**Supplementary Tables**

**Table S1:** Proportion of common bean varieties grown in surveyed agroecology zones expressed as percentage of total gardens surveyed per agroecology

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Agroecology1** | | | | | | |
| **S. No.** | **Variety** | **KP** | **WM** | **LVC** | **NM** | **SWH** | **EH** | **WN** |
| 1 | CAL 96 (K132) | 45 | 9 | 9.9 | 4.5 | 44.1 | 0 | 33.3 |
| 2 | Unknown | 15 | 32 | 4.9 | 3 | 0 | 14.2 | 11.7 |
| 3 | Red | 15 | 0.9 | 5.9 | 3 | 5.8 | 21.4 | 21.5 |
| 4 | NABE 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Masindi yellow | 5 | 3.2 | 2.9 | 3 | 0 | 7.1 | 3.9 |
| 6 | Mixed | 5 | 1.6 | 0.9 | 10.5 | 0 | 7.14 | 0 |
| 7 | NABE 1 | 5 | 36 | 14.8 | 1 | 47 | 0 | 13.7 |
| 8 | NABE 6 | 0 | 4 | 6 | 0 | 0 | 0 | 13.7 |
| 9 | NABE 15 | 0 | 2.4 | 35.6 | 4.5 | 0 | 7.14 | 2.2 |
| 10 | NABE 16 | 0 | 2.4 | 0.9 | 1.5 | 0 | 21.4 | 0 |
| 11 | Okeng | 0 | 2.4 | 0 | 4.5 | 0 | 0 | 0 |
| 12 | Blankiti | 0 | 2.1 | 0 | 0 | 0 | 0 | 0 |
| 13 | NABE 17 | 0 | 1.6 | 0 | 0 | 0 | 0 | 0 |
| 14 | Kasogasoga | 0 | 0.8 | 0.9 | 0 | 0 | 0 | 0 |
| 15 | NABE 20 | 0 | 0.8 | 0 | 0 | 0 | 0 | 0 |
| 16 | NABE 12C | 0 | 0.8 | 0.9 | 0 | 3.1 | 0 | 0 |
| 17 | NAROBEAN 1 | 0 | 0 | 8.9 | 0 | 0 | 0 | 0 |
| 18 | NABE 4 | 0 | 0 | 2.9 | 0 | 0 | 0 | 0 |
| 19 | NAROBEAN 3 | 0 | 0 | 1.9 | 0 | 0 | 7.34 | 0 |
| 20 | Rakai | 0 | 0 | 0.9 | 0 | 0 | 0 | 0 |
| 21 | Green seeded | 0 | 0 | 0.9 | 0 | 0 | 0 | 0 |
| 22 | Jewee | 0 | 0 | 0.9 | 9 | 0 | 0 | 0 |
| 23 | NABE 2 | 0 | 0 | 0 | 54.5 | 0 | 7.14 | 0 |
| 24 | K20 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 25 | NABE 26 | 0 | 0 | 0 | 0 | 0 | 7.14 | 0 |
|  | **Total** | **100** | **100** | **100** | **100** | **100** | **100** | **100** |

1KP= Karamoja Pastoral zone, WM= Western Mixed Farming System zone, LVC= Lake Victoria Crescent and Mbale Farmland, NM= Northern Mixed Farming System zone, SWH= Southwestern Highlands, EH= Eastern Highlands, WN= West Nile Mixed Farming System zone.

**Table S2:** Morphology of *Fusarium* spp. strains on PDA media

| **S. No.** | **Agroecology1** | **Strain** | **Growth**  **Rate2** | **SE** | **Colony**  **Texture** | **Top Colour** | **Bottom**  **Colour** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | KP | NakF-520.1 | 0.17 | 0.02 | Compact | White | White |
| 2 | EH | KapF\_375 | 0.22 | 0.00 | Compact | White | White |
| 3 | KP | NakF-106 | 0.31 | 0.01 | Cottony aerial | White/Purple | White |
| 4 | LVC | MitF-487.1 | 0.37 | 0.02 | Cottony aerial | White | White |
| 5 | WM | HoiF-393.3 | 0.39 | 0.02 | Cottony aerial | White | White |
| 6 | KP | NakF-109.2 | 0.46 | 0.04 | Cottony aerial | White | Cream |
| 7 | NM | GulF-449.2 | 0.51 | 0.01 | Compact | White | White |
| 8 | LVC | MubF-466 | 0.52 | 0.02 | Cottony aerial | White/Purple | White/Purple |
| 9 | KP | NakF-520.2 | 0.54 | 0.02 | Cottony aerial | White/Purple | White/Purple |
| 10 | NM | OyaF-541.1 | 0.54 | 0.23 | Compact | White | White |
| 11 | LVC | MitF-489 | 0.55 | 0.03 | Cottony aerial | White | Cream |
| 12 | SW | KabF-113.2 | 0.55 | 0.01 | Cottony aerial | White | White |
| 13 | LVC | LweF-215 | 0.57 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 14 | SWH | LweF-504 | 0.59 | 0.04 | Cottony aerial | White | White |
| 15 | KP | NakF-105.1 | 0.60 | 0.01 | Compact | White | White |
| 16 | NM | ApaF-551 | 0.60 | 0.12 | Compact | White | White |
| 17 | LVC | LweF-497 | 0.63 | 0.09 | Compact | White | Cream |
| 18 | KP | AmuF515.2 | 0.63 | 0.03 | Cottony aerial | White | Cream/White |
| 19 | NM | OyaF-541.2 | 0.63 | 0.08 | Cottony aerial | White | White |
| 20 | LVC | MitF-489.2 | 0.64 | 0.03 | Compact | Cream/White | Cream |
| 22 | WM | MasF-409 | 0.64 | 0.02 | Cottony aerial | White/Yellow | White/Pink |
| 23 | WM | SheF-250.1 | 0.64 | 0.09 | Cottony aerial | White/Purple | White |
| 24 | LVC | LweF-223 | 0.65 | 0.17 | Cottony aerial | White | White |
| 25 | KP | NakF-106.2 | 0.66 | 0.03 | Cottony aerial | White | Cream/White |
| 26 | LVC | LweF-221.3 | 0.67 | 0.04 | Cottony aerial | White | Cream |
| 27 | LVC | LweF-220 | 0.69 | 0.02 | Cottony aerial | White/Purple | White/Purple |
| 28 | LVC | MitF-491.1 | 0.69 | 0.03 | Cottony aerial | White/Purple | White |
| 29 | KP | AmuF-517 | 0.69 | 0.04 | Cottony aerial | White/Purple | White/Purple |
| 30 | KP | NakF-108.2 | 0.69 | 0.05 | Cottony aerial | White | White/Pink |
| 31 | WM | BusF-255.1 | 0.69 | 0.02 | Cottony aerial | White/Orange | Cream |
| 32 | WM | SheF-250.2 | 0.69 | 0.04 | Cottony aerial | White | White |
| 33 | LVC | MubF-460 | 0.71 | 0.06 | Cottony aerial | White/Pink | White |
| 34 | LVC | MubF-462.2 | 0.71 | 0.01 | Cottony aerial | White/Purple | Cream |
| 35 | KP | NakF-518.1 | 0.71 | 0.03 | Cottony low | White/Purple | White/Purple |
| 36 | WM | MbaF-234 | 0.71 | 0.46 | Cottony low | White/Yellow | White/Orange |
| 37 | WM | KamF-289 | 0.72 | 0.04 | Cottony aerial | White | Cream |
| 38 | LVC | GomF\_492 | 0.73 | 0.03 | Cottony aerial | White/Pink | White/Pink |
| 39 | KP | AmuF517.1 | 0.73 | 0.16 | Compact | Cream/White | Cream/White |
| 40 | KP | NakF-524 | 0.74 | 0.12 | Compact | White | White |
| 41 | EH | KapF-373.1 | 0.75 | 0.12 | Compact | Cream/White | White/Cream |
| 42 | LVC | SirF-358 | 0.75 | 0.06 | Cottony low | White | Cream |
| 43 | NM | KirF-416 | 0.75 | 0.02 | Cottony aerial | White/Yellow | Cream |
| 44 | NM | GulF-451.1 | 0.76 | 0.02 | Cottony aerial | White/Purple | White |
| 45 | WM | HoiF-385 | 0.76 | 0.00 | Cottony aerial | White/Purple | White |
| 46 | WM | KyeF-320.3 | 0.76 | 0.03 | Cottony low | White | White |
| 47 | LVC | LweF-484 | 0.77 | 0.02 | Cottony aerial | White | White |
| 48 | SWH | KabF-114 | 0.77 | 0.04 | Cottony aerial | White/Orange | White/Orange |
| 49 | LVC | LweF-495.2 | 0.78 | 0.04 | Cottony aerial | White | White |
| 50 | LVC | MubF-461 | 0.78 | 0.04 | Cottony low | White/Pink | White |
| 51 | KP | NapF-104.1 | 0.79 | 0.03 | Cottony aerial | White | White |
| 52 | KP | NakF-102.2 | 0.79 | 0.03 | Cottony aerial | White/Orange | White/Orange |
| 53 | NM | KirF-418 | 0.80 | 0.01 | Cottony low | White | Cream |
| 54 | WM | MbaF-229 | 0.81 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 55 | LVC | MitF-481 | 0.82 | 0.03 | Cottony aerial | White/Purple | White |
| 56 | NM | ApaF-552.2 | 0.82 | 0.14 | Compact | White | White |
| 57 | LVC | LweF-221 | 0.83 | 0.06 | Cottony aerial | White/Pink | White |
| 58 | LVC | SirF-349.3 | 0.83 | 0.02 | Cottony aerial | White/Pink | White |
| 59 | WM | KamF-290 | 0.84 | 0.01 | Cottony low | White | White |
| 60 | LVC | LweF-483 | 0.85 | 0.04 | Cottony low | White/Purple | White/Purple |
| 61 | LVC | MitF-487 | 0.85 | 0.04 | Cottony aerial | White | Yellow |
| 62 | LVC | LweF-507 | 0.86 | 0.08 | Cottony aerial | White/Purple | White/Purple |
| 63 | LVC | MitF-340.4 | 0.86 | 0.01 | Compact | White | White |
| 64 | LVC | MubF-463 | 0.86 | 0.03 | Compact | White | White |
| 65 | KP | MorF-119.2 | 0.86 | 0.01 | Cottony aerial | White | White |
| 66 | SWH | KabF-108.1 | 0.86 | 0.01 | Cottony aerial | White | White |
| 67 | LVC | LweF-495 | 0.87 | 0.01 | Cottony aerial | White/Purple | White |
| 68 | LVC | MitF-345 | 0.87 | 0.05 | Cottony aerial | White | White |
| 69 | LVC | MubF-463.1 | 0.87 | 0.04 | Cottony low | White/Pink | White/Pink |
| 70 | LVC | MubF-465 | 0.87 | 0.05 | Cottony aerial | White/Purple | White |
| 71 | NM | KolF-563 | 0.87 | 0.01 | Cottony aerial | White | White |
| 72 | NM | LirF-601.2 | 0.87 | 0.09 | Compact | White | White |
| 73 | SWH | KabF-109.1 | 0.87 | 0.01 | Cottony aerial | White/Yellow | White |
| 74 | WM | MasF-403 | 0.87 | 0.03 | Cottony aerial | Cream | White |
| 75 | SWH | KabF-91.1 | 0.88 | 0.02 | Cottony aerial | White | White |
| 76 | WM | SheF-249 | 0.88 | 0.04 | Cottony aerial | White/Purple | White/Purple |
| 77 | LVC | GomF-4933 | 0.89 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 78 | LVC | MitF-491.2 | 0.89 | 0.01 | Cottony aerial | White/Purple | White/Purple |
| 79 | WM | KyeF-323 | 0.89 | 0.05 | Cottony low | White | White |
| 80 | LVC | LweF-779 | 0.90 | 0.01 | Cottony aerial | White/Purple | White |
| 81 | NM | ApaF-545 | 0.90 | 0.15 | Cottony aerial | White | White |
| 82 | WM | BusF-256 | 0.90 | 0.01 | Cottony low | White | White |
| 83 | WM | KamF-290.1 | 0.90 | 0.03 | Cottony aerial | White | White |
| 84 | WM | SheF-250 | 0.90 | 0.03 | Cottony aerial | White | White/Pink |
| 85 | LVC | LweF-496 | 0.91 | 0.01 | Cottony aerial | White | White |
| 86 | LVC | MitF-467 | 0.91 | 0.01 | Cottony aerial | White/Purple | White/Purple |
| 87 | NM | ApaF-548.2 | 0.91 | 0.04 | Compact | White | Cream |
| 88 | WM | BusF-258 | 0.91 | 0.03 | Cottony aerial | White | White |
| 89 | LVC | LweF-296 | 0.92 | 0.01 | Cottony aerial | White/Pink | White |
| 90 | LVC | LweF-500.2 | 0.92 | 0.01 | Cottony aerial | White/Green | White/Green |
| 91 | WM | IbaF-270 | 0.92 | 0.05 | Cottony aerial | White/Pink | White |
| 92 | LVC | SirF-349.1 | 0.93 | 0.02 | Cottony aerial | White | White/Purple |
| 93 | SWH | KabF-103 | 0.93 | 0.04 | Cottony aerial | White | White |
| 94 | SWH | KabF-98.2 | 0.93 | 0.05 | Cottony aerial | White/Purple | White |
| 95 | WM | HoiF-393 | 0.93 | 0.01 | Cottony aerial | White | White/Purple |
| 96 | EH | KapF-367 | 0.94 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 97 | LVC | LweF-293.2 | 0.95 | 1.00 | Cottony aerial | White/Pink | White/Pink |
| 99 | WM | BusF-258.1 | 0.96 | 0.01 | Cottony aerial | White | White |
| 100 | NM | KolF-581 | 0.97 | 0.07 | Cottony low | White | White |
| 101 | LVC | MitF-490 | 0.98 | 0.04 | Cottony aerial | White/Purple | White/Purple |
| 102 | LVC | LweF-500.5 | 1.00 | 0.04 | Cottony aerial | White/Purple | White/Purple |
| 103 | LVC | MitF-490 | 1.03 | 0.04 | Cottony low | White | White |
| 104 | NM | KolF-562 | 1.06 | 0.01 | Cottony aerial | White/Pink | White/Pink |
| 105 | NM | OyaF-541.3 | 1.06 | 0.02 | Compact | White/Purple | White/Purple |
| 106 | NM | KolF-577.4 | 1.07 | 0.02 | Cottony low | White/Purple | White/Purple |
| 107 | NM | LirF-604 | 1.09 | 0.01 | Cottony aerial | White | White |
| 108 | NM | KolF-577.2 | 1.13 | 0.02 | Cottony aerial | White/Pink | White/Pink |
| 109 | NM | ApaF-560 | 1.20 | 0.00 | Cottony low | White/Pink | White/Pink |
| 110 | KP | NakF-521.1 | 1.21 | 0.02 | Cottony aerial | White/Pink | White/Pink |
| 111 | KP | NakF-108.3 | 0.50 | 0.01 | Cottony aerial | White | White |
| 112 | KP | NakF-519.2 | 0.57 | 0.21 | Cottony aerial | White/Purple | White |
| 113 | KP | NakF-105.1 | 0.64 | 0.09 | Cottony aerial | White | White |
| 114 | KP | NakF-105 | 0.70 | 0.30 | Cottony aerial | White | White |
| 115 | LVC | MitF-489.3 | 0.71 | 0.01 | Cottony low | White | White |
| 116 | KP | AmuF-516 | 0.71 | 0.02 | Cottony aerial | White | White |
| 117 | NM | LirF-595 | 0.71 | 0.01 | Cottony aerial | White | White |
| 118 | LVC | LweF-494 | 0.72 | 0.01 | Cottony aerial | White | Cream |
| 119 | LVC | LweF-221.6 | 0.76 | 0.02 | Cottony low | White | White |
| 120 | KP | NakF-524.3 | 0.76 | 0.02 | Cottony aerial | White | White/Purple |
| 121 | LVC | MitF-338.1 | 0.78 | 0.03 | Compact | White | Brown |
| 122 | WM | KirF-306-1 | 0.79 | 0.02 | Compact | White | Brown |
| 123 | LVC | LweF-214.1 | 0.80 | 0.05 | Cottony aerial | White | White |
| 123 | LVC | MubF-462.1 | 0.80 | 0.05 | Cottony aerial | White | White |
| 125 | LVC | MubF-462 | 0.81 | 0.01 | Cottony aerial | White/Purple | White/Purple |
| 126 | WM | BusF-253 | 0.81 | 0.01 | Cottony aerial | White | White/Purple |
| 127 | LVC | LweF-329 | 0.82 | 0.03 | Cottony aerial | White | Cream |
| 128 | LVC | MubF-472 | 0.82 | 0.02 | Cottony aerial | White | White/Purple |
| 129 | KP | NapF-104.2 | 0.82 | 0.03 | Cottony aerial | White | White |
| 130 | NM | ApaF-551.2 | 0.82 | 0.14 | Compact | White | White |
| 131 | LVC | MubF-474 | 0.83 | 0.07 | Compact | White | White |
| 132 | KP | NapF-113 | 0.83 | 0.02 | Cottony aerial | White/Purple | White/Purple |
| 133 | KP | NakF-524.2 | 0.83 | 0.04 | Compact | White | White |
| 134 | NM | KirF-418 | 0.83 | 0.07 | Cottony low | White | White |
| 135 | WM | KirF-306.2 | 0.83 | 0.01 | Cottony low | White/Pink | White/Pink |
| 136 | LVC | LweF-221.4 | 0.84 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 137 | LVC | MitF-485 | 0.84 | 0.04 | Cottony low | Cream | Cream |
| 138 | LVC | MubF-468 | 0.86 | 0.02 | Cottony aerial | White/Purple | White/Purple |
| 139 | LVC | MubF-469 | 0.86 | 0.04 | Cottony aerial | White/Pink | White/Pink |
| 140 | NM | OyaF-532.3 | 0.86 | 0.06 | Cottony aerial | White/Pink | White/Pink |
| 141 | LVC | LweF-221.2 | 0.87 | 0.04 | Cottony aerial | Cream | Cream |
| 142 | LVC | MubF-473 | 0.87 | 0.00 | Cottony aerial | White/Purple | White/Purple |
| 143 | WM | IbaF-274 | 0.87 | 0.02 | Cottony low | Cream | Cream |
| 144 | WM | KirF-306.2 | 0.87 | 0.01 | Cottony aerial | White/Purple | White/Purple |
| 145 | WM | KirF-283.3 | 0.87 | 0.01 | Cottony low | Cream | Cream |
| 146 | LVC | LweF-221.5 | 0.88 | 0.04 | Cottony low | White/Purple | White/Purple |
| 147 | LVC | LweF-293 | 0.88 | 0.03 | Cottony aerial | Cream/White | White |
| 148 | LVC | MitF-345.1 | 0.88 | 0.05 | Cottony aerial | White/Purple | White/Pink |
| 149 | WM | HoiF-389.2 | 0.88 | 0.02 | Cottony aerial | White/Pink | White/Pink |
| 150 | WM | kirF-298 | 0.88 | 0.02 | Cottony aerial | White/Pink | White/Pink |
| 151 | WM | MbaF-235 | 0.88 | 0.04 | Cottony low | Cream | Cream |
| 152 | NM | LirF-601.1 | 0.89 | 0.04 | Compact | White/Purple | White/Purple |
| 153 | WM | KyeF-324 | 0.89 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 154 | WM | KirF-314 | 0.89 | 0.05 | Cottony aerial | White/Purple | White/Purple |
| 155 | LVC | LweF-214 | 0.90 | 0.04 | Cottony aerial | White/Purple | White/Purple |
| 156 | WM | BusF-257 | 0.90 | 0.03 | Cottony aerial | White/Pink | White/Pink |
| 157 | WM | KamF-285.3 | 0.90 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 158 | WM | SheF-250 | 0.90 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 159 | LVC | LweF-496 | 0.91 | 0.01 | Cottony | White/Pink | White/Pink |
| 160 | LVC | MitF-478 | 0.91 | 0.01 | Cottony aerial | White/Pink | White/Pink |
| 161 | LVC | LweF-500 | 0.92 | 0.01 | Cottony aerial | Cream | Cream |
| 162 | NM | LirF-600 | 0.93 | 0.01 | Cottony aerial | White/Pink | White/Pink |
| 163 | LVC | LwF-202 | 0.94 | 0.05 | Cottony aerial | Cream | Cream |
| 164 | LVC | LwF-213 | 0.94 | 0.01 | Cottony aerial | Cream | Cream |
| 165 | KP | MorF-118.1 | 0.94 | 0.05 | Compact aerial | White/Pink | White/Pink |
| 166 | NM | ApaF-548.1 | 0.94 | 0.02 | Compact aerial | Cream | Cream |
| 167 | WM | BusF-258.3 | 0.94 | 0.05 | Cottony low | Cream | Cream |
| 168 | WM | HoiF-393.2 | 0.94 | 0.08 | Cottony aerial | White | White/Purple |
| 168 | WM | KirF-309 | 0.94 | 0.01 | Cottony low | Cream | Cream |
| 170 | LVC | MitF-335.3 | 0.95 | 0.05 | Cottony aerial | White/Purple | White/Purple |
| 171 | LVC | MitF-485.1 | 0.95 | 0.01 | Cottony aerial | Cream/White | White |
| 172 | LVC | LweF-225 | 0.96 | 0.03 | Cottony aerial | White/Purple | White/Purple |
| 173 | LVC | LweF-505 | 0.96 | 0.04 | Cottony low | Cream | Cream |
| 174 | LVC | MitF-477 | 0.97 | 0.04 | Cottony aerial | White/Pink | White/Pink |
| 175 | KP | AmuF-515 | 0.98 | 0.01 | Cottony low | Cream | Cream |
| 176 | NM | ApaF-552.1 | 0.98 | 0.10 | Cottony low | Cream | Cream |
| 177 | NM | OyaF-542.1 | 0.98 | 0.01 | Cottony low | Cream | Cream |
| 178 | WM | KirF-298.2 | 0.98 | 0.06 | Cottony aerial | Cream/White | White |
| 179 | LVC | MitF-340 | 0.99 | 0.02 | Cottony | White/Pink | White/Pink |
| 180 | LVC | MitF-485.3 | 0.99 | 0.02 | Cottony | White/Purple | White/Purple |
| 181 | KP | AmuF517.2 | 0.99 | 0.01 | Cottony low | Cream | Cream |
| 182 | NM | ApaF-588 | 0.99 | 0.01 | Cottony low | Cream/White | White |
| 111 | WM | KamF-2851 | 1.00 | 0.01 | Cottony low | Cream | Cream |
| 183 | NM | KolF-577.3 | 1.01 | 0.02 | Compact | White | White |
| 184 | NM | OyaF-537.2 | 1.01 | 0.01 | Cottony low | Cream | Cream |
| 185 | WM | KamF-290.2 | 1.01 | 0.02 | Cottony aerial | White/Purple | White/Purple |
| 186 | NM | ApaF-558 | 1.02 | 0.05 | Cottony low | Cream | Cream |
| 187 | NM | OyaF-542.2 | 1.03 | 0.02 | Compact | Cream/White | White |
| 188 | WM | HoiF-383.1 | 1.03 | 0.04 | Cottony aerial | Cream/White | Cream/White |
| 189 | NM | OyAf-537.1 | 1.04 | 0.03 | Cottony low | Cream | Cream |
| 190 | NM | OyaF-535 | 1.05 | 0.01 | Cottony aerial | White/Purple | White/Purple |
| 191 | NM | KolF-564.2 | 1.06 | 0.05 | Cottony aerial | White/Purple | White/Purple |
| 192 | KP | MorF-119.1 | 1.07 | 0.01 | Cottony low | Cream | Cream |
| 193 | NM | KolF-564.1 | 1.09 | 0.13 | Cottony low | Cream/White | Cream/White |
| 194 | NM | LirF-607 | 1.09 | 0.01 | Compact | White/Purple | White/Purple |
| 195 | NM | LirF-535.2 | 1.11 | 0.01 | Cottony aerial | Cream/White | Cream/White |
| 196 | NM | OyaF-534 | 1.22 | 0.03 | Cottony low | Cream/White | Cream/White |

1EH=Eastern Highlands, LVC=Lake Victoria Crescent and Mbale Farmland, KP=Karamoja Pastoral zone, NM=Northern Mixed Farming System zone, SWH=Southwestern Highlands, WM=Western Mixed Farming System zone, WN=West Nile Mixed Farming System zone. 2Daily growth rates of 0.17-0.53 cm=low, 0.54-0.89 cm=moderate and >0.9 cm=high.

## Table S3: Pathogenicity of Fusarium spp. strains following inoculation on five common bean varieties in the screenhouse

| **S. No.** | **Strain** | **Agroecology1** | **District** | **Mean Disease Severity Index (%)2** | **SE** |
| --- | --- | --- | --- | --- | --- |
| 1 | AMU F-513-3 | KP | Amudat | 26.4 | 4.1 |
| 2 | Amu515-2 | KP | Amudat | 50.6 | 4.9 |
| 3 | AMU517 | KP | Amudat | 50.8 | 6.9 |
| 4 | AMUF-517-1 | KP | Amudat | 16.2 | 3.9 |
| 5 | AMUF-518-2 | KP | Amudat | 63.3 | 4.2 |
| 6 | APA546 | NM | Apac | 42.2 | 2.6 |
| 7 | APA548 | NM | Apac | 54.8 | 3.3 |
| 8 | APA551 | NM | Apac | 59.3 | 7.8 |
| 9 | APAF-552-2 | NM | Apac | 21.4 | 4.9 |
| 10 | APAF-560 | NM | Apac | 66.4 | 10.7 |
| 11 | BUS256 | WM | Bushenyi | 57.4 | 5.9 |
| 12 | BUS258 | WM | Bushenyi | 61.4 | 4.8 |
| 13 | BUSF-255-1 | WM | Bushenyi | 22.0 | 3.6 |
| 14 | BUSF-258-1 | WM | Bushenyi | 87.0 | 7.5 |
| 15 | GOMF-492 | LVC | Gomba | 15.0 | 2.3 |
| 16 | GULF-449-2 | NM | Gulu | 30.0 | 7.1 |
| 17 | GULF-451-1 | NM | Gulu | 8.1 | 7.0 |
| 18 | HOIF-393 | WM | Hoima | 49.7 | 9.1 |
| 19 | HOIF-393-3 | WM | Hoima | 61.8 | 7.9 |
| 20 | HOIF-385 | WM | Hoima | 0.9 | 0.9 |
| 21 | IBAF-270 | WM | Ibanda | 39.1 | 5.0 |
| 22 | KABF-113-2 | SWH | Kabale | 35.9 | 8.6 |
| 23 | KABF-114 | WM | Kabale | 35.2 | 6.3 |
| 24 | KABF-91-1 | SWH | Kabale | 28.8 | 6 |
| 25 | KABF-103 | SWH | Kabale | 98.3 | 1.6 |
| 26 | KABF-108-1 | SWH | Kabale | 63.2 | 10.8 |
| 27 | KABF-109-1 | SWH | Kabale | 62.8 | 6.9 |
| 28 | KAMF-290 | WM | Kamwenge | 34.5 | 5.9 |
| 29 | KAMF-290-1 | WM | Kamwenge | 48.7 | 5.6 |
| 30 | KAM493-3 | WM | Kamwenge | 55.6 | 5.9 |
| 31 | KAMF-289 | WM | Kamwenge | 22.0 | 6.1 |
| 32 | KAP372 | EH | Kapchorwa | 50.0 | 4.2 |
| 33 | KAPF-367 | EH | Kapchorwa | 63.5 | 9.0 |
| 34 | KIR418 | WM | Kiryadongo | 30.0 | 3.4 |
| 35 | KIRF-416 | WM | Kiryadongo | 14.0 | 6.5 |
| 36 | KOLF-557-4 | NM | Kole | 61.8 | 10.6 |
| 37 | KOLF-581 | NM | Kole | 59.6 | 11.5 |
| 38 | KOLF-562 | NM | Kole | 72.6 | 10.9 |
| 39 | KOLF-563 | NM | Kole | 65.8 | 5.7 |
| 40 | KYEF-320-3 | WM | Kyenjojo | 49.4 | 9.9 |
| 41 | KYEF-323 | WM | Kyenjojo | 46.3 | 6.3 |
| 42 | LIRF-601-2 | NM | Lira | 23.4 | 5.0 |
| 43 | LWEF-221-3 | LVC | Lwengo | 48.2 | 5.3 |
| 44 | LWEF-223 | LVC | Lwengo | 70.0 | 5.3 |
| 45 | LWEF-296 | LVC | Lwengo | 51.0 | 6.1 |
| 46 | LWEF-483 | LVC | Lwengo | 30.5 | 4.2 |
| 47 | LWEF-496 | LVC | Lwengo | 50.3 | 4.5 |
| 48 | LWE500-2 | LVC | Lwengo | 43.0 | 5.6 |
| 49 | LWEF-504 | LVC | Lwengo | 32.6 | 5.3 |
| 50 | LWEF-507 | LVC | Lwengo | 55.1 | 8.1 |
| 51 | LWEF-595-2 | LVC | Lwengo | 53.4 | 7.0 |
| 52 | LWF-E604 | LVC | Lwengo | 58.1 | 5.3 |
| 53 | LWEF-215 | LVC | Lwengo | 19.3 | 7.8 |
| 54 | LWEF-220 | LVC | Lwengo | 65.2 | 5.8 |
| 55 | LWEF-221-3 | LVC | Lwengo | 70.8 | 8.8 |
| 56 | LWEF-497 | LVC | Lwengo | 23.7 | 3.5 |
| 57 | MASF-403 | WM | Masindi | 41.0 | 4.1 |
| 58 | MBAF-R229 | WM | Mbarara | 37.0 | 7.2 |
| 59 | MBAF-R234 | WM | Mbarara | 30.2 | 4.8 |
| 60 | MITF-340-2 | LVC | Mityana | 55.8 | 7.9 |
| 61 | MITF-345 | LVC | Mityana | 41.8 | 5.7 |
| 62 | MITF-467 | LVC | Mityana | 50.2 | 6.5 |
| 63 | MITF-487 | LVC | Mityana | 31.3 | 5.6 |
| 64 | MITF-489 | LVC | Mityana | 42.4 | 5.3 |
| 65 | MITF-489-2 | LVC | Mityana | 42.8 | 3.4 |
| 66 | MITF-491-2 | LVC | Mityana | 52.6 | 5.3 |
| 67 | MITF-481 | LVC | Mityana | 73.1 | 8.8 |
| 68 | MITF-490 | LVC | Mityana | 88.3 | 5.0 |
| 69 | MITF-491-1 | LVC | Mityana | 27.8 | 4.0 |
| 70 | MITF-487 | LVC | Mityana | 75.0 | 8.3 |
| 71 | MORF-119 | KP | Moroto | 57.4 | 5.7 |
| 72 | MUBF-463 | LVC | Mubende | 60.7 | 8.0 |
| 73 | MUBF-463-1 | LVC | Mubende | 61.7 | 7.6 |
| 74 | MUBF-465 | LVC | Mubende | 30.1 | 5.8 |
| 75 | MUBF-466 | LVC | Mubende | 61.0 | 11.0 |
| 76 | MUBF-460 | LVC | Mubende | 10.7 | 4.8 |
| 77 | MUBF-461 | LVC | Mubende | 62.0 | 10.0 |
| 78 | MUBF-462-2 | LVC | Mubende | 21.9 | 5.1 |
| 79 | NAKF-105-1 | KP | Nakapiripirit | 46.0 | 5.1 |
| 80 | NAKF-106 | KP | Nakapiripirit | 40.1 | 5.1 |
| 81 | NAKF-108-2 | KP | Nakapiripirit | 28.3 | 3.0 |
| 82 | NAKF-375 | KP | Nakapiripirit | 57.3 | 11.6 |
| 83 | NAKF-520 | KP | Nakapiripirit | 45.1 | 4.9 |
| 84 | NAKF-520-2 | KP | Nakapiripirit | 42.3 | 6.1 |
| 85 | NAKF-521 | KP | Nakapiripirit | 58.9 | 8.9 |
| 86 | NAKF-102-2 | KP | Nakapiripirit | 20.8 | 5.3 |
| 87 | NAKF-106-2 | KP | Nakapiripirit | 17.5 | 3.4 |
| 88 | NAKF-518-1 | KP | Nakapiripirit | 18.6 | 4.5 |
| 89 | NAKF-524 | KP | Nakapiripirit | 10.9 | 4.9 |
| 90 | NAPF-104.1 | KP | Nakapiripirit | 32.8 | 4.5 |
| 91 | NAPF-109-2 | KP | Nakapiripirit | 37.5 | 4.4 |
| 92 | OYAF-541-2 | NM | Oyam | 34.9 | 5.2 |
| 93 | OYAF-541-3 | NM | Oyam | 76.0 | 6.6 |
| 94 | SHEF-249 | WM | Sheema | 46.2 | 3.2 |
| 95 | SHEF-250 | WM | Sheema | 30.2 | 9.8 |
| 96 | SHEF-250-1 | WM | Sheema | 18.2 | 10.0 |
| 97 | SIRF-349-1 | LVC | Sironko | 59.0 | 10.9 |
| 98 | SIRF-349-3 | LVC | Sironko | 73.8 | 7.8 |
| 99 | SIRF-358 | LVC | Sironko | 25.7 | 4.1 |

1EH=Eastern Highlands, LVC=Lake Victoria Crescent and Mbale Farmlands, KP=Karamoja Pastoral zone, NM=Northern Mixed Farming System zone, SWH=Southwestern Highlands, WM=Western Mixed Farming System zone.2Mean disease severity index (DSI) caused by each strain on the five varieties combined.