04/2026 | 12.001 | 84 | 0,0070 | 0,0506 | 0,0566 | 0,0446 |
| 84 | 23/04/2026 | 12.541 | 1.507 | 0,1202 | 0,0506 | 0,0565 | 0,0448 |
| 85 | 24/04/2026 | 6.575 | 275 | 0,0418 | 0,0506 | 0,0587 | 0,0425 |
| 86 | 25/04/2026 | 9.777 | 212 | 0,0217 | 0,0506 | 0,0573 | 0,0440 |
| 87 | 27/04/2026 | 15.030 | 385 | 0,0256 | 0,0506 | 0,0560 | 0,0453 |
| 88 | 28/04/2026 | 9.142 | 556 | 0,0608 | 0,0506 | 0,0575 | 0,0437 |
| 89 | 02/05/2026 | 11.008 | 656 | 0,0596 | 0,0506 | 0,0569 | 0,0444 |
| 90 | 04/05/2026 | 13.560 | 583 | 0,0430 | 0,0506 | 0,0563 | 0,0450 |
| 91 | 05/05/2026 | 10.772 | 378 | 0,0351 | 0,0506 | 0,0570 | 0,0443 |
| 92 | 06/05/2026 | 6.583 | 683 | 0,1038 | 0,0506 | 0,0587 | 0,0425 |
| 93 | 07/05/2026 | 9.159 | 130 | 0,0142 | 0,0506 | 0,0575 | 0,0438 |
| 94 | 08/05/2026 | 3.259 | 109 | 0,0334 | 0,0506 | 0,0621 | 0,0391 |
| 95 | 09/05/2026 | 9.852 | 402 | 0,0408 | 0,0506 | 0,0572 | 0,0440 |
| 96 | 11/05/2026 | 20.650 | 628 | 0,0304 | 0,0506 | 0,0552 | 0,0460 |
| 97 | 12/05/2026 | 17.184 | 279 | 0,0162 | 0,0506 | 0,0556 | 0,0456 |
| 98 | 13/05/2026 | 12.065 | 95 | 0,0079 | 0,0506 | 0,0566 | 0,0446 |
| 99 | 16/05/2026 | 18.215 | 566 | 0,0311 | 0,0506 | 0,0555 | 0,0458 |
| 100 | 18/05/2026 | 9.077 | 520 | 0,0573 | 0,0506 | 0,0575 | 0,0437 |
| 101 | 19/05/2026 | 6.980 | 1.040 | 0,1490 | 0,0506 | 0,0585 | 0,0428 |

## Lampiran 3. Data Perhitungan *Statistical Process Control*

| Hari | Tanggal | Total kecambah yang diperiksa(n) | Kecambah cacat (d) | p | CL | UCL | LCL |
|---|---|---|---|---|---|---|---|
| 102 | 20/05/2026 | 10.025 | 575 | 0,0574 | 0,0506 | 0,0572 | 0,0441 |
| 103 | 21/05/2026 | 6.175 | 369 | 0,0598 | 0,0506 | 0,0590 | 0,0423 |
| 104 | 25/05/2026 | 11.800 | 903 | 0,0765 | 0,0506 | 0,0567 | 0,0446 |
| 105 | 26/05/2026 | 3.693 | 417 | 0,1129 | 0,0506 | 0,0614 | 0,0398 |
| 106 | 29/05/2026 | 9.204 | 254 | 0,0276 | 0,0506 | 0,0575 | 0,0438 |
| 107 | 30/05/2026 | 5.997 | 380 | 0,0634 | 0,0506 | 0,0591 | 0,0421 |
| **Total** | | 1.146.330 | 58.031 | 6,5709 | 0,0506 | 6,1423 | 4,6911 |

## Lampiran 4. Data *Out Of Control*

| No | Tanggal | n | d | p | UCL | LCL | Keterangan |
|---|---|---|---|---|---|---|---|
| 1 | 02/01/2026 | 7.261 | 218 | 0,0300 | 0,0583 | 0,0429 | Di bawah LCL |
| 2 | 03/01/2026 | 11.463 | 242 | 0,0211 | 0,0568 | 0,0445 | Di bawah LCL |
| 3 | 05/01/2026 | 15.813 | 182 | 0,0115 | 0,0559 | 0,0454 | Di bawah LCL |
| 4 | 06/01/2026 | 14.422 | 133 | 0,0092 | 0,0561 | 0,0451 | Di bawah LCL |
| 5 | 07/01/2026 | 14.792 | 76 | 0,0051 | 0,0560 | 0,0452 | Di bawah LCL |
| 6 | 08/01/2026 | 19.812 | 661 | 0,0334 | 0,0553 | 0,0460 | Di bawah LCL |
| 7 | 09/01/2026 | 8.277 | 666 | 0,0805 | 0,0579 | 0,0434 | Di atas UCL |
| 8 | 10/01/2026 | 10.570 | 734 | 0,0694 | 0,0570 | 0,0442 | Di atas UCL |
| 9 | 12/01/2026 | 14.860 | 603 | 0,0406 | 0,0560 | 0,0452 | Di bawah LCL |
| 10 | 13/01/2026 | 17.144 | 411 | 0,0240 | 0,0556 | 0,0456 | Di bawah LCL |
| 11 | 14/01/2026 | 17.315 | 86 | 0,0050 | 0,0556 | 0,0456 | Di bawah LCL |
| 12 | 15/01/2026 | 9.601 | 663 | 0,0691 | 0,0573 | 0,0439 | Di atas UCL |
| 13 | 17/01/2026 | 19.092 | 220 | 0,0115 | 0,0554 | 0,0459 | Di bawah LCL |
| 14 | 19/01/2026 | 14.295 | 276 | 0,0193 | 0,0561 | 0,0451 | Di bawah LCL |
| 15 | 20/01/2026 | 12.020 | 488 | 0,0406 | 0,0566 | 0,0446 | Di bawah LCL |
| 16 | 21/01/2026 | 10.743 | 454 | 0,0423 | 0,0570 | 0,0443 | Di bawah LCL |
| 17 | 22/01/2026 | 16.942 | 79 | 0,0047 | 0,0557 | 0,0456 | Di bawah LCL |
| 18 | 23/01/2026 | 7.277 | 112 | 0,0154 | 0,0583 | 0,0429 | Di bawah LCL |
| 19 | 24/01/2026 | 12.853 | 176 | 0,0137 | 0,0564 | 0,0448 | Di bawah LCL |
| 20 | 26/01/2026 | 17.533 | 250 | 0,0143 | 0,0556 | 0,0457 | Di bawah LCL |
| 21 | 27/01/2026 | 15.265 | 1.355 | 0,0888 | 0,0559 | 0,0453 | Di atas UCL |
| 22 | 28/01/2026 | 11.446 | 1.039 | 0,0908 | 0,0568 | 0,0445 | Di atas UCL |
| 23 | 29/01/2026 | 11.619 | 501 | 0,0431 | 0,0567 | 0,0445 | Di bawah LCL |
| 24 | 30/01/2026 | 4.051 | 639 | 0,1577 | 0,0610 | 0,0403 | Di atas UCL |
| 25 | 31/01/2026 | 11.887 | 1.062 | 0,0893 | 0,0567 | 0,0446 | Di atas UCL |
| 26 | 02/02/2026 | 7.599 | 718 | 0,0945 | 0,0582 | 0,0431 | Di atas UCL |
| 27 | 03/02/2026 | 10.564 | 107 | 0,0101 | 0,0570 | 0,0442 | Di bawah LCL |

**Lampiran 4. Data *Out Of Control***

| No | Tanggal | n | d | p | UCL | LCL | Keterangan |
|---|---|---|---|---|---|---|---|
| 28 | 04/02/2026 | 15.979 | 52 | 0,0033 | 0,0558 | 0,0454 | Di bawah LCL |
| 29 | 05/02/2026 | 16.890 | 40 | 0,0024 | 0,0557 | 0,0456 | Di bawah LCL |
| 30 | 06/02/2026 | 9.314 | 59 | 0,0063 | 0,0574 | 0,0438 | Di bawah LCL |
| 31 | 07/02/2026 | 17.482 | 302 | 0,0173 | 0,0556 | 0,0456 | Di bawah LCL |
| 32 | 09/02/2026 | 16.021 | 692 | 0,0432 | 0,0558 | 0,0454 | Di bawah LCL |
| 33 | 10/02/2026 | 17.904 | 240 | 0,0134 | 0,0555 | 0,0457 | Di bawah LCL |
| 34 | 11/02/2026 | 14.448 | 168 | 0,0116 | 0,0561 | 0,0452 | Di bawah LCL |
| 35 | 12/02/2026 | 13.908 | 236 | 0,0170 | 0,0562 | 0,0450 | Di bawah LCL |
| 36 | 13/02/2026 | 5.546 | 561 | 0,1012 | 0,0595 | 0,0418 | Di atas UCL |
| 37 | 18/02/2026 | 11.768 | 402 | 0,0342 | 0,0567 | 0,0446 | Di bawah LCL |
| 38 | 19/02/2026 | 9.404 | 584 | 0,0621 | 0,0574 | 0,0438 | Di atas UCL |
| 39 | 20/02/2026 | 6.948 | 491 | 0,0707 | 0,0585 | 0,0427 | Di atas UCL |
| 40 | 21/02/2026 | 15.167 | 573 | 0,0378 | 0,0560 | 0,0453 | Di bawah LCL |
| 41 | 23/02/2026 | 13.694 | 832 | 0,0608 | 0,0562 | 0,0450 | Di atas UCL |
| 42 | 24/02/2026 | 12.551 | 907 | 0,0723 | 0,0565 | 0,0448 | Di atas UCL |
| 43 | 25/02/2026 | 10.548 | 743 | 0,0704 | 0,0570 | 0,0442 | Di atas UCL |
| 44 | 26/02/2026 | 10.232 | 636 | 0,0622 | 0,0571 | 0,0441 | Di atas UCL |
| 45 | 27/02/2026 | 7.559 | 550 | 0,0728 | 0,0582 | 0,0431 | Di atas UCL |
| 46 | 28/02/2026 | 8.943 | 911 | 0,1019 | 0,0576 | 0,0437 | Di atas UCL |
| 47 | 02/03/2026 | 6.686 | 880 | 0,1316 | 0,0587 | 0,0426 | Di atas UCL |
| 48 | 03/03/2026 | 9.123 | 52 | 0,0057 | 0,0575 | 0,0437 | Di bawah LCL |
| 49 | 04/03/2026 | 6.110 | 515 | 0,0843 | 0,0590 | 0,0422 | Di atas UCL |
| 50 | 05/03/2026 | 6.264 | 805 | 0,1285 | 0,0589 | 0,0423 | Di atas UCL |
| 51 | 07/03/2026 | 11.064 | 165 | 0,0149 | 0,0569 | 0,0444 | Di bawah LCL |
| 52 | 09/03/2026 | 12.791 | 423 | 0,0331 | 0,0564 | 0,0448 | Di bawah LCL |
| 53 | 10/03/2026 | 12.417 | 1.130 | 0,0910 | 0,0565 | 0,0447 | Di atas UCL |
| 54 | 11/03/2026 | 6.406 | 527 | 0,0823 | 0,0588 | 0,0424 | Di atas UCL |
| 55 | 12/03/2026 | 3.012 | 335 | 0,1112 | 0,0626 | 0,0386 | Di atas UCL |
| 56 | 14/03/2026 | 10.129 | 816 | 0,0806 | 0,0572 | 0,0441 | Di atas UCL |
| 57 | 16/03/2026 | 8.591 | 1.294 | 0,1506 | 0,0577 | 0,0435 | Di atas UCL |
| 58 | 17/03/2026 | 8.769 | 579 | 0,0660 | 0,0576 | 0,0436 | Di atas UCL |
| 59 | 18/03/2026 | 8.464 | 589 | 0,0696 | 0,0578 | 0,0435 | Di atas UCL |
| 60 | 24/03/2026 | 6.123 | 978 | 0,1597 | 0,0590 | 0,0422 | Di atas UCL |
| 61 | 25/03/2026 | 10.269 | 2.079 | 0,2025 | 0,0571 | 0,0441 | Di atas UCL |
| 62 | 26/03/2026 | 8.131 | 991 | 0,1219 | 0,0579 | 0,0433 | Di atas UCL |
| 63 | 27/03/2026 | 4.930 | 625 | 0,1268 | 0,0600 | 0,0413 | Di atas UCL |
| 64 | 28/03/2026 | 5.315 | 433 | 0,0815 | 0,0596 | 0,0416 | Di atas UCL |
| 65 | 30/03/2026 | 4.041 | 723 | 0,1789 | 0,0610 | 0,0403 | Di atas UCL |
| 66 | 31/03/2026 | 3.799 | 649 | 0,1708 | 0,0613 | 0,0400 | Di atas UCL |
| 67 | 01/04/2026 | 6.866 | 288 | 0,0419 | 0,0586 | 0,0427 | Di bawah LCL |
| 68 | 02/04/2026 | 7.837 | 330 | 0,0421 | 0,0581 | 0,0432 | Di bawah LCL |
| 69 | 04/04/2026 | 11.103 | 47 | 0,0042 | 0,0569 | 0,0444 | Di bawah LCL |
| 70 | 07/04/2026 | 8.556 | 1.521 | 0,1778 | 0,0577 | 0,0435 | Di atas UCL |

**Lampiran 4. Data *Out Of Control***

| No | Tanggal | n | d | p | UCL | LCL | Keterangan |
|---|---|---|---|---|---|---|---|
| 71 | 08/04/2026 | 6.922 | 433 | 0,0626 | 0,0585 | 0,0427 | Di atas UCL |
| 72 | 09/04/2026 | 8.189 | 126 | 0,0154 | 0,0579 | 0,0434 | Di bawah LCL |
| 73 | 10/04/2026 | 5.408 | 579 | 0,1071 | 0,0596 | 0,0417 | Di atas UCL |
| 74 | 13/04/2026 | 11.699 | 1.433 | 0,1225 | 0,0567 | 0,0445 | Di atas UCL |
| 75 | 14/04/2026 | 8.460 | 953 | 0,1126 | 0,0578 | 0,0435 | Di atas UCL |
| 76 | 18/04/2026 | 17.583 | 719 | 0,0409 | 0,0556 | 0,0457 | Di bawah LCL |
| 77 | 20/04/2026 | 11.303 | 93 | 0,0082 | 0,0568 | 0,0444 | Di bawah LCL |
| 78 | 21/04/2026 | 6.088 | 1.512 | 0,2484 | 0,0591 | 0,0422 | Di atas UCL |
| 79 | 22/04/2026 | 12.001 | 84 | 0,0070 | 0,0566 | 0,0446 | Di bawah LCL |
| 80 | 23/04/2026 | 12.541 | 1.507 | 0,1202 | 0,0565 | 0,0448 | Di atas UCL |
| 81 | 24/04/2026 | 6.575 | 275 | 0,0418 | 0,0587 | 0,0425 | Di bawah LCL |
| 82 | 25/04/2026 | 9.777 | 212 | 0,0217 | 0,0573 | 0,0440 | Di bawah LCL |
| 83 | 27/04/2026 | 15.030 | 385 | 0,0256 | 0,0560 | 0,0453 | Di bawah LCL |
| 84 | 28/04/2026 | 9.142 | 556 | 0,0608 | 0,0575 | 0,0437 | Di atas UCL |
| 85 | 02/05/2026 | 11.008 | 656 | 0,0596 | 0,0569 | 0,0444 | Di atas UCL |
| 86 | 04/05/2026 | 13.560 | 583 | 0,0430 | 0,0563 | 0,0450 | Di bawah LCL |
| 87 | 05/05/2026 | 10.772 | 378 | 0,0351 | 0,0570 | 0,0443 | Di bawah LCL |
| 88 | 06/05/2026 | 6.583 | 683 | 0,1038 | 0,0587 | 0,0425 | Di atas UCL |
| 89 | 07/05/2026 | 9.159 | 130 | 0,0142 | 0,0575 | 0,0438 | Di bawah LCL |
| 90 | 08/05/2026 | 3.259 | 109 | 0,0334 | 0,0621 | 0,0391 | Di bawah LCL |
| 91 | 09/05/2026 | 9.852 | 402 | 0,0408 | 0,0572 | 0,0440 | Di bawah LCL |
| 92 | 11/05/2026 | 20.650 | 628 | 0,0304 | 0,0552 | 0,0460 | Di bawah LCL |
| 93 | 12/05/2026 | 17.184 | 279 | 0,0162 | 0,0556 | 0,0456 | Di bawah LCL |
| 94 | 13/05/2026 | 12.065 | 95 | 0,0079 | 0,0566 | 0,0446 | Di bawah LCL |
| 95 | 16/05/2026 | 18.215 | 566 | 0,0311 | 0,0555 | 0,0458 | Di bawah LCL |
| 96 | 19/05/2026 | 6.980 | 1.040 | 0,1490 | 0,0585 | 0,0428 | Di atas UCL |
| 97 | 20/05/2026 | 10.025 | 575 | 0,0574 | 0,0572 | 0,0441 | Di atas UCL |
| 98 | 21/05/2026 | 6.175 | 369 | 0,0598 | 0,0590 | 0,0423 | Di atas UCL |
| 99 | 25/05/2026 | 11.800 | 903 | 0,0765 | 0,0567 | 0,0446 | Di atas UCL |
| 100 | 26/05/2026 | 3.693 | 417 | 0,1129 | 0,0614 | 0,0398 | Di atas UCL |
| 101 | 29/05/2026 | 9.204 | 254 | 0,0276 | 0,0575 | 0,0438 | Di bawah LCL |
| 102 | 30/05/2026 | 5.997 | 380 | 0,0634 | 0,0591 | 0,0421 | Di atas UCL |
| | **Total** | 1.092.517 | 55.218 | 6,310 | 5,856 | 4,472 | |

**Lampiran 5. Pertanyaan Wawancara**

Daftar Pertanyaan Wawancara

1. Teknisi Kepala, Mandor Produksi, dan QC Produksi
   a. Menurut anda apa yang menjadi penyebab utama terjadinya kecacatan pada kecambah?
   b. Menurut bapak/ibu apa penyebab terjadi kecacatan pada masing – masing jenis kecacatan?

c. Apakah ada pelatihan untuk karyawan?
d. Dari faktor pekerja apakah ada kesalahan yang dilakukan yang menyebabkan terjadi kecacatan pada kecambah?
e. Apakah mesin/peralatan sering mengalami kerusakan atau gangguan?
f. Apakah dilakukan perawatan atau maintenance secara rutin?
g. Apakah ada tahap proses yang sering menjadi titik terjadinya kecacatan?
h. Apakah terdapat perubahan metode kerja yang mempengaruhi kualitas kecambah?
i. Apakah bahan baku pernah mengalami kerusakan sebelum diproses?
j. Apakah terdapat variasi kualitas bahan baku?
k. Apakah ada gangguan lingkungan seperti hama atau kontaminasi?
l. Bagaimana kondisi suhu dan kelembaban di area produksi kecambah?

2. Teknisi Kepala Pohon Induk
   a. Apakah proses penyerbukan sudah berjalan sesuai dengan standar SOP?
   b. Berdasarkan informasi dari Mandor Produksi, faktor bahan baku merupakan penyebab utama tingginya kecacatan kecambah. Menurut Bapak, bagaimana kondisi bahan baku yang dihasilkan dari bagian pohon induk, dan permasalahan apa saja yang berpotensi menyebabkan terjadinya kecacatan tersebut?

**Lampiran 6. Dokumentasi**




Kerusakan mesin turbo



Jamur pada benih





Kerusakan mesin

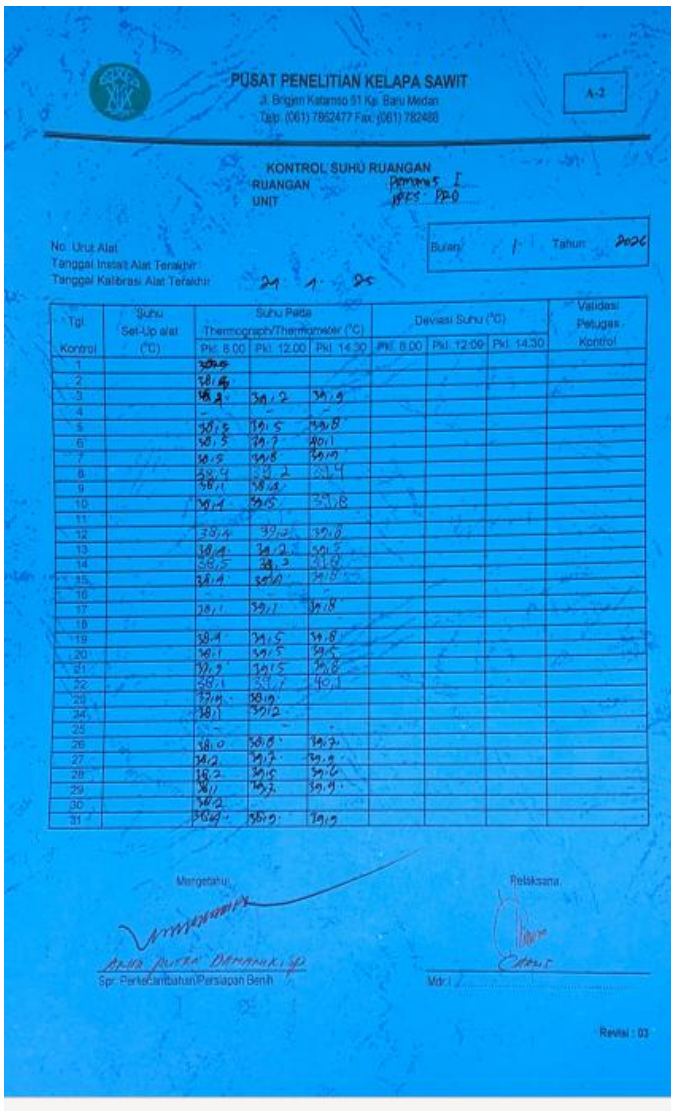


Kecacatan/ afkir kecambah dan bakteri di benih



Dokumentasi wawancara

**Lampiran 7. Data Suhu**



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN
RUANGAN Pemanas I
UNIT PPKS PRD

No. Urut Alat
Tanggal Instalt Alat Terakhir
Tanggal Kalibrasi Alat Terakhir 24 1 25

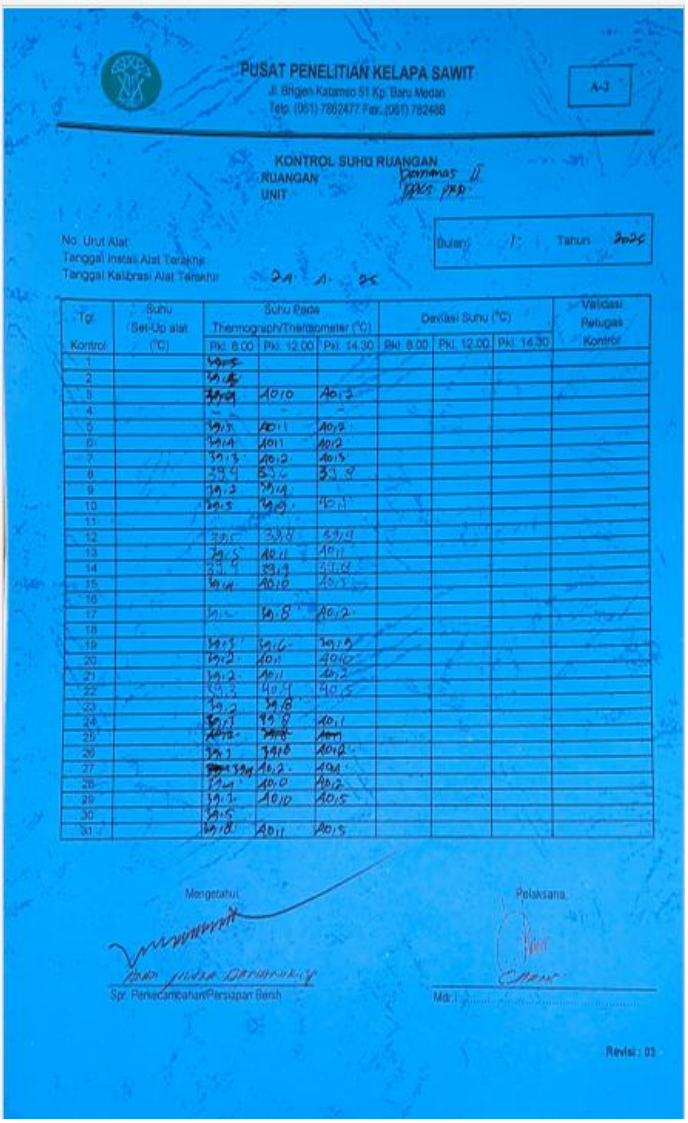
Bulan 1 Tahun 2026

| Tgl Kontrol | Suhu Set-Up alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 38.5 | | | | | | |
| 2 | | 38.4 | | | | | | |
| 3 | | 38.4 | 39.2 | 39.9 | | | | |
| 4 | | - | - | - | | | | |
| 5 | | 38.5 | 39.5 | 39.8 | | | | |
| 6 | | 38.5 | 39.7 | 40.1 | | | | |
| 7 | | 38.5 | 39.8 | 39.9 | | | | |
| 8 | | 38.4 | 39.2 | 39.4 | | | | |
| 9 | | 38.1 | 38.4 | | | | | |
| 10 | | 38.4 | 39.5 | 39.8 | | | | |
| 11 | | | | | | | | |
| 12 | | 38.4 | 39.2 | 39.8 | | | | |
| 13 | | 38.4 | 39.2 | 39.5 | | | | |
| 14 | | 38.5 | 39.3 | 39.8 | | | | |
| 15 | | 38.4 | 39.0 | 39.8 | | | | |
| 16 | | | | | | | | |
| 17 | | 38.1 | 39.1 | 39.8 | | | | |
| 18 | | | | | | | | |
| 19 | | 38.4 | 39.5 | 39.8 | | | | |
| 20 | | 38.1 | 39.5 | 39.5 | | | | |
| 21 | | 38.9 | 39.5 | 39.8 | | | | |
| 22 | | 38.1 | 39.7 | 40.1 | | | | |
| 23 | | 38.4 | 38.9 | | | | | |
| 24 | | 38.1 | 39.2 | | | | | |
| 25 | | - | - | - | | | | |
| 26 | | 38.0 | 38.8 | 39.7 | | | | |
| 27 | | 38.2 | 39.7 | 39.9 | | | | |
| 28 | | 38.2 | 39.5 | 39.6 | | | | |
| 29 | | 38.1 | 39.3 | 39.9 | | | | |
| 30 | | 38.2 | | | | | | |
| 31 | | 38.4 | 38.9 | 39.9 | | | | |

Mengetahui,
Arya Putra Damanik, SP
Spr. Perkecambahan/Persiapan Benih

Pelaksana,
Chanis
Mdr.

Revisi : 03



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN
RUANGAN Pemanas II
UNIT PPKS PRD

No. Urut Alat
Tanggal Instalt Alat Terakhir
Tanggal Kalibrasi Alat Terakhir 24 1 25

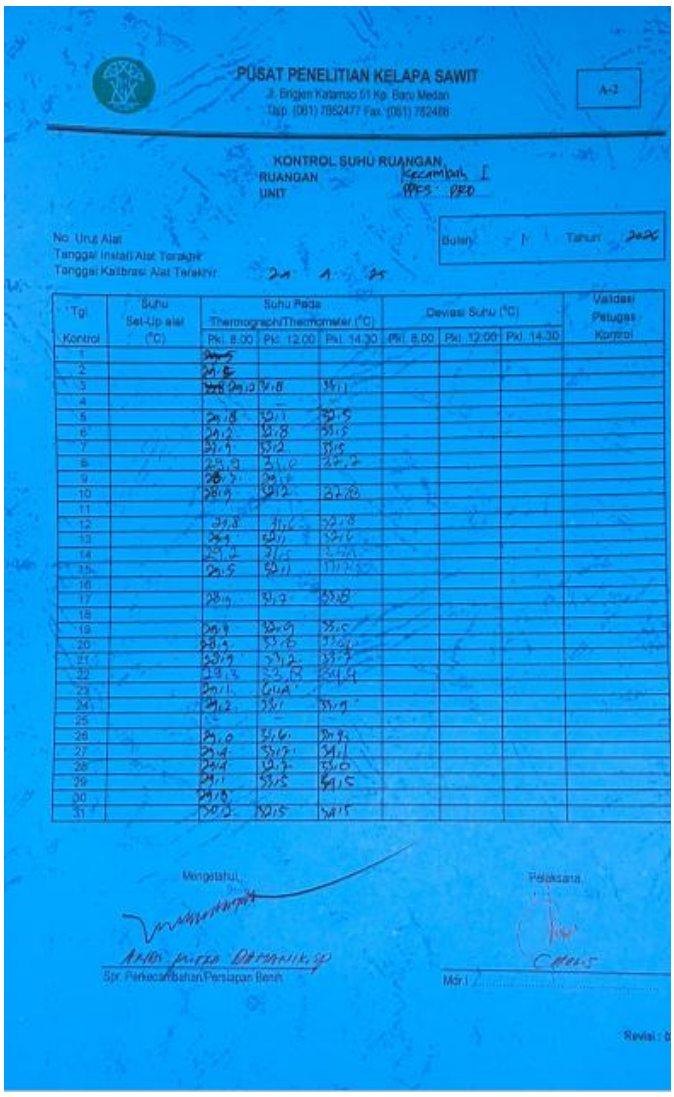
Bulan 1 Tahun 2026

| Tgl Kontrol | Suhu Set-Up alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 39.5 | | | | | | |
| 2 | | 39.4 | | | | | | |
| 3 | | 39.4 | 40.0 | 40.2 | | | | |
| 4 | | - | - | - | | | | |
| 5 | | 39.5 | 40.1 | 40.2 | | | | |
| 6 | | 39.4 | 40.1 | 40.2 | | | | |
| 7 | | 39.3 | 40.2 | 40.3 | | | | |
| 8 | | 39.4 | 39.6 | 39.8 | | | | |
| 9 | | 39.2 | 39.4 | | | | | |
| 10 | | 39.5 | 39.9 | 40.1 | | | | |
| 11 | | | | | | | | |
| 12 | | 39.5 | 39.8 | 39.9 | | | | |
| 13 | | 39.5 | 40.1 | 40.1 | | | | |
| 14 | | 39.4 | 39.9 | 39.8 | | | | |
| 15 | | 39.4 | 40.0 | 40.3 | | | | |
| 16 | | | | | | | | |
| 17 | | 39.5 | 39.8 | 40.2 | | | | |
| 18 | | | | | | | | |
| 19 | | 39.3 | 39.6 | 39.9 | | | | |
| 20 | | 39.2 | 40.1 | 40.0 | | | | |
| 21 | | 39.2 | 40.1 | 40.2 | | | | |
| 22 | | 39.3 | 40.4 | 40.5 | | | | |
| 23 | | 39.2 | 39.8 | | | | | |
| 24 | | 39.3 | 39.8 | 40.1 | | | | |
| 25 | | 40.0 | 39.8 | 40.1 | | | | |
| 26 | | 39.3 | 39.8 | 40.2 | | | | |
| 27 | | 39.4 | 40.2 | 40.4 | | | | |
| 28 | | 39.4 | 40.0 | 40.2 | | | | |
| 29 | | 39.3 | 40.0 | 40.5 | | | | |
| 30 | | 39.5 | | | | | | |
| 31 | | 39.8 | 40.1 | 40.5 | | | | |

Mengetahui,
Arya Putra Damanik, SP
Spr. Perkecambahan/Persiapan Benih

Pelaksana,
Chanis
Mdr.

Revisi : 03



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN

RUANGAN : Kecambah I
UNIT : PPKS - PRD

No. Urut Alat :
Tanggal Instalasi Alat Terakhir :
Tanggal Kalibrasi Alat Terakhir : 24 - 1 - 25

Bulan : 1 Tahun : 2025

| Tgl Kontrol | Suhu Set-Up alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | ~~30.5~~ | | | | | | |
| 2 | | 31.8 | | | | | | |
| 3 | | ~~30.0~~ 29.0 | 31.8 | 33.1 | | | | |
| 4 | | | | | | | | |
| 5 | | 29.8 | 32.1 | 32.5 | | | | |
| 6 | | 29.2 | 32.8 | 33.5 | | | | |
| 7 | | 31.9 | 33.2 | 33.5 | | | | |
| 8 | | 29.9 | 31.0 | 32.2 | | | | |
| 9 | | ~~28.5~~ | 30.5 | | | | | |
| 10 | | 28.9 | 30.2 | 32.20 | | | | |
| 11 | | | | | | | | |
| 12 | | 29.3 | 31.6 | 32.8 | | | | |
| 13 | | 28.9 | 30.1 | 32.6 | | | | |
| 14 | | 29.2 | 31.5 | 32.20 | | | | |
| 15 | | 29.5 | 30.1 | 33.25 | | | | |
| 16 | | | | | | | | |
| 17 | | 28.9 | 30.2 | 33.8 | | | | |
| 18 | | | | | | | | |
| 19 | | 29.9 | 30.9 | 33.5 | | | | |
| 20 | | 28.9 | 33.6 | 33.0 | | | | |
| 21 | | 30.9 | 31.2 | 33.7 | | | | |
| 22 | | 29.5 | 33.8 | 34.9 | | | | |
| 23 | | 29.1 | 30.4 | | | | | |
| 24 | | 29.2 | 33.1 | 33.9 | | | | |
| 25 | | | | | | | | |
| 26 | | 29.0 | 31.6 | 33.9 | | | | |
| 27 | | 29.4 | 33.7 | 34.1 | | | | |
| 28 | | 29.9 | 32.7 | 34.0 | | | | |
| 29 | | 29.1 | 33.5 | 34.15 | | | | |
| 30 | | 29.8 | | | | | | |
| 31 | | 30.5 | 32.15 | 34.15 | | | | |

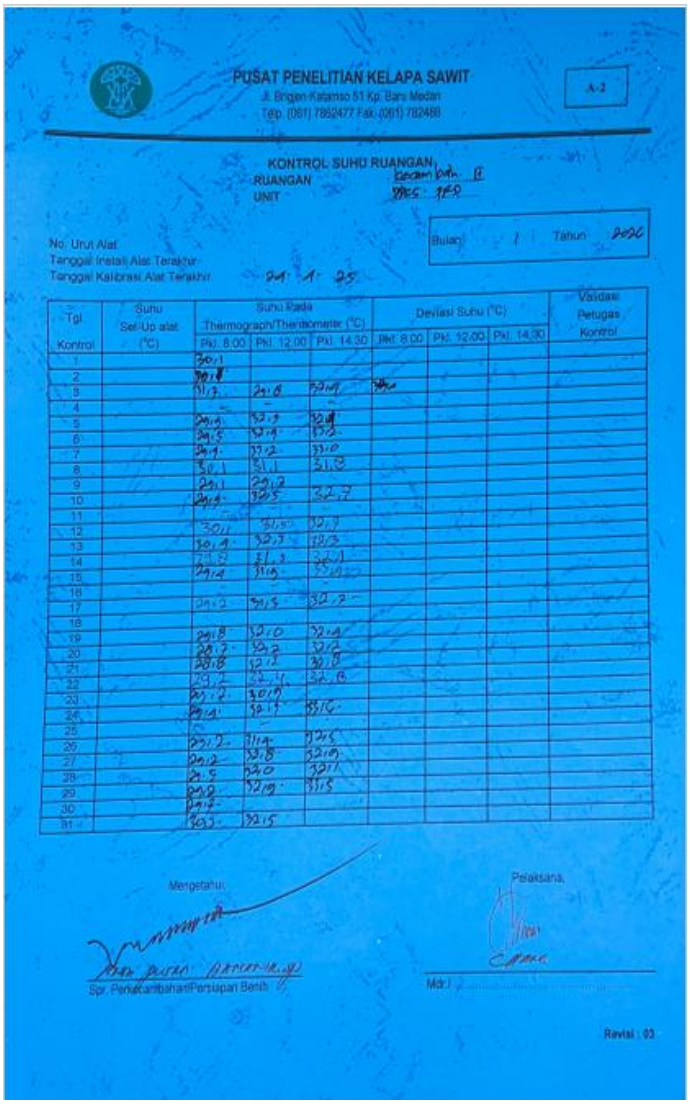
Mengetahui,

Spr. Pemeliharaan/Persiapan Benih

Pelaksana,

Mdr.I

Revisi : 0



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN

RUANGAN : Kecambah II
UNIT : PPKS - PRD

No. Urut Alat :
Tanggal Instalasi Alat Terakhir :
Tanggal Kalibrasi Alat Terakhir : 24 - 1 - 25

Bulan : 1 Tahun : 2025

| Tgl Kontrol | Suhu Set-Up alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 30.1 | | | | | | |
| 2 | | 30.8 | | | | | | |
| 3 | | 31.7 | 29.6 | 33.9 | | | | |
| 4 | | | | | | | | |
| 5 | | 29.9 | 32.7 | 32.8 | | | | |
| 6 | | 29.5 | 32.9 | 33.2 | | | | |
| 7 | | 29.9 | 33.2 | 33.0 | | | | |
| 8 | | 30.1 | 31.1 | 31.8 | | | | |
| 9 | | 29.1 | 29.2 | | | | | |
| 10 | | 29.4 | 32.5 | 32.7 | | | | |
| 11 | | | | | | | | |
| 12 | | 30.1 | 31.5 | 32.7 | | | | |
| 13 | | 30.1 | 32.7 | 33.3 | | | | |
| 14 | | 29.2 | 31.2 | 32.1 | | | | |
| 15 | | 29.4 | 31.9 | 33.0 | | | | |
| 16 | | | | | | | | |
| 17 | | 29.2 | 30.5 | 32.2 | | | | |
| 18 | | | | | | | | |
| 19 | | 29.8 | 32.0 | 32.4 | | | | |
| 20 | | 29.7 | 32.7 | 32.9 | | | | |
| 21 | | 29.8 | 32.1 | 32.8 | | | | |
| 22 | | 29.7 | 33.1 | 32.8 | | | | |
| 23 | | 29.2 | 30.9 | | | | | |
| 24 | | 29.4 | 32.7 | 33.6 | | | | |
| 25 | | | | | | | | |
| 26 | | 29.2 | 31.9 | 32.5 | | | | |
| 27 | | 29.2 | 32.8 | 32.9 | | | | |
| 28 | | 29.5 | 32.0 | 32.1 | | | | |
| 29 | | 29.8 | 32.9 | 33.5 | | | | |
| 30 | | 29.2 | | | | | | |
| 31 | | 30.5 | 32.15 | | | | | |

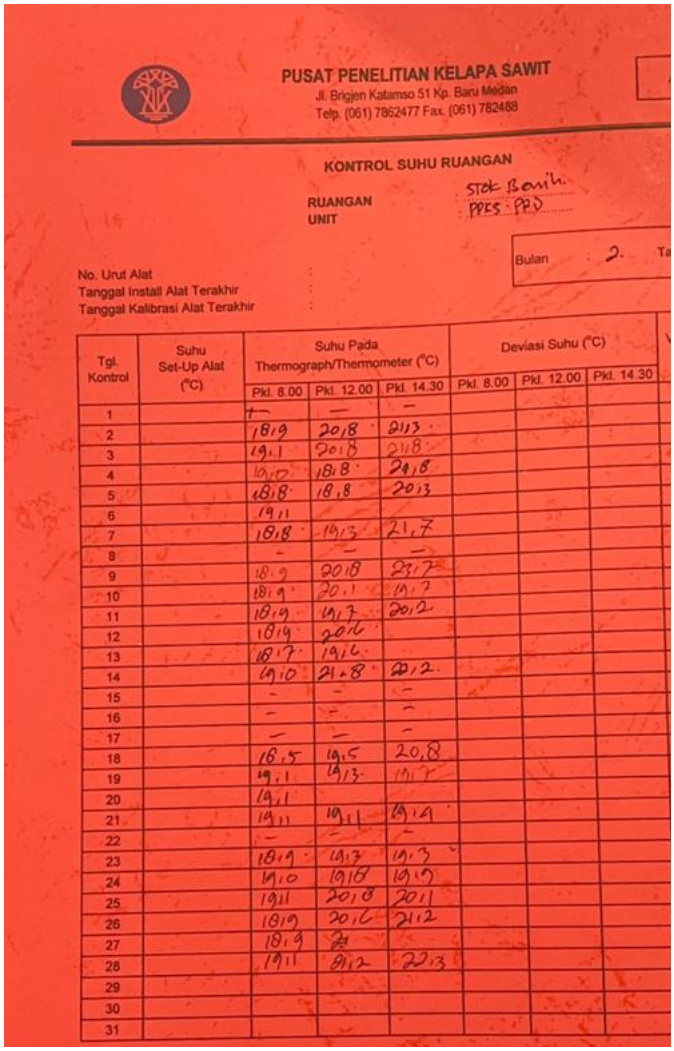
Mengetahui,

Spr. Pemeliharaan/Persiapan Benih

Pelaksana,

Mdr.I

Revisi : 03



**PUSAT PENELITIAN KELAPA SAWIT**
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

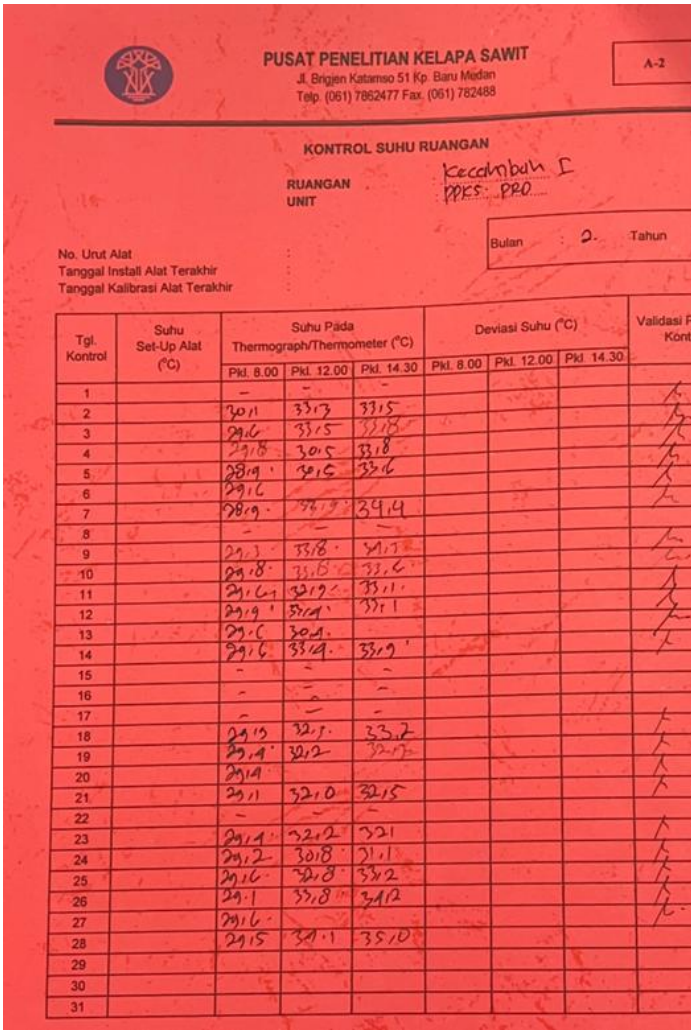
**KONTROL SUHU RUANGAN**

RUANGAN : Stok Benih.
UNIT : PPKS: PPD

Bulan : 2. Ta

No. Urut Alat :
Tanggal Install Alat Terakhir :
Tanggal Kalibrasi Alat Terakhir :

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | |
|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 |
| 1 | | – | – | – | | | |
| 2 | | 18,9 | 20,8 | 21,3 | | | |
| 3 | | 19,1 | 20,8 | 21,8 | | | |
| 4 | | 18,0 | 18,8 | 21,8 | | | |
| 5 | | 18,8 | 18,8 | 20,3 | | | |
| 6 | | 19,1 | | | | | |
| 7 | | 18,8 | 19,3 | 21,7 | | | |
| 8 | | – | – | – | | | |
| 9 | | 18,9 | 20,8 | 23,7 | | | |
| 10 | | 18,9 | 20,1 | 19,7 | | | |
| 11 | | 18,9 | 19,7 | 20,2 | | | |
| 12 | | 18,9 | 20,6 | | | | |
| 13 | | 18,7 | 19,6 | | | | |
| 14 | | 19,0 | 21,8 | 22,2 | | | |
| 15 | | – | – | – | | | |
| 16 | | – | – | – | | | |
| 17 | | – | – | – | | | |
| 18 | | 18,5 | 19,5 | 20,8 | | | |
| 19 | | 19,1 | 19,3 | 19,7 | | | |
| 20 | | 19,1 | | | | | |
| 21 | | 19,11 | 19,11 | 19,19 | | | |
| 22 | | – | – | – | | | |
| 23 | | 18,9 | 19,3 | 19,3 | | | |
| 24 | | 19,0 | 19,8 | 19,9 | | | |
| 25 | | 19,11 | 20,8 | 20,1 | | | |
| 26 | | 18,9 | 20,6 | 21,2 | | | |
| 27 | | 18,9 | 21 | | | | |
| 28 | | 19,11 | 21,2 | 22,3 | | | |
| 29 | | | | | | | |
| 30 | | | | | | | |
| 31 | | | | | | | |



**PUSAT PENELITIAN KELAPA SAWIT**
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

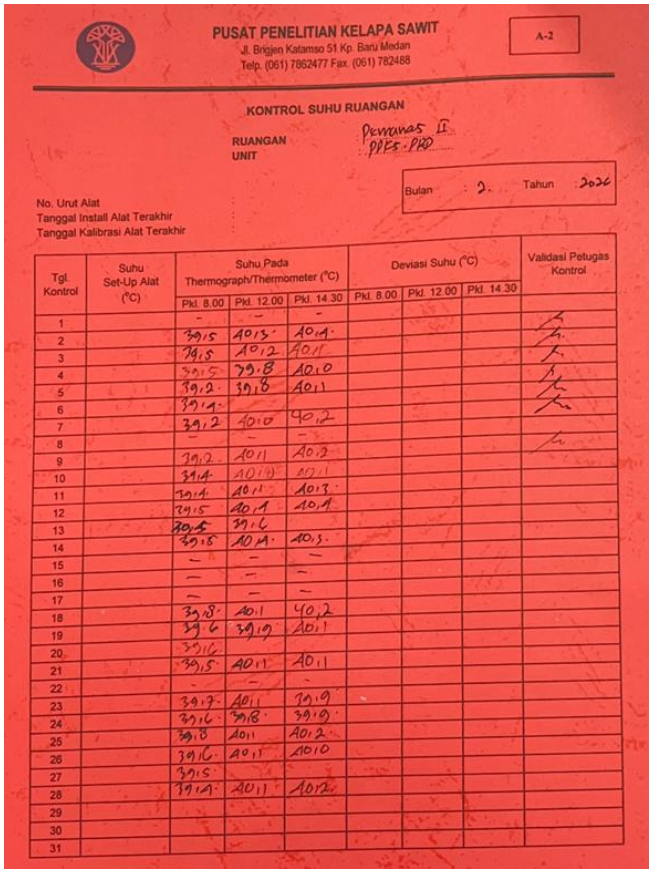
**KONTROL SUHU RUANGAN**

RUANGAN : Kecambah I
UNIT : PPKS: PPD

Bulan : 2. Tahun

No. Urut Alat :
Tanggal Install Alat Terakhir :
Tanggal Kalibrasi Alat Terakhir :

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi P Kont |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | – | – | – | | | | |
| 2 | | 30,1 | 33,7 | 33,5 | | | | |
| 3 | | 29,6 | 33,5 | 33,8 | | | | |
| 4 | | 29,8 | 30,5 | 33,8 | | | | |
| 5 | | 28,9 | 30,5 | 33,6 | | | | |
| 6 | | 29,6 | | | | | | |
| 7 | | 28,9 | 34,9 | 34,4 | | | | |
| 8 | | – | – | – | | | | |
| 9 | | 29,3 | 33,8 | 34,3 | | | | |
| 10 | | 29,8 | 33,6 | 33,6 | | | | |
| 11 | | 29,6 | 32,9 | 33,1 | | | | |
| 12 | | 29,9 | 33,9 | 33,1 | | | | |
| 13 | | 29,6 | 30,9 | | | | | |
| 14 | | 29,6 | 33,9 | 33,9 | | | | |
| 15 | | – | – | – | | | | |
| 16 | | – | – | – | | | | |
| 17 | | – | – | – | | | | |
| 18 | | 29,5 | 32,5 | 33,2 | | | | |
| 19 | | 29,9 | 32,2 | 32,7 | | | | |
| 20 | | 29,9 | | | | | | |
| 21 | | 29,1 | 32,0 | 32,5 | | | | |
| 22 | | – | – | – | | | | |
| 23 | | 29,9 | 32,2 | 32,1 | | | | |
| 24 | | 29,2 | 30,8 | 31,1 | | | | |
| 25 | | 29,6 | 32,8 | 33,2 | | | | |
| 26 | | 29,1 | 33,8 | 34,2 | | | | |
| 27 | | 29,6 | | | | | | |
| 28 | | 29,5 | 34,1 | 35,0 | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |



PUSAT PENELITIAN KELAPA SAWIT

Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

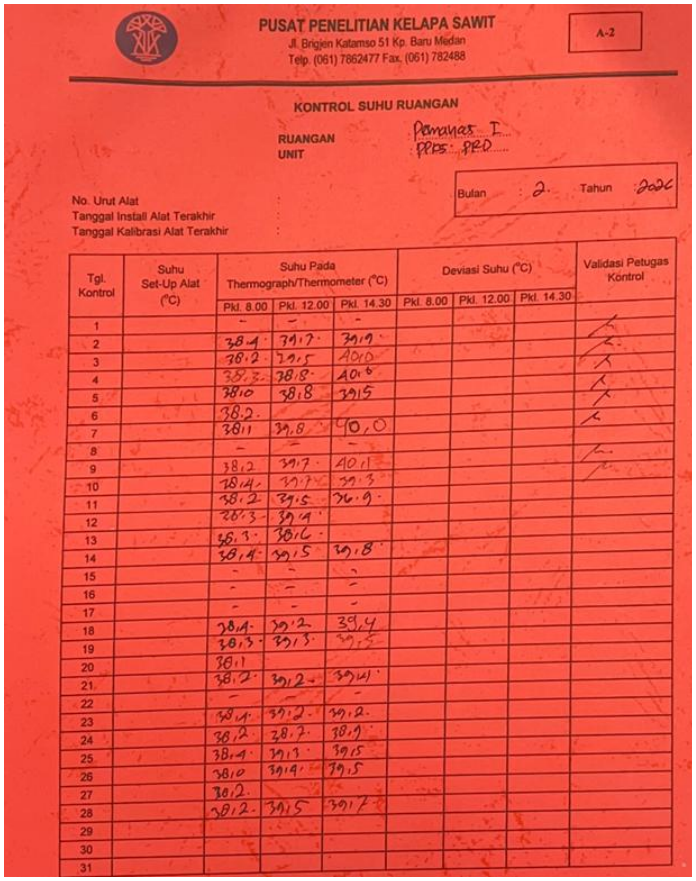
KONTROL SUHU RUANGAN

RUANGAN : Pemanas II
UNIT : PPKS-PRD

Bulan : 2 Tahun : 2026

No. Urut Alat :
Tanggal Install Alat Terakhir :
Tanggal Kalibrasi Alat Terakhir :

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | - | - | - | | | | |
| 2 | | 39,5 | 40,3 | 40,4 | | | | |
| 3 | | 39,5 | 40,2 | 40,1 | | | | |
| 4 | | 39,5 | 39,8 | 40,0 | | | | |
| 5 | | 39,2 | 39,8 | 40,1 | | | | |
| 6 | | 39,4 | | | | | | |
| 7 | | 39,2 | 40,0 | 40,2 | | | | |
| 8 | | - | - | - | | | | |
| 9 | | 39,2 | 40,1 | 40,2 | | | | |
| 10 | | 39,4 | 40,0 | 40,1 | | | | |
| 11 | | 39,4 | 40,1 | 40,3 | | | | |
| 12 | | 39,5 | 40,1 | 40,1 | | | | |
| 13 | | 39,5 | 39,6 | | | | | |
| 14 | | 39,5 | 40,4 | 40,3 | | | | |
| 15 | | - | - | - | | | | |
| 16 | | - | - | - | | | | |
| 17 | | - | - | - | | | | |
| 18 | | 39,8 | 40,1 | 40,2 | | | | |
| 19 | | 39,6 | 39,9 | 40,1 | | | | |
| 20 | | 39,6 | | | | | | |
| 21 | | 39,5 | 40,1 | 40,1 | | | | |
| 22 | | - | - | - | | | | |
| 23 | | 39,7 | 40,1 | 39,9 | | | | |
| 24 | | 39,6 | 39,8 | 39,9 | | | | |
| 25 | | 39,8 | 40,1 | 40,2 | | | | |
| 26 | | 39,6 | 40,1 | 40,0 | | | | |
| 27 | | 39,5 | | | | | | |
| 28 | | 39,4 | 40,1 | 40,2 | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |



PUSAT PENELITIAN KELAPA SAWIT

Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

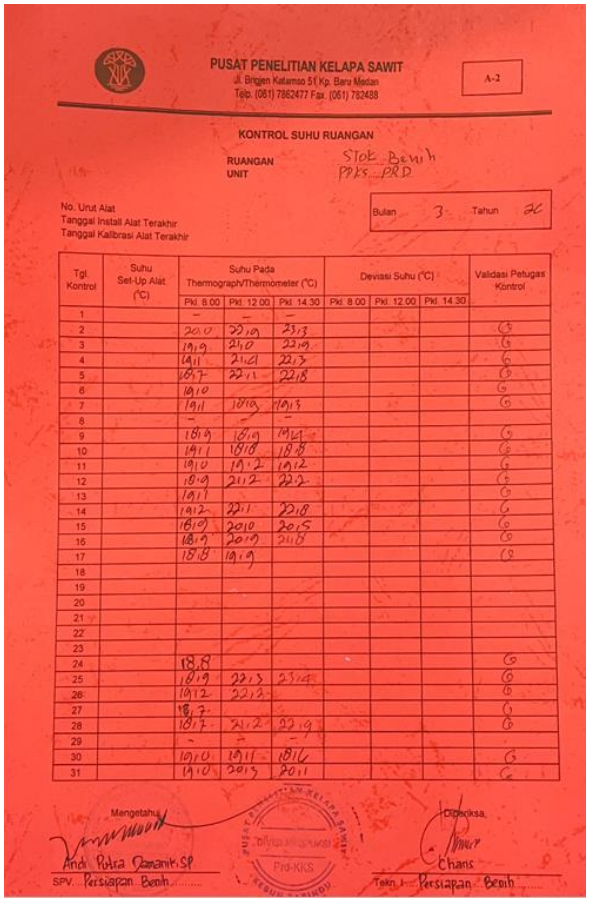
KONTROL SUHU RUANGAN

RUANGAN : Pemanas I
UNIT : PPKS-PRD

Bulan : 2 Tahun : 2026

No. Urut Alat :
Tanggal Install Alat Terakhir :
Tanggal Kalibrasi Alat Terakhir :

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | - | - | - | | | | |
| 2 | | 38,4 | 39,7 | 39,9 | | | | |
| 3 | | 38,2 | 39,5 | 40,0 | | | | |
| 4 | | 38,2 | 38,8 | 40,0 | | | | |
| 5 | | 38,0 | 38,8 | 39,5 | | | | |
| 6 | | 38,2 | | | | | | |
| 7 | | 38,1 | 39,8 | 40,0 | | | | |
| 8 | | - | - | - | | | | |
| 9 | | 38,2 | 39,7 | 40,1 | | | | |
| 10 | | 38,4 | 39,7 | 39,3 | | | | |
| 11 | | 38,2 | 39,5 | 36,9 | | | | |
| 12 | | 38,3 | 39,9 | | | | | |
| 13 | | 38,3 | 38,6 | | | | | |
| 14 | | 38,4 | 39,5 | 39,8 | | | | |
| 15 | | - | - | - | | | | |
| 16 | | - | - | - | | | | |
| 17 | | - | - | - | | | | |
| 18 | | 38,4 | 39,2 | 39,4 | | | | |
| 19 | | 38,3 | 39,5 | 39,5 | | | | |
| 20 | | 38,1 | | | | | | |
| 21 | | 38,2 | 39,2 | 39,4 | | | | |
| 22 | | - | - | - | | | | |
| 23 | | 38,4 | 39,2 | 39,2 | | | | |
| 24 | | 38,2 | 38,7 | 38,9 | | | | |
| 25 | | 38,4 | 39,1 | 39,5 | | | | |
| 26 | | 38,0 | 39,4 | 39,5 | | | | |
| 27 | | 38,2 | | | | | | |
| 28 | | 38,2 | 39,5 | 39,7 | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN

RUANGAN / UNIT: STOK Benih PPKS PRD

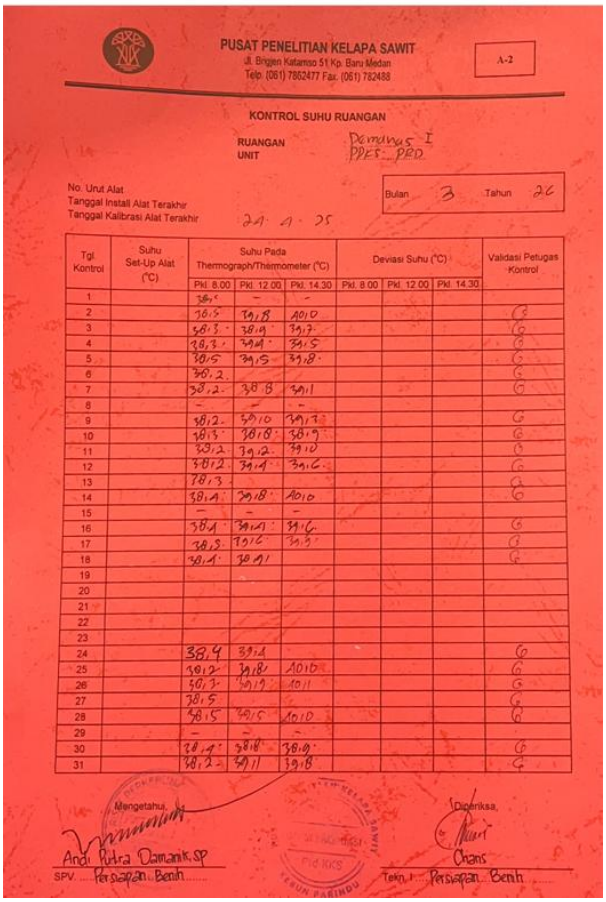
No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

Bulan 3 Tahun 2C

| Tgl Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | – | – | – | | | | |
| 2 | | 20.0 | 22.0 | 23.3 | | | | G |
| 3 | | 19.9 | 21.0 | 22.9 | | | | G |
| 4 | | 19.1 | 21.2 | 22.3 | | | | G |
| 5 | | 18.7 | 22.1 | 22.8 | | | | G |
| 6 | | 19.0 | – | – | | | | G |
| 7 | | 19.1 | 18.9 | 19.3 | | | | G |
| 8 | | – | – | – | | | | |
| 9 | | 18.9 | 18.9 | 19.4 | | | | G |
| 10 | | 19.1 | 18.8 | 18.8 | | | | G |
| 11 | | 19.0 | 19.2 | 19.2 | | | | G |
| 12 | | 18.9 | 21.2 | 22.2 | | | | G |
| 13 | | 19.1 | | | | | | G |
| 14 | | 19.2 | 22.1 | 22.8 | | | | G |
| 15 | | 18.9 | 20.0 | 20.5 | | | | G |
| 16 | | 18.9 | 20.9 | 21.8 | | | | G |
| 17 | | 18.8 | 19.9 | | | | | G |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | 18.8 | | | | | | G |
| 25 | | 18.9 | 22.3 | 23.4 | | | | G |
| 26 | | 19.2 | 22.2 | | | | | G |
| 27 | | 18.7 | | | | | | G |
| 28 | | 18.7 | 21.2 | 22.9 | | | | G |
| 29 | | – | – | – | | | | |
| 30 | | 19.0 | 19.1 | 19.6 | | | | G |
| 31 | | 19.0 | 20.3 | 20.1 | | | | G |

Mengetahui,
Andi Putra Damanik, SP
SPV. Persiapan Benih

Diperiksa,
Chans
Tekn. I Persiapan Benih



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN

RUANGAN / UNIT: Pemuliaan I PPKS PRD

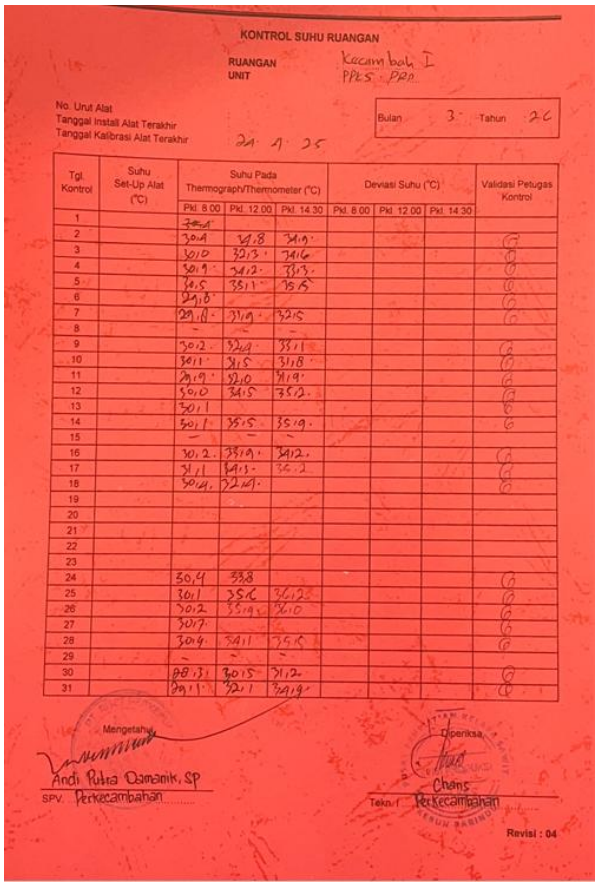
No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir 21-1-25

Bulan 3 Tahun 2C

| Tgl Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 38.5 | – | – | | | | |
| 2 | | 38.5 | 39.8 | 40.0 | | | | G |
| 3 | | 38.3 | 38.9 | 39.7 | | | | G |
| 4 | | 38.3 | 39.4 | 39.5 | | | | G |
| 5 | | 38.5 | 39.5 | 39.8 | | | | G |
| 6 | | 38.2 | – | – | | | | G |
| 7 | | 38.2 | 38.8 | 39.1 | | | | G |
| 8 | | – | – | – | | | | |
| 9 | | 38.2 | 39.0 | 39.2 | | | | G |
| 10 | | 38.3 | 38.8 | 38.9 | | | | G |
| 11 | | 38.2 | 39.2 | 39.0 | | | | G |
| 12 | | 38.2 | 39.4 | 39.6 | | | | G |
| 13 | | 38.3 | | | | | | G |
| 14 | | 38.4 | 39.8 | 40.0 | | | | G |
| 15 | | – | – | – | | | | |
| 16 | | 38.4 | 39.4 | 39.6 | | | | G |
| 17 | | 38.3 | 39.2 | 39.3 | | | | G |
| 18 | | 38.4 | 38.9 | | | | | G |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | 38.4 | 39.4 | | | | | G |
| 25 | | 38.2 | 39.8 | 40.0 | | | | G |
| 26 | | 38.2 | 39.9 | 40.1 | | | | G |
| 27 | | 38.5 | | | | | | G |
| 28 | | 38.5 | 39.5 | 40.0 | | | | G |
| 29 | | – | – | – | | | | |
| 30 | | 38.4 | 38.8 | 38.9 | | | | G |
| 31 | | 38.2 | 39.1 | 39.8 | | | | G |

Mengetahui,
Andi Putra Damanik, SP
SPV. Persiapan Benih

Diperiksa,
Chans
Tekn. I Persiapan Benih



KONTROL SUHU RUANGAN

RUANGAN / UNIT: Kecambah I, PPLS : PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir: 22-1-25

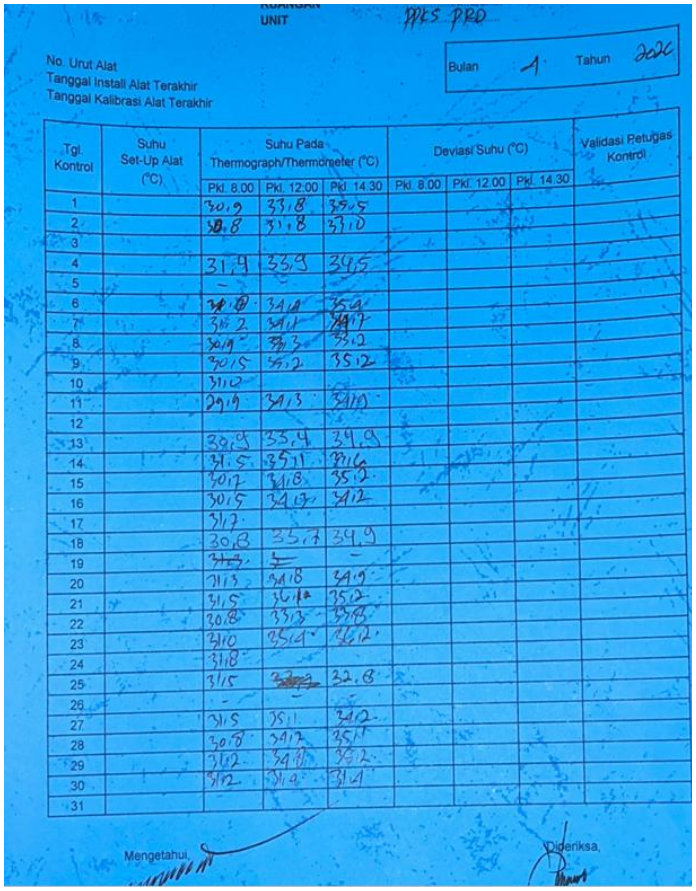
Bulan: 3 Tahun: 20

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | [illegible] | | | | | | |
| 2 | | 30,4 | 31,8 | 31,9 | | | | |
| 3 | | 30,0 | 32,3 | 34,6 | | | | |
| 4 | | 30,9 | 34,2 | 33,3 | | | | |
| 5 | | 30,5 | 35,1 | 35,5 | | | | |
| 6 | | 29,8 | | | | | | |
| 7 | | 29,8 | 31,9 | 32,5 | | | | |
| 8 | | - | | | | | | |
| 9 | | 30,2 | 32,9 | 33,1 | | | | |
| 10 | | 30,1 | 31,5 | 31,8 | | | | |
| 11 | | 29,9 | 32,0 | 31,9 | | | | |
| 12 | | 30,0 | 34,5 | 35,2 | | | | |
| 13 | | 30,1 | | | | | | |
| 14 | | 30,1 | 35,5 | 35,9 | | | | |
| 15 | | - | - | - | | | | |
| 16 | | 30,2 | 35,9 | 34,2 | | | | |
| 17 | | 31,1 | 34,5 | 36,2 | | | | |
| 18 | | 30,4 | 32,4 | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | 30,4 | 33,8 | | | | | |
| 25 | | 30,1 | 35,6 | 36,2 | | | | |
| 26 | | 30,2 | 35,9 | 36,0 | | | | |
| 27 | | 30,7 | | | | | | |
| 28 | | 30,4 | 34,1 | 35,5 | | | | |
| 29 | | - | - | | | | | |
| 30 | | 28,3 | 30,5 | 31,2 | | | | |
| 31 | | 29,1 | 32,1 | 34,9 | | | | |

Mengetahui,
Andi Putra Damanik, SP
SPV. Perkecambahan

Diperiksa,
Chans
Tekn. I Perkecambahan

Revisi : 04



UNIT: PPLS PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

Bulan: 1 Tahun: 2020

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 30,9 | 33,8 | 35,5 | | | | |
| 2 | | 30,8 | 31,8 | 33,0 | | | | |
| 3 | | | | | | | | |
| 4 | | 31,9 | 33,9 | 34,5 | | | | |
| 5 | | - | - | | | | | |
| 6 | | 31,0 | 34,0 | 35,9 | | | | |
| 7 | | 30,2 | 34,1 | 34,7 | | | | |
| 8 | | 30,9 | 33,3 | 35,2 | | | | |
| 9 | | 30,5 | 35,2 | 35,2 | | | | |
| 10 | | 31,2 | | | | | | |
| 11 | | 29,9 | 34,3 | 34,0 | | | | |
| 12 | | | | | | | | |
| 13 | | 30,9 | 35,4 | 34,9 | | | | |
| 14 | | 31,5 | 35,1 | 34,6 | | | | |
| 15 | | 30,7 | 34,8 | 35,3 | | | | |
| 16 | | 30,5 | 34,7 | 34,2 | | | | |
| 17 | | 31,7 | | | | | | |
| 18 | | 30,8 | 35,7 | 34,9 | | | | |
| 19 | | 31,3 | - | - | | | | |
| 20 | | 31,3 | 34,8 | 34,9 | | | | |
| 21 | | 31,5 | 36,2 | 35,2 | | | | |
| 22 | | 30,8 | 33,3 | 34,8 | | | | |
| 23 | | 31,0 | 35,4 | 36,2 | | | | |
| 24 | | 31,8 | - | | | | | |
| 25 | | 31,5 | [illegible] | 32,8 | | | | |
| 26 | | - | - | | | | | |
| 27 | | 31,5 | 35,1 | 34,2 | | | | |
| 28 | | 30,8 | 34,2 | 35,1 | | | | |
| 29 | | 31,2 | 34,9 | 35,2 | | | | |
| 30 | | 31,2 | 31,4 | 31,4 | | | | |
| 31 | | | | | | | | |

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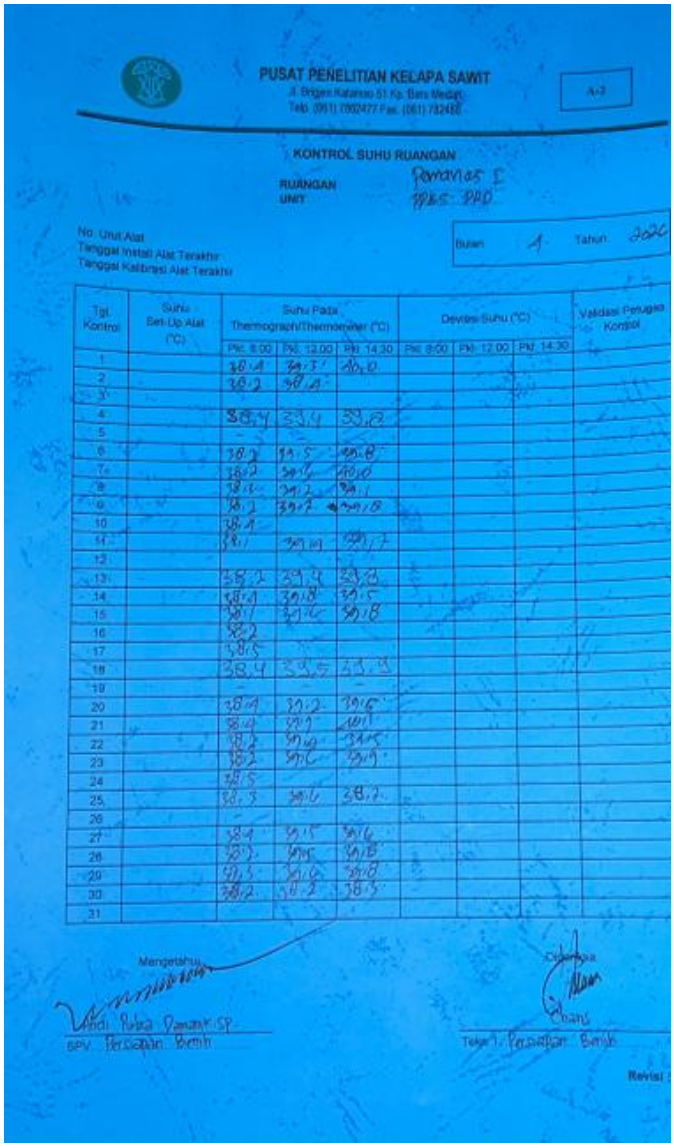
Diperiksa,



PUSAT PENELITIAN KELAPA SAWIT
Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN

RUANGAN Pemanas I
UNIT PPKS PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

Bulan 4 Tahun 2026

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 38.4 | 39.3 | 40.0 | | | | |
| 2 | | 38.2 | 38.4 | | | | | |
| 3 | | | | | | | | |
| 4 | | 38.4 | 39.4 | 39.8 | | | | |
| 5 | | | | | | | | |
| 6 | | 38.2 | 39.5 | 39.8 | | | | |
| 7 | | 38.2 | 39.6 | 40.0 | | | | |
| 8 | | 38.3 | 39.2 | 39.1 | | | | |
| 9 | | 38.2 | 39.7 | 39.8 | | | | |
| 10 | | 38.4 | | | | | | |
| 11 | | 38.1 | 39.4 | 39.7 | | | | |
| 12 | | | | | | | | |
| 13 | | 38.2 | 39.4 | 39.8 | | | | |
| 14 | | 38.4 | 39.8 | 39.5 | | | | |
| 15 | | 38.1 | 39.6 | 39.8 | | | | |
| 16 | | 38.2 | | | | | | |
| 17 | | 38.5 | | | | | | |
| 18 | | 38.4 | 39.5 | 39.9 | | | | |
| 19 | | | | | | | | |
| 20 | | 38.4 | 39.2 | 39.6 | | | | |
| 21 | | 38.4 | 39.9 | 40.1 | | | | |
| 22 | | 38.2 | 39.4 | 39.5 | | | | |
| 23 | | 38.2 | 39.6 | 39.9 | | | | |
| 24 | | 38.5 | | | | | | |
| 25 | | 38.3 | 39.6 | 38.7 | | | | |
| 26 | | | | | | | | |
| 27 | | 38.4 | 39.5 | 39.6 | | | | |
| 28 | | 38.2 | 39.5 | 39.8 | | | | |
| 29 | | 38.3 | 39.6 | 39.8 | | | | |
| 30 | | 38.2 | 38.2 | 38.3 | | | | |
| 31 | | | | | | | | |

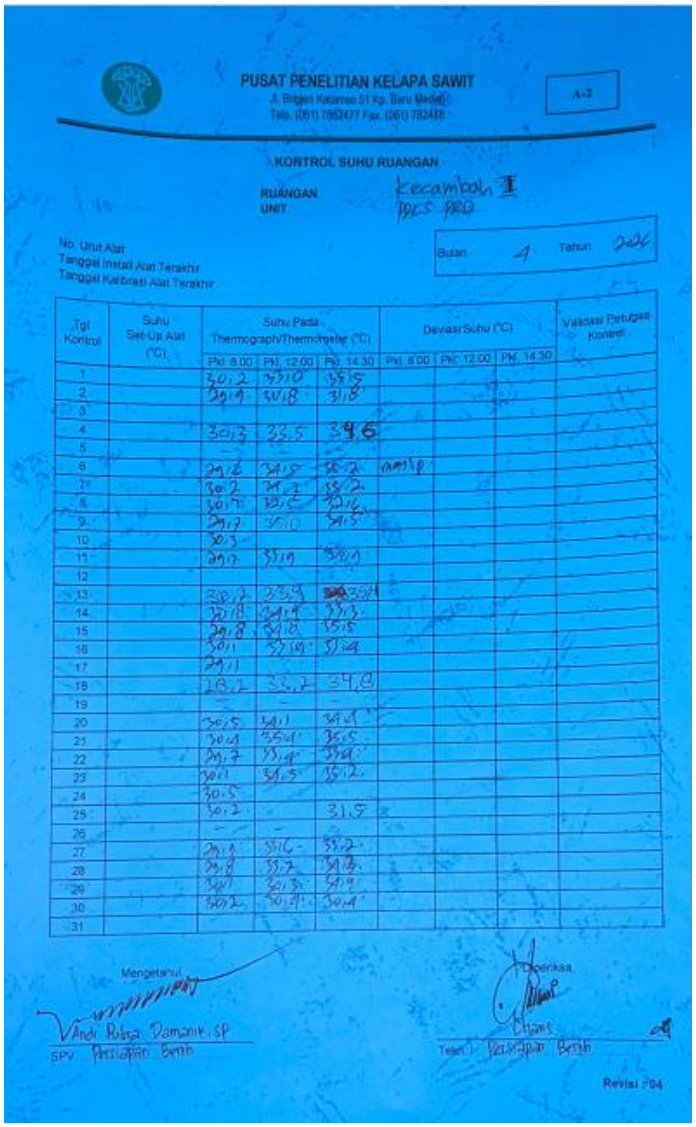
Mengetahui,

Andi Rubra Damanik SP
SPV Persiapan Benih

Diperiksa,

Chans
Teknik Persiapan Benih

Revisi



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Jl. Brigjen Katamso 51 Kp. Baru Medan
Telp. (061) 7862477 Fax. (061) 782488

A-2

KONTROL SUHU RUANGAN

RUANGAN Kecambah I
UNIT PPKS PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

Bulan 4 Tahun 2026

| Tgl. Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | 30.2 | 33.0 | 35.5 | | | | |
| 2 | | 29.9 | 30.8 | 31.8 | | | | |
| 3 | | | | | | | | |
| 4 | | 30.3 | 33.5 | 34.6 | | | | |
| 5 | | | | | | | | |
| 6 | | 29.2 | 34.5 | 35.2 | mmlp | | | |
| 7 | | 30.2 | 34.3 | 35.2 | | | | |
| 8 | | 30.7 | 32.5 | 32.6 | | | | |
| 9 | | 29.7 | 35.0 | 34.5 | | | | |
| 10 | | 30.3 | | | | | | |
| 11 | | 29.7 | 33.9 | 34.4 | | | | |
| 12 | | | | | | | | |
| 13 | | 30.2 | 33.9 | 34.4 | | | | |
| 14 | | 30.8 | 34.4 | 33.3 | | | | |
| 15 | | 29.8 | 34.8 | 35.5 | | | | |
| 16 | | 30.1 | 33.9 | 31.4 | | | | |
| 17 | | 29.1 | | | | | | |
| 18 | | 28.2 | 33.2 | 34.8 | | | | |
| 19 | | | | | | | | |
| 20 | | 30.5 | 34.1 | 34.4 | | | | |
| 21 | | 30.4 | 35.4 | 35.5 | | | | |
| 22 | | 29.7 | 33.4 | 33.4 | | | | |
| 23 | | 30.1 | 34.5 | 35.2 | | | | |
| 24 | | 30.5 | | | | | | |
| 25 | | 30.2 | | 31.5 | | | | |
| 26 | | | | | | | | |
| 27 | | 29.9 | 33.6 | 33.2 | | | | |
| 28 | | 29.8 | 33.7 | 34.3 | | | | |
| 29 | | 30.1 | 34.3 | 34.9 | | | | |
| 30 | | 30.2 | 30.4 | 30.4 | | | | |
| 31 | | | | | | | | |

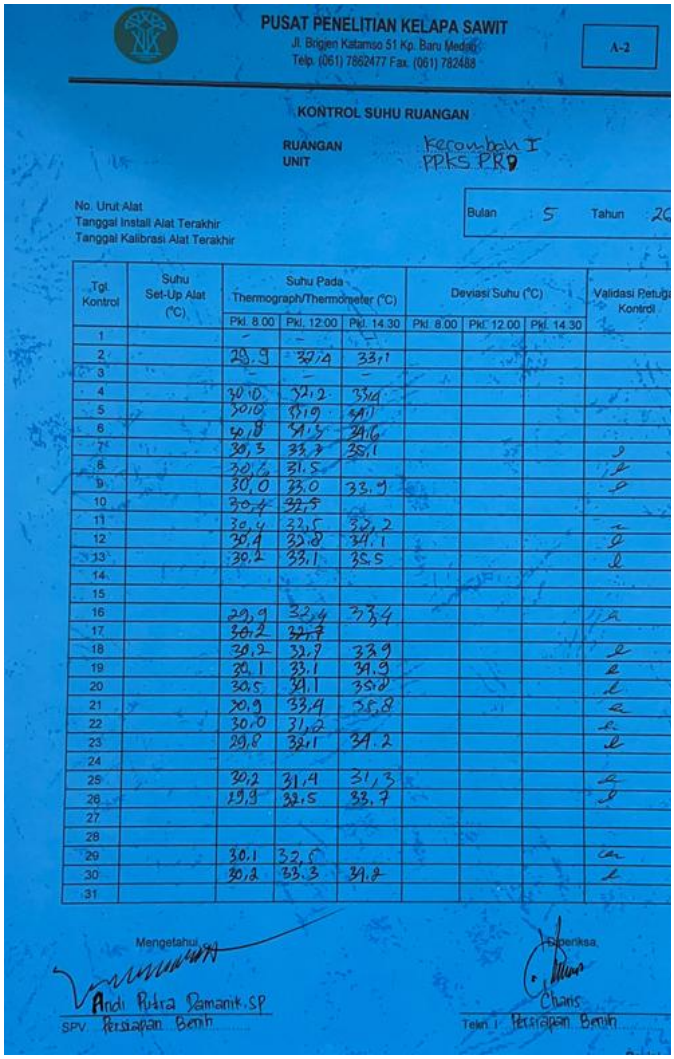
Mengetahui,

Andi Rubra Damanik SP
SPV Persiapan Benih

Diperiksa,

Chans
Teknik Persiapan Benih

Revisi : 04



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A-2

KONTROL SUHU RUANGAN

RUANGAN: Kerombah I
UNIT: PPKS PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

Bulan: 5 Tahun: 2C

| Tgl Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petuga Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | - | - | - | | | | |
| 2 | | 29,9 | 32,4 | 33,1 | | | | |
| 3 | | - | - | - | | | | |
| 4 | | 30,0 | 32,2 | 33,1 | | | | |
| 5 | | 30,0 | 31,9 | 34,1 | | | | |
| 6 | | 30,8 | 31,5 | 34,6 | | | | |
| 7 | | 30,3 | 33,7 | 35,1 | | | | |
| 8 | | 30,6 | 31,5 | | | | | |
| 9 | | 30,0 | 33,0 | 33,9 | | | | |
| 10 | | 30,4 | 32,5 | | | | | |
| 11 | | 30,4 | 32,5 | 32,2 | | | | |
| 12 | | 30,4 | 32,8 | 34,1 | | | | |
| 13 | | 30,2 | 33,1 | 35,5 | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | 29,9 | 32,4 | 33,4 | | | | |
| 17 | | 30,2 | 32,7 | | | | | |
| 18 | | 30,2 | 32,9 | 33,9 | | | | |
| 19 | | 30,1 | 33,1 | 34,9 | | | | |
| 20 | | 30,5 | 34,1 | 35,2 | | | | |
| 21 | | 30,9 | 33,4 | 35,8 | | | | |
| 22 | | 30,0 | 31,2 | | | | | |
| 23 | | 29,8 | 32,1 | 34,2 | | | | |
| 24 | | | | | | | | |
| 25 | | 30,2 | 31,4 | 31,3 | | | | |
| 26 | | 29,9 | 32,5 | 33,7 | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | 30,1 | 32,5 | | | | | |
| 30 | | 30,2 | 33,3 | 34,2 | | | | |
| 31 | | | | | | | | |

Mengetahui,
Andi Putra Damanik, SP
SPV. Persiapan Benih

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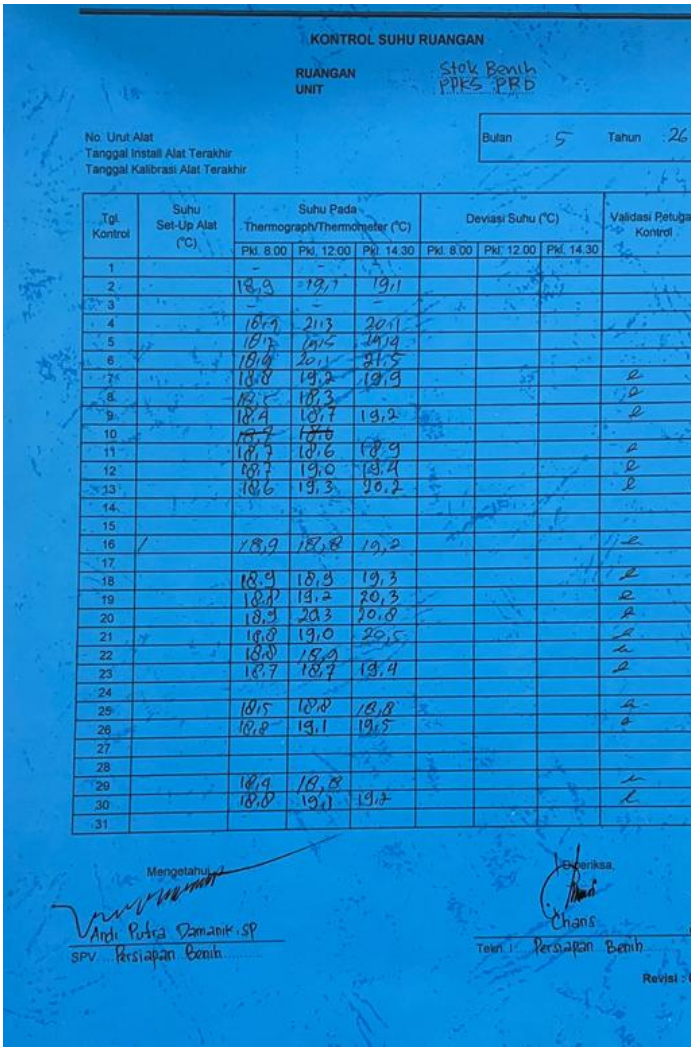
Tekn. I Persiapan Benih



KONTROL SUHU RUANGAN

RUANGAN: Stok Benih
UNIT: PPKS PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

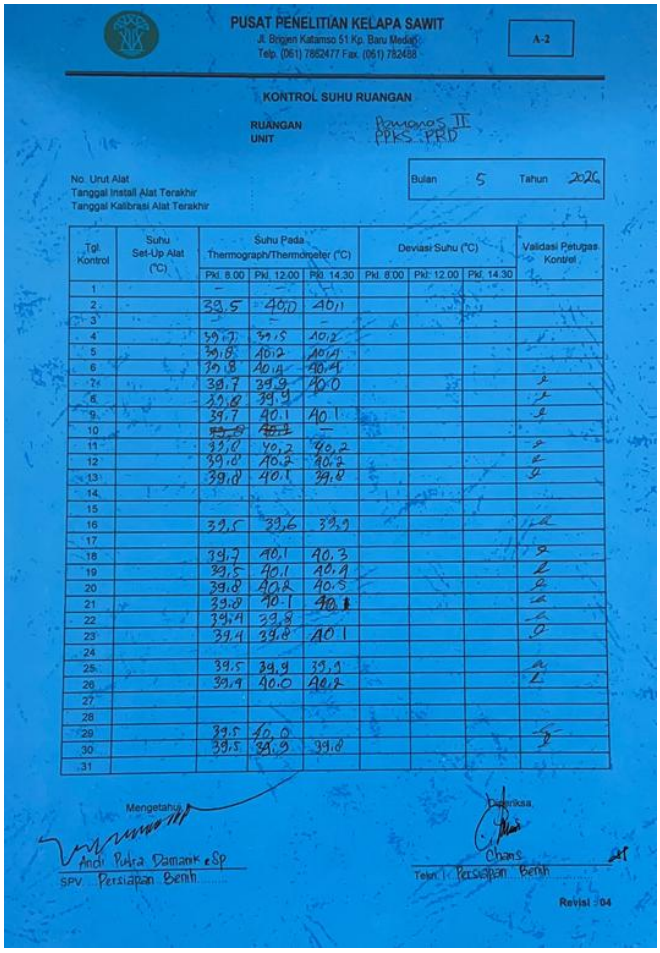
Bulan: 5 Tahun: 26

| Tgl Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petuga Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | - | - | - | | | | |
| 2 | | 18,9 | 19,1 | 19,1 | | | | |
| 3 | | - | - | - | | | | |
| 4 | | 18,9 | 21,3 | 20,1 | | | | |
| 5 | | 18,7 | 19,6 | 19,9 | | | | |
| 6 | | 18,6 | 20,1 | 21,5 | | | | |
| 7 | | 18,8 | 19,2 | 18,9 | | | | |
| 8 | | 18,6 | 18,3 | | | | | |
| 9 | | 18,4 | 18,7 | 19,2 | | | | |
| 10 | | 18,2 | 18,0 | | | | | |
| 11 | | 18,7 | 18,6 | 18,9 | | | | |
| 12 | | 18,7 | 19,0 | 18,4 | | | | |
| 13 | | 18,6 | 19,3 | 20,2 | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | / | 18,9 | 18,8 | 19,2 | | | | |
| 17 | | | | | | | | |
| 18 | | 18,9 | 18,9 | 19,3 | | | | |
| 19 | | 18,7 | 19,2 | 20,3 | | | | |
| 20 | | 18,9 | 20,3 | 20,8 | | | | |
| 21 | | 18,8 | 19,0 | 20,5 | | | | |
| 22 | | 18,8 | 18,9 | | | | | |
| 23 | | 18,7 | 18,7 | 19,4 | | | | |
| 24 | | | | | | | | |
| 25 | | 18,5 | 18,8 | 18,8 | | | | |
| 26 | | 18,8 | 19,1 | 19,5 | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | 18,9 | 18,8 | | | | | |
| 30 | | 18,8 | 19,1 | 19,7 | | | | |
| 31 | | | | | | | | |

Mengetahui,
Andi Putra Damanik, SP
SPV. Persiapan Benih

Diperiksa,
Chans
Tekn. I Persiapan Benih

Revisi :



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Jl. Brigjen Katamso 51 Kp. Baru Medan
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A-2

**KONTROL SUHU RUANGAN**

RUANGAN : Pamanos II
UNIT : PPKS PRD

No. Urut Alat
Tanggal Install Alat Terakhir
Tanggal Kalibrasi Alat Terakhir

Bulan : 5 Tahun : 2026

| Tgl Kontrol | Suhu Set-Up Alat (°C) | Suhu Pada Thermograph/Thermometer (°C) | | | Deviasi Suhu (°C) | | | Validasi Petugas Kontrol |
|---|---|---|---|---|---|---|---|---|
| | | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | Pkl. 8.00 | Pkl. 12.00 | Pkl. 14.30 | |
| 1 | | - | | | | | | |
| 2 | | 39.5 | 40.0 | 40.1 | | | | |
| 3 | | - | - | - | | | | |
| 4 | | 39.7 | 39.5 | 40.2 | | | | |
| 5 | | 39.8 | 40.2 | 40.1 | | | | |
| 6 | | 40.8 | 40.4 | 40.4 | | | | |
| 7 | | 39.7 | 39.9 | 40.0 | | | | |
| 8 | | 39.8 | 39.9 | | | | | |
| 9 | | 39.7 | 40.1 | 40.1 | | | | |
| 10 | | ~~39.8~~ | ~~40.2~~ | - | | | | |
| 11 | | 39.8 | 40.2 | 40.2 | | | | |
| 12 | | 39.8 | 40.2 | 40.2 | | | | |
| 13 | | 39.8 | 40.1 | 39.8 | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | 39.5 | 39.6 | 39.9 | | | | |
| 17 | | | | | | | | |
| 18 | | 39.7 | 40.1 | 40.3 | | | | |
| 19 | | 39.5 | 40.1 | 40.9 | | | | |
| 20 | | 39.8 | 40.2 | 40.5 | | | | |
| 21 | | 39.8 | 40.1 | 40.1 | | | | |
| 22 | | 39.9 | 39.8 | | | | | |
| 23 | | 39.4 | 39.8 | 40.1 | | | | |
| 24 | | | | | | | | |
| 25 | | 39.5 | 39.9 | 39.9 | | | | |
| 26 | | 39.9 | 40.0 | 40.2 | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | 39.5 | 40.0 | | | | | |
| 30 | | 39.5 | 39.9 | 39.8 | | | | |
| 31 | | | | | | | | |

Mengetahui,

Andi Putra Damanik, Sp
SPV. Persiapan Benih

Diperiksa,

Chairs
Tekn. I. Persiapan Benih

Revisi : 04

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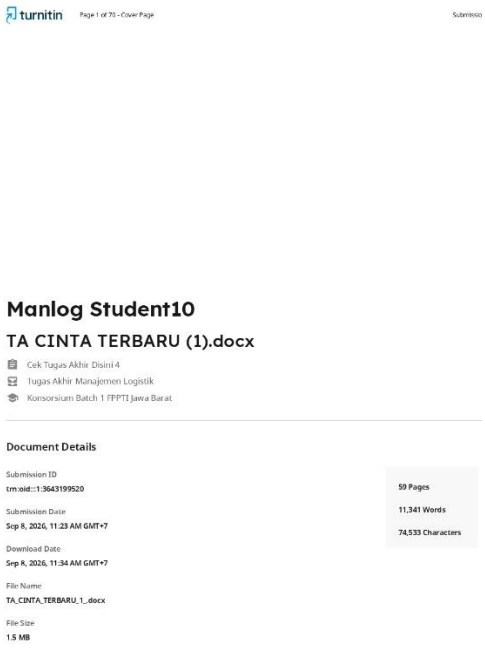
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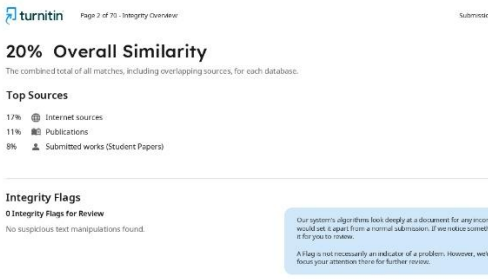
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