**Annex 1.** Average performances of the 300 common bean genotypes for insect traits after infestation by bean bruchid

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| Acc. No. 201066 | 43a-m | 26b-f | 36a-v | 0.027a-d | 7.3i-p | 84.5r-w |
| Acc. No. 207534 | 47a-n | 24ab | 42a-x | 0.038a-e | 8.3k-p | 90.8t-w |
| Acc. No. 207934 | 26a-k | 26b-f | 23a-s | 0.019abc | 6f-o | 79.4o-w |
| Acc. No. 207935 | 29a-l | 28b-i | 24a-s | 0.019abc | 5.7e-o | 81.6p-w |
| Acc. No. 207938 | 38a-m | 28b-i | 20a-s | 0.019abc | 5.3e-n | 54e-w |
| Acc. No. 207942 | 29a-l | 31f-l | 23a-s | 0.02abc | 5d-m | 75.3n-w |
| Acc. No. 207943 | 27a-k | 28b-j | 24a-s | 0.018abc | 6f-o | 88.7s-w |
| Acc. No. 207949 | 63a-p | 26b-f | 57a-z | 0.054a-f | 8.3k-p | 92.6t-w |
| Acc. No. 208367 | 48a-n | 27b-h | 44a-y | 0.04a-e | 7.3i-p | 91.3t-w |
| Acc. No. 208638 | 44a-n | 26b-e | 34a-v | 0.031a-d | 7.3i-p | 79o-w |
| Acc. No. 208995 | 38a-m | 26b-f | 30a-v | 0.026a-d | 7h-p | 81.1o-w |
| Acc. No. 208699 | 35a-l | 26b-e | 29a-u | 0.025a-d | 7h-p | 82.6p-w |
| Acc. No. 208702 | 41a-m | 27b-h | 38a-v | 0.032a-d | 7h-p | 94.9t-w |
| Acc. No. 208703 | 55a-p | 27b-i | 45a-y | 0.05a-f | 7h-p | 84.3q-w |
| Acc. No. 208705 | 11ab | 26b-f | 8a-j | 0.012ab | 4.3b-k | 74.2n-w |
| Acc. No. 211266 | 55a-p | 28b-i | 45a-z | 0.04a-e | 7h-p | 83.3p-w |
| Acc. No. 211267 | 43a-m | 27b-g | 34a-v | 0.028a-d | 7h-p | 80.9o-w |
| Acc. No. 211269 | 56a-p | 27b-g | 45a-z | 0.039a-e | 7.7j-p | 82p-w |
| Acc. No. 211274 | 32a-l | 28b-i | 29a-v | 0.027a-d | 6.3g-o | 92.8t-w |
| Acc. No. 211278 | 55a-p | 27b-i | 49a-z | 0.038a-e | 7.7j-p | 88.5s-w |
| Acc. No. 211279 | 59a-p | 27b-i | 54a-z | 0.123ef | 7.7j-p | 91.3t-w |
| Acc. No. 211280 | 41a-m | 27b-h | 33a-v | 0.024a-d | 7h-p | 80.4o-w |
| Acc. No. 211282 | 62a-p | 26b-f | 58a-z | 0.044a-e | 8j-p | 92.2t-w |
| Acc. No. 211284 | 37a-m | 27b-h | 36a-v | 0.030a-d | 7h-p | 99w |
| Acc. No. 211286 | 56a-p | 27b-g | 46a-z | 0.051a-f | 7.3i-p | 80.5o-w |
| Acc. No. 211293 | 104i-p | 26b-e | 85s-z | 0.064a-f | 9.3n-p | 86.5s-w |
| Acc. No. 211294 | 38a-m | 27b-h | 32a-v | 0.0244a-d | 6.3g-o | 92t-w |
| Acc. No. 211302 | 111l-p | 25b-d | 83r-z | 0.065a-f | 9.7op | 76.4n-w |
| Acc. No. 211304 | 51a-o | 28b-i | 44a-y | 0.039a-e | 7.3i-p | 87.6s-w |
| Acc. No. 211305 | 24a-j | 29c-k | 20a-r | 0.0214a-d | 5d-m | 81.3o-w |
| Acc. No. 211311 | 57a-p | 25abc | 45a-y | 0.043a-e | 8.3k-p | 78.2n-w |
| Acc. No. 211313 | 64a-p | 25a-d | 54a-z | 0.045a-e | 8.3k-p | 84.4q-w |
| Acc. No. 211314 | 40a-m | 28b-i | 36a-v | 0.036a-d | 6.7h-o | 90.9t-w |
| Acc. No. 211315 | 43a-m | 27b-g | 39a-w | 0.032a-d | 7.3i-p | 90.7t-w |
| Acc. No. 211320 | 43a-m | 28b-i | 39a-w | 0.027a-d | 7h-p | 92t-w |
| Acc. No. 211321 | 63a-p | 29c-k | 57a-z | 0.253h | 7.3i-p | 89.7t-w |
| Acc. No. 211322 | 42a-m | 28b-i | 39a-w | 0.135fg | 6.7h-o | 96.1vw |

**Annex 1.** Continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| Acc. No. 211323 | 34a-l | 27b-g | 30a-v | 0.026a-d | 7h-p | 87.3s-w |
| Acc. No. 211324 | 62a-p | 29c-k | 58a-z | 0.95i | 7.3i-p | 94.3t-w |
| Acc. No. 211325 | 85a-p | 26b-f | 74l-z | 0.062a-f | 9m-p | 89.2s-w |
| Acc. No. 211327 | 21a-j | 30d-k | 19a-r | 0.004a | 5.3e-n | 91.8t-w |
| Acc. No. 211329 | 73a-p | 27b-g | 64a-z | 0.048a-e | 8.3k-p | 86.3r-w |
| Acc. No. 211332 | 31a-l | 26b-f | 23a-s | 0.017abc | 6.3g-o | 76.7n-w |
| Acc. No. 211331 | 45a-n | 28b-i | 42a-x | 0.037a-d | 6.7h-o | 90.9t-w |
| Acc. No. 211333 | 70a-p | 27b-h | 61a-z | 0.042a-e | 8j-p | 86.2r-w |
| Acc. No. 211339 | 25a-j | 30d-k | 23a-s | 0.026a-d | 5.3e-n | 94.2t-w |
| Acc. No. 211340 | 59a-p | 30d-k | 43a-y | 0.05a-f | 6.7h-o | 80.5o-w |
| Acc. No. 211341 | 30a-l | 28b-i | 27a-u | 0.024a-d | 6.3g-o | 88.6s-w |
| Acc. No. 211344 | 33a-l | 26b-f | 27a-t | 0.022a-d | 6.7h-o | 80.4o-w |
| Acc. No. 211346 | 39a-m | 26b-f | 36a-v | 0.025a-d | 7.3i-p | 91.7t-w |
| Acc. No. 211347 | 27a-k | 28b-i | 21a-s | 0.018abc | 5.3e-n | 79o-w |
| Acc. No. 211348 | 74a-p | 26b-f | 62a-z | 0.06a-f | 8.3k-p | 80.1o-w |
| Acc. No. 211349 | 63a-p | 26b-f | 54a-z | 0.041a-e | 8j-p | 89.1s-w |
| Acc. No. 211350 | 38a-m | 27b-g | 30a-v | 0.025a-d | 6.7h-o | 75.6n-w |
| Acc. No. 211356 | 44a-n | 27b-g | 41a-x | 0.029a-d | 7.7j-p | 93.9t-w |
| Acc. No. 211361 | 43a-m | 25a-d | 37a-v | 0.027a-d | 8j-p | 88.3s-w |
| Acc. No. 211362 | 28a-l | 27b-h | 23a-s | 0.015abc | 6.3g-o | 85.7r-w |
| Acc. No. 211365 | 34a-l | 27b-g | 21a-s | 0.020a-d | 5.7e-o | 68.1k-w |
| Acc. No. 211366 | 55a-p | 27b-h | 43a-y | 0.033a-d | 7.7j-p | 75.8n-w |
| Acc. No. 211367 | 80a-p | 26b-f | 61a-z | 0.056a-f | 8.3k-p | 77.6n-w |
| Acc. No. 211382 | 35a-l | 27b-i | 24a-s | 0.020a-d | 6.3g-o | 80.9o-w |
| Acc. No. 211483 | 26a-k | 27b-i | 24a-s | 0.019abc | 6.3g-o | 93.1t-w |
| Acc. No. 211546 | 43a-m | 27b-h | 42a-y | 0.038a-e | 7h-p | 98.3w |
| Acc. No. 211552 | 75a-p | 27b-g | 60a-z | 0.058a-f | 8.3k-p | 80.7o-w |
| Acc. No. 211553 | 15a-f | 28b-i | 11a-l | 0.01a | 4.3b-k | 70.8m-w |
| Acc. No. 212860 | 63a-p | 26b-f | 58a-z | 0.05a-f | 8.3k-p | 92.1t-w |
| Acc. No. 213046 | 41a-m | 29c-j | 37a-v | 0.034a-d | 6.3g-o | 90.4t-w |
| Acc. No. 213197 | 51a-o | 27b-i | 42a-y | 0.029a-d | 7h-p | 86.3r-w |
| Acc. No. 213198 | 42a-m | 26b-f | 36a-v | 0.026a-d | 7.3i-p | 86.1r-w |
| Acc. No. 214662 | 63a-p | 26b-f | 51a-z | 0.041a-e | 8j-p | 83.1p-w |
| Acc. No. 214663 | 31a-l | 27b-g | 28a-u | 0.022a-d | 6.7h-o | 90t-w |
| Acc. No. 214664 | 37a-m | 26b-f | 35a-v | 0.031a-d | 7.3i-p | 95u-w |
| Acc. No. 214665 | 37a-m | 26b-f | 35a-v | 0.030a-d | 7h-p | 93.4t-w |
| Acc. No. 214667 | 48a-n | 26b-f | 43a-y | 0.033a-d | 7.3i-p | 92.5t-w |

**Annex 1.** Continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| Acc. No. 214671 | 33a-l | 27b-g | 27a-u | 0.023a-d | 5.7e-o | 68.9l-w |
| Acc. No. 214675 | 76a-p | 27b-g | 66b-z | 0.052a-f | 8j-p | 86.7s-w |
| Acc. No. 214676 | 54a-o | 25abc | 48a-z | 0.037a-e | 8.3k-p | 89.3s-w |
| Acc. No. 214677 | 47a-n | 27b-i | 37a-v | 0.03a-d | 6.3g-o | 71.6n-w |
| Acc. No. 214678 | 21a-j | 28b-i | 21a-s | 0.019abc | 5.7e-o | 100w |
| Acc. No. 215048 | 110k-p | 26b-e | 94v-z | 0.083a-f | 9.3n-p | 86.3r-w |
| Acc. No. 215049 | 49a-n | 28b-j | 40a-x | 0.036a-d | 7h-p | 87.3s-w |
| Acc. No. 215050 | 84a-p | 25abc | 76m-z | 0.064a-f | 9.3n-p | 90.7t-w |
| Acc. No. 215051 | 51a-o | 27b-g | 49a-z | 0.043a-e | 7.7j-p | 93.1t-w |
| Acc. No. 215391 | 32a-l | 29c-k | 30a-v | 0.029a-d | 6.3g-o | 95.1t-w |
| Acc. No. 215542 | 39a-m | 25a-d | 27a-u | 0.024a-d | 7h-p | 76.3n-w |
| Acc. No. 215545 | 37a-m | 27b-h | 35a-v | 0.028a-d | 7h-p | 94.1t-w |
| Acc. No. 215719 | 128n-p | 27b-g  | 107yz | 0.106def | 9.3n-p | 81.5p-w |
| Acc. No. 215720 | 93b-p | 27b-g | 77n-z | 0.061a-f | 9m-p | 84.4q-w |
| Acc. No. 216820 | 68a-p | 27b-h | 56a-z | 0.052a-f | 8j-p | 83.4p-w |
| Acc. No. 219231 | 84a-p | 27b-g | 71g-z | 0.062a-f | 8.7l-p | 84.5r-w |
| Acc. No. 219233 | 55a-p | 26b-f | 42a-x | 0.032a-d | 7.7j-p | 75.6n-w |
| Acc. No. 219337 | 64a-p | 27b-g | 53a-z | 0.071a-f | 7.7j-p | 83p-w |
| Acc. No. 219338 | 62a-p | 26b-f | 49a-z | 0.043a-e | 8j-p | 77.7n-w |
| Acc. No. 219389 | 78a-p | 27b-i | 60a-z | 0.047a-e | 7.7j-p | 73.3n-w |
| Acc. No. 219340 | 26a-k | 26b-f | 18a-r | 0.014abc | 5.7e-o | 70.2m-w |
| Acc. No. 223329 | 138p | 26b-f | 105x-z | 0.098b-f | 9.3n-p | 74.5n-w |
| Acc. No. 228077 | 95c-p | 26b-f | 81p-z | 0.099c-f | 9m-p | 85.5r-w |
| Acc. No. 228079 | 81a-p | 26b-f | 72i-z | 0.059a-f | 9m-p | 88.5s-w |
| Acc. No. 228080 | 41a-m | 27b-g | 32a-v | 0.026a-d | 6.7h-o | 85.9r-w |
| Acc. No. 228081 | 47a-n | 26b-f | 35a-v | 0.031a-d | 7.3i-p | 76.4n-w |
| Acc. No. 228082 | 104h-p | 26b-f | 92u-z | 0.078a-f | 9.3n-p | 89.7t-w |
| Acc. No. 228083 | 95c-p | 26b-f | 70f-z | 0.051a-f | 9m-p | 73.7n-w |
| Acc. No. 228084 | 62a-p | 27b-h | 47a-z | 0.038a-e | 7.7j-p | 73n-w |
| Acc. No. 228085 | 71a-p | 26b-f | 58a-z | 0.05a-f | 8.3k-p | 80.6o-w |
| Acc. No. 228086 | 86a-p | 25a-d | 63a-z | 0.056a-f | 8.7l-p | 80.4o-w |
| Acc. No. 228088 | 52a-o | 27b-h | 38a-w | 0.037a-d | 7h-p | 78.7n-w |
| Acc. No. 228089 | 63a-p | 26b-f | 48a-z | 0.039a-e | 7.7j-p | 73.1n-w |
| Acc. No. 228090 | 61a-p | 27b-g | 48a-z | 0.056a-f | 7.3i-p | 73.4n-w |
| Acc. No. 228246 | 97f-p | 26b-e | 91t-z | 0.218gh | 9.3n-p | 92.6t-w |
| Acc. No. 228247 | 70a-p | 26b-f | 49a-z | 0.046a-e | 7.7j-p | 73n-w |
| Acc. No. 228522 | 85a-p | 26b-f | 67c-z | 0.054a-f | 8.3k-p | 78n-w |

**Annex 1.** Continued

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| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| Acc. No. 228811 | 90a-p | 27b-g | 73j-z | 0.061a-f | 9m-p | 83.4p-w |
| Acc. No. 228812 | 62a-p | 26b-e | 49a-z | 0.039a-e | 8.3k-p | 77.7n-w |
| Acc. No. 228813 | 79a-p | 26b-f | 59a-z | 0.049a-e | 8.3k-p | 75.7n-w |
| Acc. No. 228911 | 62a-p | 27b-h | 58a-z | 0.059a-f | 7.7j-p | 90t-w |
| Acc. No. 228912 | 41a-m | 26b-e | 30a-v | 0.023a-d | 7h-p | 79.1o-w |
| Acc. No. 228913 | 39a-m | 26b-f | 31a-v | 0.024a-d | 7h-p | 79.2o-w |
| Acc. No. 229814 | 54a-o | 26b-f | 44a-y | 0.036a-d | 8j-p | 82.1p-w |
| Acc. No. 230044 | 34a-l | 27b-h | 29a-v | 0.021a-d | 6.7h-o | 88.1s-w |
| Acc. No. 230525 | 76a-p | 26b-f | 59a-z | 0.045a-e | 8j-p | 79.7o-w |
| Acc. No. 230526 | 53a-o | 26b-f | 39a-w | 0.032a-d | 7.3i-p | 71m-w |
| Acc. No. 230661 | 74a-p | 25abc | 67d-z | 0.06a-f | 9.3n-p | 89.7t-w |
| Acc. No. 232196 | 83a-p | 27b-h | 59a-z | 0.048a-e | 7.7j-p | 74.7n-w |
| Acc. No. 235502 | 63a-p | 26b-f | 55a-z | 0.048a-e | 8.3k-p | 91t-w |
| Acc. No. 235503 | 34a-l | 26b-f | 29a-v | 0.021a-d | 6.7h-o | 84.7r-w |
| Acc. No. 235506 | 77a-p | 26b-f | 63a-z | 0.051a-f | 8.3k-p | 80.9o-w |
| Acc. No. 235507 | 41a-m | 27b-g | 33a-v | 0.023a-d | 7h-p | 80.4o-w |
| Acc. No. 235508 | 32a-l | 26b-f | 26a-t | 0.022a-d | 6.7h-o | 81.5p-w |
| Acc. No. 237079 | 72a-p | 21a | 56a-z | 0.044a-e | 11p | 77.3n-w |
| Acc. No. 237080 | 50a-n | 27b-h | 43a-y | 0.021a-d | 7.7j-p | 88.7s-w |
| Acc. No. 237993 | 60a-p | 27b-g | 41a-x | 0.033a-d | 7.3i-p | 68.1k-w |
| Acc. No. 241134 | 53a-o | 27b-g | 37a-v | 0.028a-d | 7h-p | 69.2m-w |
| Acc. No. 241729 | 62a-p | 27b-h | 34a-v | 0.012ab | 6.3g-o | 52.5b-w |
| Acc. No. 241730 | 65a-p | 27b-g | 49a-z | 0.034a-d | 7.7j-p | 74.6n-w |
| Acc. No. 241734 | 48a-n | 27b-g | 37a-v | 0.03a-d | 7h-p | 79.6o-w |
| Acc. No. 241736 | 21a-j | 26b-f | 15a-o | 0.012a | 5.3e-n | 75.1n-w |
| Acc. No. 241737 | 35a-l | 26b-f | 21a-s | 0.026a-d | 5.7e-o | 55.71f-w |
| Acc. No. 241739 | 56a-p | 27b-h | 44a-y | 0.038a-e | 7h-p | 77.8n-w |
| Acc. No. 241748 | 35a-l | 28b-i | 29a-u | 0.023a-d | 6.3g-o | 83.5p-w |
| Acc. No. 241750 | 53a-o | 26b-f | 46a-z | 0.038a-e | 7.7j-p | 88.1s-w |
| Acc. No. 241752 | 54a-p | 26b-f | 46a-z | 0.034a-d | 7.7j-p | 84p-w |
| Acc. No. 241756 | 86a-p | 26b-e | 73j-z | 0.062a-f | 9m-p | 85.6r-w |
| Acc. No. 241757 | 72a-p | 27b-g | 57a-z | 0.018abc | 8j-p | 77.9n-w |
| Acc. No. 241807 | 55a-p | 26b-f | 49a-z | 0.029a-d | 8j-p | 90.4t-w |
| Acc. No. 241813 | 59a-p | 26b-f | 54a-z | 0.042a-e | 8.3k-p | 91.7t-w |
| Acc. No. 241814 | 40a-m | 26b-f | 38a-v | 0.029a-d | 7.3i-p | 95.8u-w |
| Acc. No. 244805 | 90a-p | 27b-g | 78o-z | 0.061a-f | 9m-p | 88.1s-w |
| Acc. No. 241809 | 89a-p | 26b-f | 56a-z | 0.048a-e | 8.3k-p | 64.4j-w |

**Annex 1.** Continued

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| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| NC-01 | 46a-n | 27b-i | 37a-v | 0.031a-d | 7h-p | 80.2o-w |
| NC-02 | 83a-p | 27b-g | 59a-z | 0.057a-f | 8j-p | 69.7m-w |
| NC-03 | 41a-m | 29c-j | 17a-p | 0.016abc | 5d-m | 53.5d-w |
| NC-05 | 33a-l | 27b-h | 26a-t | 0.021a-d | 6.3g-o | 73.4n-w |
| NC-06 | 38a-m | 27b-h | 33a-v | 0.026a-d | 6.7h-o | 86.3r-w |
| NC-07 | 20a-i | 26b-f | 15a-o | 0.013ab | 5d-m | 70.5m-w |
| NC-08 | 36a-l | 29c-k | 27a-u | 0.018abc | 6f-o | 75.2n-w |
| NC-09 | 53a-o | 26b-f | 47a-z | 0.037a-e | 8j-p | 88.9s-w |
| NC-10 | 56a-p | 29c-k | 32a-v | 0.021a-d | 6f-o | 57.7g-w |
| NC-11 | 54a-p | 27b-i | 44a-y | 0.038a-e | 7h-p | 80.9o-w |
| NC-12 | 46a-n | 28b-i | 40a-x | 0.028a-d | 6.7h-o | 83.8p-w |
| NC-13 | 62a-p | 27b-h | 47a-z | 0.049a-e | 7.7j-p | 79.7o-w |
| NC-14 | 43a-m | 27b-g | 40a-x | 0.029a-d | 7.3i-p | 94.9t-w |
| NC-15 | 28a-l | 27b-i | 21a-s | 0.017abc | 6f-o | 76.3n-w |
| NC-16 | 20a-h | 26b-f | 12a-m | 0.009a | 3.3a-i | 62.4i-w |
| NC-17 | 30a-l | 27b-h | 25a-s | 0.018abc | 6.3g-o | 76.8n-w |
| NC-18 | 28a-l | 27b-h | 28a-u | 0.026a-d | 6.3g-o | 97.9vw |
| NC-19 | 52a-o | 27b-i | 40a-x | 0.033a-d | 7h-p | 77.9n-w |
| NC-20 | 23a-j | 28b-i | 23a-s | 0.016abc | 5.7e-o | 98w |
| NC-22 | 58a-p | 28b-i | 51a-z | 0.043a-e | 7.7j-p | 89.4s-w |
| NC-24 | 25a-j | 29c-j | 19a-r | 0.017abc | 5.3e-n | 71.5n-w |
| NC-25 | 56a-p | 25abc | 47a-z | 0.036a-d | 8.7l-p | 83.5p-w |
| NC-28 | 36a-m | 28b-i | 31a-v | 0.025a-d | 6.7h-o | 83.1p-w |
| NC-29 | 75a-p | 26b-e | 61a-z | 0.057a-f | 8.7l-p | 82.8p-w |
| NC-30 | 74a-p | 26b-f | 65a-z | 0.055a-f | 8.7l-p | 88s-w |
| NC-32 | 44a-n | 27b-h | 37a-v | 0.022a-d | 7.3i-p | 85.8r-w |
| NC-33 | 35a-l | 28b-i | 20a-s | 0.017abc | 5.3e-n | 66.8k-w |
| NC-34 | 83a-p | 27b-h | 75l-z | 0.054a-f | 8.3k-p | 90.8t-w |
| NC-35 | 68a-p | 27b-i | 50a-z | 0.047a-e | 7.7j-p | 73.4n-w |
| NC-36 | 64a-p | 27b-i | 52a-z | 0.049a-e | 7.7j-p | 80.6o-w |
| NC-37 | 42a-m | 28b-i | 37a-v | 0.025a-d | 6.7h-o | 86.6s-w |
| NC-38 | 96e-p | 29c-j | 82a-z | 0.086a-f | 8j-p | 85.7r-w |
| NC-39 | 66a-p | 27b-h | 56a-z | 0.041a-e | 8j-p | 84.6r-w |
| NC-40 | 76a-p | 27b-g | 65a-z | 0.062a-f | 8.3k-p | 86.3r-w |
| NC-41 | 81a-p | 28b-i | 62a-z | 0.03a-d | 8j-p | 75.9n-w |
| NC-43 | 62a-p | 27b-i | 52a-z | 0.046a-e | 7.7j-p | 80.7o-w |
| NC-44 | 74a-p | 27b-g | 61a-z | 0.059a-f | 8j-p | 82.2p-w |

**Annex 1.** Continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| NC-45 | 80a-p | 27b-h | 66a-z | 0.057a-f | 8.3k-p | 83.8p-w |
| NC-46 | 134op | 26b-f | 110z | 0.056a-f | 9.7op | 82.4p-w |
| NC-47 | 82a-p | 26b-f | 73k-z | 0.068a-f | 8.7l-p | 91.6t-w |
| NC-48 | 86a-p | 26b-f | 47a-z | 0.044a-e | 8j-p | 58.3g-w |
| NC-49 | 76a-p | 28b-j | 67a-z | 0.058a-f | 7.7j-p | 90.7t-w |
| NC-50 | 60a-p | 27b-i | 53a-z | 0.029a-d | 7.7j-p | 89.8t-w |
| NC-51 | 81a-p | 26b-f | 61a-z | 0.042a-e | 8j-p | 78n-w |
| NC-52 | 96d-p | 27b-h | 72i-z | 0.063a-f | 8.3k-p | 76.3n-w |
| NC-53 | 55a-p | 28b-i | 50a-z | 0.045a-e | 7h-p | 88.8s-w |
| NC-54 | 51a-o | 27b-h | 44a-y | 0.033a-d | 7.3i-p | 90.1t-w |
| NC-55 | 16a-g | 28b-i | 14a-o | 0.013ab | 5d-m | 83.1p-w |
| NC-56 | 18a-g | 31g-m | 17a-q | 0.007a | 4.7c-l | 90t-w |
| NC-57 | 18a-g | 27b-i | 15a-o | 0.01a | 5.3e-n | 83.1p-w |
| NC-58 | 18a-g | 29c-k | 16a-o | 0.017abc | 5d-m | 90.6t-w |
| NC-59 | 57a-p | 27b-h | 47a-z | 0.037a-e | 7.3i-p | 78.1n-w |
| NC-60 | 86a-p | 27b-i | 76l-z | 0.069a-f | 8.3k-p | 88.4s-w |
| NC-61 | 52a-o | 28b-i | 42a-y | 0.039a-e | 6.7h-o | 82.2p-w |
| NC-62 | 14a-f | 29c-k | 12a-n | 0.012ab | 4.3b-k | 84.4q-w |
| NC-63 | 19a-g | 28b-i | 16a-o | 0.012a | 5.3e-n | 82.3p-w |
| KK25/MAIAWA/19 | 91a-p | 26b-f | 71h-z | 0.065a-f | 8.3k-p | 78.6n-w |
| KK25/NAGAGA/184 | 39a-m | 32h-m | 29a-v | 0.018abc | 5d-m | 65.4k-w |
| SAB-9 | 52a-o | 27b-g | 41a-x | 0.033a-d | 7h-p | 76.1n-w |
| SCR-28 | 25a-j | 27b-h | 24a-s | 0.07a-f | 6f-o | 95.1u-w |
| SAB-14 | 82a-p | 27b-h | 46a-z | 0.042a-e | 7.7j-p | 58.9g-w |
| SCR-24 | 44a-n | 27b-h | 32a-v | 0.025a-d | 6.3g-o | 71.9n-w |
| SCR-14 | 58a-p | 27b-g | 48a-z | 0.045a-e | 7.7j-p | 87s-w |
| SCR-19 | 39a-m | 27b-g | 34a-v | 0.023a-d | 7h-p | 86.4r-w |
| Line smc-21 | 39a-m | 28b-i | 37a-v | 0.028a-d | 7h-p | 94.1t-w |
| Line SEC-8 | 31a-l | 32i-m | 19a-r | 0.017abc | 5d-m | 61.8h-w |
| SAB-17 | 20a-h | 29c-k | 12a-n | 0.01a | 4.3b-k | 64.4j-w |
| SCR-6 | 60a-p | 28b-i | 54a-z | 0.053a-f | 7.7j-p | 90.3t-w |
| SCR-37 | 19a-g | 27b-g | 16a-p | 0.012ab | 5.7e-o | 85.7r-w |
| SCR-36 | 60a-p | 27b-g | 46a-z | 0.04a-e | 7.3i-p | 71.1m-w |
| SCR-9 | 57a-p | 27b-g | 51a-z | 0.043a-e | 8j-p | 89.2s-w |
| SCR-25 | 45a-n | 28b-i | 40a-x | 0.035a-d | 7h-p | 83.2p-w |
| SCR-35 | 69a-p | 27b-h | 57a-z | 0.054a-f | 8j-p | 78.7n-w |
| SCR-34 | 59a-p | 27b-i | 46a-z | 0.04a-e | 7.7j-p | 79.9o-w |

**Annex 1.** Continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| SCR-7 | 43a-m | 27b-g | 41a-x | 0.028a-d | 7.3i-p | 95.2u-w |
| SCR-11 | 42a-m | 28b-i | 6a-h | 0.005a | 3a-h | 14.3a-j |
| SCR-15 | 38a-m | 28b-i | 32a-v | 0.030a-d | 6.7h-o | 82.7p-w |
| SCR-1 | 26a-k | 28b-j | 18a-r | 0.015abc | 5d-m | 62.8i-w |
| SCR-22 | 34a-l | 28b-j | 32a-v | 0.026a-d | 6.3g-o | 93.5t-w |
| SCR-26 | 33a-l | 27b-h | 27a-u | 0.025a-d | 6.3g-o | 84.3q-w |
| SCR-20 | 55a-p | 29c-k | 55a-z | 0.04a-e | 7h-p | 100w |
| SCR-3 | 49a-n | 26b-f | 35a-v | 0.031a-d | 7h-p | 74.6n-w |
| SCR-13 | 35a-l | 26b-f | 25a-s | 0.019abc | 6.7h-o | 74.6n-w |
| Hirna | 60a-p | 27b-i | 51a-z | 0.022a-d | 7.7j-p | 85.9r-w |
| Ayenew | 72a-p | 26b-f | 65a-z | 0.051a-f | 8.3k-p | 89.6t-w |
| Kufanzik | 40a-m | 28b-i | 33a-v | 0.028a-d | 6.7h-o | 82.8p-w |
| Tinkie | 36a-l | 29c-j | 29a-u | 0.027a-d | 6f-o | 86.1r-w |
| Chercher | 25a-j | 27b-g | 24a-s | 0.022a-d | 6f-o | 93.9t-w |
| Dursitu | 33a-l | 26b-f | 30a-v | 0.023a-d | 7h-p | 90.6t-w |
| Babile | 69a-p | 27b-i | 61a-z | 0.057a-f | 7.7j-p | 89.1s-w |
| Gofta | 31a-l | 28b-i | 21a-s | 0.018abc | 6f-o | 67.4k-w |
| Hundene | 38a-m | 28b-i | 18a-r | 0.017abc | 5.3e-n | 51.9b-w |
| Haramaya | 41a-m | 28b-i | 29a-v | 0.036a-d | 6.3g-o | 71.4n-w |
| Fidise | 21a-j | 28b-i | 15a-o | 0.012ab | 5d-m | 73.9n-w |
| Red wolayta | 31a-l | 26b-f | 30a-v | 0.016abc | 6.7h-o | 94.1t-w |
| AFR-702-1 | 120m-p | 29c-k | 35a-v | 0.02a-d | 6f-o | 35.8a-r |
| IBADO | 30a-l | 27b-h | 28a-u | 0.02a-d | 6.3g-o | 93t-w |
| OMO-95 | 29a-l | 28b-i | 26a-t | 0.018abc | 6.3g-o | 89.1s-w |
| ETAW-01-L-1-7A   | 69a-p | 32h-m | 22a-s | 0.018abc | 5d-m | 33.4a-p |
| SARI-1 | 92a-p | 27b-i | 50a-z | 0.042a-e | 7.7j-p | 53.5c-w |
| ETAW-01-L-7-6K  | 62a-p | 28b-i | 53a-z | 0.028a-d | 7.3i-p | 83.6p-w |
| ETAW- 01-L-7-20A  | 30a-l | 28b-i | 20a-s | 0.009a | 5.7e-o | 72.8n-w |
| Awash-1 | 120m-p | 27b-i | 104w-z | 0.052a-f | 9m-p | 86.7s-w |
| Awash Melka | 26a-k | 27b-h | 15a-o | 0.013ab | 5.3e-n | 60.2g-w |
| Deme | 87a-p | 27b-h | 55a-z | 0.062a-f | 7.7j-p | 66.4k-w |
| Dinknesh | 105j-p | 27b-g | 66a-z | 0.061a-f | 8j-p | 58.1g-w |
| Batu | 71a-p | 26b-f | 62a-z | 0.058a-f | 8.7l-p | 89.1s-w |
| DRK | 67a-p | 27b-h | 51a-z | 0.038a-e | 8j-p | 75.9n-w |
| Beshbesh | 35a-l | 25a-d | 35a-v | 0.028a-d | 7.7j-p | 100w |
| Roba | 100g-p | 25a-d | 47a-z | 0.017abc | 7.7j-p | 49.3a-w |
| KAT-B1 | 27a-l | 26b-f | 22a-s | 0.018abc | 6.3g-o | 79.9o-w |

**Annex 1**. Continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| KAT-B9 | 104i-p | 26b-f | 64a-z | 0.061a-f | 8.3k-p | 61.5h-w |
| Nasir | 94b-p | 26b-f | 78o-z | 0.056a-f | 9m-p | 83.4p-w |
| Nazareth-2 | 72a-p | 26b-f | 57a-z | 0.044a-e | 8.3k-p | 80o-w |
| Cranscope | 97f-p | 27b-g | 47a-z | 0.025a-d | 7.7j-p | 47.2a-v |
| Ser 125 | 56a-p | 27b-g | 50a-z | 0.056a-f | 8j-p | 91.2t-w |
| Mexican 142 | 58a-p | 26b-f | 48a-z | 0.038a-e | 8j-p | 82.7p-w |
| Lehode | 49a-n | 27b-h | 44a-y | 0.049a-e | 7.3i-p | 92.6t-w |
| Wedo | 58a-p | 28b-i | 51a-z | 0.047a-e | 7.7j-p | 89.3s-w |
| MAZ-112 | 43a-m | 29c-k | 16a-p | 0.015abc | 4.7c-l | 38.8a-s |
| MAZ-151 | 88a-p | 35l-p | 15a-o | 0.016abc | 3.3a-i | 17.7a-k |
| MAZ-172 | 44a-n | 36m-q | 4a-e | 0.005a | 2a-f | 10.2a-g |
| MAZ-174 | 39a-m | 36m-q | 5a-f | 0.007a | 2a-f | 11.4a-h |
| MAZ-179 | 45a-n | 33j-n | 7a-i | 0.007a | 3a-h | 18.4a-l |
| MAZ-180 | 12a-d | 29c-k | 6a-g | 0.006a | 3a-h | 53c-w |
| MAZ-198 | 20a-i | 29c-j | 16a-p | 0.013ab | 5d-m | 79.5o-w |
| MAZ-200 | 49a-n | 28b-j | 1a-c | 0.003a | 0.3ab | 2.8a-c |
| MAZ-202 | 68a-p | 29c-j | 27a-u | 0.022a-d | 6f-o | 44.3a-t |
| MAZ-203 | 41a-m | na | 0a | 0.001a | 0a | 0a |
| MAZ-204 | 33a-l | 29c-j | 12a-m | 0.008a | 4.3b-k | 33.8a-q |
| MAZ-205 | 41a-m | 29c-j | 12a-n | 0.007a | 4a-j | 30.8a-o |
| MAZ-215 | 45a-n | 28b-i | 39a-x | 0.037a-e | 7h-p | 89s-w |
| MAZ-217 | 8a | 30e-l | 8a-k | 0.008a | 3a-h | 100w |
| MAZ-153 | 19a-g | 32h-m | 3a-e | 0.002a | 1.7a-e | 14.6a-j |
| SMARC-4 | 86a-p | 40q | 32a-v | 0.029a-d | 4a-j | 45.3a-u |
| RAZ-28-8 | 45a-n | 34k-o | 6a-h | 0.006a | 2a-f | 12.4a-i |
| RAZ-28 | 60a-p | 38opq | 4a-e | 0.005a | 1.7a-e | 6.1a-f |
| RAZ-9 | 31a-l | 38n-q | 2a-d | 0a | 0.7a-c | 5.5a-f |
| RAZ-2 | 31a-l | na | 0a | 0a | 0a | 0a |
| RAZ-138 | 60a-p | 36m-q | 2a-e | 0.001a | 0.7a-c | 3.5a-e |
| RAZ-36 | 39a-m | na | 0a | 0a | 0a | 0a |
| RAZ-34 | 64a-p | 26b-f | 18a-r | 0.016abc | 5.7e-o | 28.1a-n |
| RAZ-44 | 28a-l | na | 0a | 0.002a | 0.3ab | 0a |
| RAZ-42 | 52a-o | 40pq | 1ab | 0.001a | 0a | 1.9ab |
| RAZ-11-1 | 48a-n | 39pq | 1ab | 0a | 0a | 2.2ab |
| RAZ-11 | 20a-i | na | 0a | 0a | 0a | 0a |
| RAZ-120 | 57a-p | na | 0a | 0.001a | 0a | 0a |
| RAZ-19 | 45a-n | 36m-q | 6a-g | 0.006a | 2.3a-g | 12.7a-i |

**Annex 1.** Continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | NE | DAE | NAE | ADW (gm) | IS | PAE |
| RAZ-111 | 61a-p | 39pq | 2a-e | 0a | 1a-d | 3.3a-d |
| RAZ-114 | 24a-j | 39pq | 2a-e | 0.003a | 0.7a-c | 20.7a-m |
| RAZ-40 | 20a-i | na | 0a | 0a | 0a | 0a |
| RAZ-119 | 40a-m | 40q | 2a-e | 0.002a | 0.7a-c | 5.1a-f |
| Mean | 53.1 | 22.6 | 39.63 | 0.0379 | 6.63 | 74.65 |

\*Values sharing the same letter within the column are not statistically significant.

NE, Number of eggs; DAE, days to adult emergence; NAE, number of adults emerged; ADW, adult dry weight; IS = index of susceptibility; and PAE, percentage adult emergence.

**Annex 2** Average performances of the 300 common bean genotypes for seed traits after infestation by bean bruchid

| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Acc. No. 201066 | 25.4a-v | 36a-u | 2b-l | 21.2a-D | 99.7w | 9.6a-D | 9.1m-k1 | 1.263a-o | 27.7z-W |
| Acc. No. 207534 | 18.4a-r | 42a-w | 2b-m | 18.1a-z | 99.2w | 23 a-U | 10.8i-p1 | 1.41e-x | 14.7a-f |
| Acc. No. 207934 | 16.3a-o | 23a-r | 1b-k | 15.1a-u | 96.6vw | 18.4a-T | 9.2m-k1 | 1.36a-w | 20.0i-H |
| Acc. No. 207935 | 23.4a-u | 24a-r | 1a-k | 23a-E | 96.9w | 30.7a-U | 8.4c-Y | 1.40e-x | 27.3x-I1 |
| Acc. No. 207938 | 21a-s | 22a-q | 2b-m | 12.4a-t | 99.1w | 24.3a-U | 9.8E-p1 | 1.385c-x | 18.7d-B |
| Acc. No. 207942 | 14a-k | 24a-r | 2b-m | 12.2a-s | 64.5g-p | 4.7a-o | 9j-j1 | 1.318a-v | 16.0b-k |
| Acc. No. 207943 | 12a-h | 24a-r | 2b-m | 8.9a-p | 20a-e | 2.6a-i | 10.2T-p1 | 1.37a-x | 17.0b-r |
| Acc. No. 207949 | 29.5a-A | 63a-y | 2b-l | 30.3a-L | 99.5w | 30.8a-U | 7.1a-i | 1.39d-x | 20.0i-H |
| Acc. No. 208367 | 26.8a-y | 48a-y | 2b-l | 29.9a-L | 100w | 28.3a-U | 7.8a-D | 1.34a-w | 20.4k-K |
| Acc. No. 208638 | 39.7a-G | 36a-u | 2b-l | 39.7a-L | 99.4w | 30.2a-U | 8.2b-P | 1.34a-w | 36.1u1-z1 |
| Acc. No. 208995 | 26.1a-w | 30a-t | 2b-m | 15.9a-u | 100w | 24.5a-U | 9.1m-k1 | 1.47s-x | 22.8A-W |
| Acc. No. 208699 | 41.1a-G | 33a-t | 1a-h | 48.9n-L | 100w | 36.3p-U | 7.9a-F | 1.27a-p | 33.7q1-w1 |
| Acc. No. 208702 | 22.3a-t | 40a-w | 2b-l | 20a-C | 99.3w | 32.7f-U | 10.1Q-p1 | 1.345a-w | 20.0i-H |
| Acc. No. 208703 | 33.5a-D | 46a-y | 2b-m | 27.5a-H | 97.5w | 23.4a-U | 7.8a-A | 1.347a-w | 22.5y-U |
| Acc. No. 208705 | 8.2a-c | 9a-j | 1b-k | 7.7a-l | 85.4o-w | 6.2a-t | 8.7d-e1 | 1.281a-r | 30.0e1-r1 |
| Acc. No. 211266 | 43a-G | 46a-x | 2b-l | 41b-L | 100w | 24.9a-u | 10.6f-p1 | 1.268a-p | 27.3x-I1 |
| Acc. No. 211267 | 21.8a-t | 34a-u | 2b-l | 18.3a-A | 100w | 32.7g-U | 7.6a-u | 1.422f-x | 18.0c-x |
| Acc. No. 211269 | 31.8a-C | 47a-y | 2b-m | 27.6a-H | 100w | 32.7f-U | 8.7d-e1 | 1.393d-x | 22.0v-R |
| Acc. No. 211274 | 14.9a-m | 29a-t | 2b-m | 18.4a-B | 100w | 19.7a-U | 8.8d-h1 | 1.195ab | 20.0i-H |
| Acc. No. 211278 | 32.7a-D | 49a-y | 1b-l | 30.2a-I | 98.8w | 37.3t-U | 8.8d-g1 | 1.321a-w | 18.9e-C |
| Acc. No. 211279 | 30.3a-C | 54a-y | 2b-l | 28.6a-H | 100w | 30.5a-U | 9.3p-l1 | 1.322a-w | 20.6l-K |
| Acc. No. 211280 | 23.1a-u | 35a-u | 1b-k | 20.8a-D | 97.1w | 25.6a-U | 9.2m-k1 | 1.354a-w | 20.6l-K |
| Acc. No. 211282 | 45.9a-G | 60a-y | 2b-m | 41.5c-L | 100w | 30.6a-U | 8a-J | 1.346a-w | 23.3C-Y |
| Acc. No. 211284 | 24a-v | 36a-u | 2b-m | 21.5a-D | 100w | 27.9a-U | 9l-j1 | 1.412e-x | 20.7m-K |
| Acc. No. 211286 | 21.3a-t | 46a-x | 2b-m | 18.3a-A | 100w | 42.4H-U | 8.7d-e1 | 1.354a-w | 21.3r-P |
| Acc. No. 211293 | 61.4m-G | 88q-y | 2b-m | 59.5C-L | 100w | 29.2a-U | 9.1m-k1 | 1.357a-w | 28.0Z-n1 |
| Acc. No. 211294 | 29.4a-z | 32a-t | 1a-k | 20.49a-C | 87.2o-w | 15.9a-Q | 8.7d-e1 | 1.423f-x | 20.1j-I |
| Acc. No. 211302 | 70.3v-G | 91r-y | 2b-m | 70.3I-L | 100w | 37.6v-U | 9j-j1 | 1.228a-e | 36.0u1-z1 |
| Acc. No. 211304 | 23.6a-v | 51a-y | 2b-m | 23.3a-E | 100w | 32.4f-U | 8.3c-V | 1.346a-w | 18.0c-x |
| Acc. No. 211305 | 20a-r | 22a-q | 1a-k | 17.7a-z | 79.9l-w | 11.9a-I | 11.6p1q1 | 1.332a-w | 20.0i-H |
| Acc. No. 211311 | 46.6a-G | 47a-y | 2b-m | 42.6d-L | 100w | 36.2p-U | 8.2b-P | 1.386c-x | 32.0n1-u1 |
| Acc. No. 211313 | 32.4a-D | 56a-y | 1b-k | 30.7a-I | 100w | 38.8A-U | 8.4c-X | 1.291a-t | 18.5c-A |
| Acc. No. 211314 | 18.4a-r | 36a-u | 2b-l | 17.6a-z | 98w | 6.2a-t | 10.2V-p1 | 1.319a-v | 15.2a-g |
| Acc. No. 211315 | 18.1a-q | 42a-w | 1b-k | 17.7a-z | 100w | 23.4a-U | 10.8j1-p1 | 1.421f-x | 16.2b-m |
| Acc. No. 211320 | 18.1a-q | 39a-w | 1b-k | 17.3a-x | 98.9w | 7.5a-z | 8.9d-h1 | 1.32a-w | 16.3b-n |
| Acc. No. 211321 | 23.6a-v | 58a-y | 2b-m | 24.2a-E | 100w | 11.9a-J | 8.4c-X | 1.415e-x | 16.4b-n |

**Annex 2.** Continued

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| Acc. No. 211322 | 20.3a-s | 42a-x | 1a-k | 20.3a-C | 99.8w | 16.2a-R | 8.5c-b1 | 1.316a-u | 17.8c-v |
| Acc. No. 211323 | 21.5a-t | 30a-t | 2b-l | 18a-z | 99.1w | 3.1a-l | 8.8d-h1 | 1.365a-w | 24.0G-a1 |
| Acc. No. 211324 | 22.4a-t | 58a-y | 1b-k | 27.6a-H | 100w | 18.9a-T | 9.3p-l1 | 1.415e-x | 14.9a-g |
| Acc. No. 211325 | 37.2a-F | 74i-y | 2b-m | 32.8a-J | 99w | 14.2a-O | 9.3n-l1 | 1.348a-w | 17.8c-w |
| Acc. No. 211327 | 8.4a-c | 20a-q | 1a-k | 8.3a-m | 58.7g-n | 0.68a-d | 8.6d-d1 | 1.365a-x | 14.6a-f |
| Acc. No. 211329 | 22.4a-t | 63a-y | 1a-k | 27.4a-H | 100w | 17.5a-S | 9.4t-m1 | 1.381b-x | 18.0c-x |
| Acc. No. 211332 | 17.4a-p | 24a-r | 2b-m | 12.3a-s | 85.2o-w | 15a-Q | 9.31p-l1 | 1.314a-u | 21.5s-P |
| Acc. No. 211331 | 17.7a-q | 44a-x | 1a-i | 18.3a-A | 100w | 15.7a-Q | 8.8d-h1 | 1.319a-v | 16.5b-p |
| Acc. No. 211333 | 25.4a-v | 66a-y | 1b-k | 24.1a-E | 99.8w | 22.1a-U | 8.7d-f1 | 1.352a-w | 14.6a-f |
| Acc. No. 211339 | 10.6a-e | 25a-s | 1a-i | 11.5a-r | 99.2w | 14.5a-O | 8.6c-d1 | 1.378b-x | 14.2abc |
| Acc. No. 211340 | 23.8a-v | 44a-x | 1a-k | 25.5a-E | 100w | 13.8a-M | 8.9e-h1 | 1.361a-w | 20.8n-K |
| Acc. No. 211341 | 14.7a-m | 27a-t | 1a-k | 15.6a-u | 95.2uvw | 5.7a-q | 10.2T-p1 | 1.321a-w | 25.3M-d1 |
| Acc. No. 211344 | 16.8a-p | 27a-t | 2a-m | 14.1a-u | 98.3w | 10.6a-F | 8.9e-h1 | 1.379b-x | 25.4N-d1 |
| Acc. No. 211346 | 27.3a-y | 37a-v | 1a-k | 26a-E | 98.2w | 7.3a-z | 8.4c-X | 1.386c-x | 21.5s-P |
| Acc. No. 211347 | 17.5a-p | 21a-q | 1a-k | 10.4a-q | 91.4s-w | 6.3a-u | 8.8d-h1 | 1.383b-x | 16.9b-r |
| Acc. No. 211348 | 40a-G | 62a-y | 2b-l | 34.2a-J | 100w | 18.6a-T | 9j-j1 | 1.38b-x | 19.8h-G |
| Acc. No. 211349 | 31.6a-C | 55a-y | 2b-m | 27a-H | 100w | 20.9a-U | 9i-j1 | 1.422f-x | 20.0j-H |
| Acc. No. 211350 | 19.5a-r | 32a-t | 1a-k | 16.9a-w | 97.6w | 21.4a-U | 9.3n-l1 | 1.302a-t | 18.3c-z |
| Acc. No. 211356 | 19.3a-r | 41a-w | 1b-k | 19.6a-C | 99.8w | 12.1a-J | 8.2b-P | 1.347a-w | 18.6c-B |
| Acc. No. 211361 | 32.2a-D | 37a-v | 1b-k | 25.6a-E | 100w | 26.1a-U | 9.6w-n1 | 1.24a-g | 23.0B-X |
| Acc. No. 211362 | 11.7a-g | 24a-r | 2b-l | 12.1a-s | 76.5l-w | 11.7a-I | 7.7a-y | 1.433h-x | 15.3a-g |
| Acc. No. 211365 | 14.7a-m | 22a-q | 1a-i | 12.2a-s | 94.6uvw | 16.7a-R | 10.2U-p1 | 1.419f-x | 16.1b-k |
| Acc. No. 211366 | 33.4a-D | 45a-x | 2b-m | 29.1a-H | 100w | 28.9a-U | 8.7d-f1 | 1.384c-x | 25.2L-d1 |
| Acc. No. 211367 | 44.1a-G | 62a-y | 2b-m | 36.4a-L | 100w | 35.1n-U | 9k-j1 | 1.374a-x | 19.4g-F |
| Acc. No. 211382 | 16.7a-p | 24a-r | 2b-l | 14.4a-u | 91.2s-w | 14.4a-O | 10.1Q-p1 | 1.25a-j | 22.0v-R |
| Acc. No. 211483 | 15.3a-m | 24a-r | 2b-l | 14.3a-u | 97.3w | 21.7a-U | 10.1S-p1 | 1.391d-x | 21.3r-P |
| Acc. No. 211546 | 23.9a-v | 35a-u | 2b-m | 18.4a-A | 99.4w | 24.9a-U | 7.7a-z | 1.351a-w | 18.7d-B |
| Acc. No. 211552 | 39.6a-G | 62a-y | 2b-m | 32.8a-J | 88.8p-w | 23.5a-U | 11k1-p1 | 1.263a-o | 18.8e-B |
| Acc. No. 211553 | 8ab | 12a-k | 1b-k | 6.3a-j | 67.3h-s | 7.5a-z | 9.3p-l1 | 1.344a-w | 20.8n-K |
| Acc. No. 212860 | 34.3a-E | 64a-y | 2b-l | 36.9a-L | 100w | 38.3z-U | 9.1m-k1 | 1.341a-w | 21.5s-P |
| Acc. No. 213046 | 21.3a-t | 37a-u | 1a-h | 22.8a-E | 79.9l-w | 13.5a-L | 9.5v-n1 | 1.353a-w | 16.6b-p |
| Acc. No. 213197 | 23a-u | 44a-x | 1a-k | 22.7a-E | 98.5w | 27.1a-U | 11.4n1-q1 | 1.421f-x | 16.2b-l |
| Acc. No. 213198 | 26.8a-y | 36a-u | 2b-l | 23a-E | 100w | 31.3b-U | 9.1m-k1 | 1.391d-x | 25.6O-e1 |
| Acc. No. 214662 | 35.2a-E | 48a-y | 1a-k | 36.8a-L | 99.3w | 26.8a-U | 8.6c-c1 | 1.387d-x | 21.3r-P |
| Acc. No. 214663 | 19a-r | 28a-t | 2b-m | 16.1a-u | 100w | 22.8a-U | 9.2m-k1 | 1.349a-w | 25.4M-d1 |
| Acc. No. 214664 | 26.9a-y | 35a-u | 2b-m | 21.9a-E | 100w | 34k-U | 9.3n-l1 | 1.353a-w | 25.4N-d1 |
| Acc. No. 214665 | 24.4a-v | 35a-u | 1b-k | 21.3a-D | 99.7w | 29a-U | 10.3Y-p1 | 1.414e-x | 23.3D-Y |

**Annex** 2. Continued

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| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| Acc. No. 214667 | 27.5a-z | 46a-x | 1b-k | 26.5a-E | 100w | 29.9a-U | 9.4t-m1 | 1.266a-p | 23.5E-Y |
| Acc. No. 214671 | 20.8a-s | 28a-t | 1a-g | 16.5a-v | 42.3d-h | 4.5a-o | 9g-j1 | 1.349a-w | 24.4H-c1 |
| Acc. No. 214675 | 40.4a-G | 69b-y | 1a-k | 36.9a-L | 99w | 36.5p-U | 10.1L-p1 | 1.413e-x | 16.4b-n |
| Acc. No. 214676 | 22.8a-u | 50a-y | 1a-k | 21.3a-D | 100w | 39.1B-U | 10.5e1-p1 | 1.411e-x | 17.3b-t |
| Acc. No. 214677 | 22.9a-u | 37a-v | 1b-k | 17.8a-z | 82.3n-w | 21a-U | 9.3o-l1 | 1.419f-x | 19.3g-F |
| Acc. No. 214678 | 7.7ab | 21a-q | 2e-n | 8.6a-n | 93.6t-w | 14.4a-O | 9.3p-l1 | 1.318a-u | 23.7F-Z |
| Acc. No. 215048 | 47.1a-G | 94t-y | 2b-m | 43.1e-L | 100w | 33.3h-U | 7.1a-f | 1.433h-x | 20.9o-L |
| Acc. No. 215049 | 19.6a-r | 39a-w | 2b-m | 16.6a-v | 100w | 38y-U | 9.1g-j1 | 1.292a-t | 21.2r-O |
| Acc. No. 215050 | 32.9a-D | 78k-y | 2b-m | 33.1a-J | 100w | 45M-U | 9.5w-n1 | 1.425g-x | 17.5c-u |
| Acc. No. 215051 | 27.5a-z | 51a-y | 2b-l | 28.6a-H | 97.9w | 19.6a-U | 7.4a-p | 1.367a-x | 16.7b-q |
| Acc. No. 215391 | 9.1a-d | 31a-t | 2b-m | 10.1a-q | 71j-u | 6.9a-y | 8.3b-T | 1.348a-w | 11.3a |
| Acc. No. 215542 | 50.3a-G | 30a-t | 2b-m | 27.7a-H | 99.1w | 22.9a-U | 7.6a-t | 1.395e-x | 31.2j1-t1 |
| Acc. No. 215545 | 48.3a-G | 32a-t | 2b-l | 43.4g-L | 100w | 16.8a-R | 15.7s1 | 1.397e-x | 27V-l1 |
| Acc. No. 215719 | 76.3A-G | 106wxy | 3i-n | 67.1G-L | 98.8w | 36.7q-U | 8.2b-Q | 1.283a-r | 38.2x1-D1 |
| Acc. No. 215720 | 41.3a-G | 77j-y | 1b-k | 39.5a-L | 100w | 45.9Q-U | 10.7g1-p1 | 1.495u-x | 15.6a-i |
| Acc. No. 216820 | 29.7a-B | 59a-y | 1a-h | 35.3a-L | 100w | 40.4C-U | 9.2m-k1 | 1.235a-f | 16.4b-o |
| Acc. No. 219231 | 54.3b-G | 71e-y | 2b-m | 57.3w-L | 100w | 23.1a-U | 8.7d-e1 | 1.348a-w | 43.4G1-L1 |
| Acc. No. 219233 | 35.3a-E | 38a-w | 1a-k | 29.7a-H | 100w | 31.2b-U | 8.7d-f1 | 1.419f-x | 30.6h1-s1 |
| Acc. No. 219337 | 39.1a-G | 55a-y | 2b-l | 32.6a-J | 99.7w | 34.6n-U | 9.1m-k1 | 1.404e-x | 26.8U-k1 |
| Acc. No. 219338 | 33.3a-D | 51a-y | 2b-l | 32.9a-J | 100w | 31.1a-U | 9.3p-l1 | 1.309a-u | 38.7y1-E1 |
| Acc. No. 219389 | 47.7a-G | 70d-y | 2b-l | 42.7d-L | 100w | 29.2a-U | 9.1m-k1 | 1.342a-w | 38.0w1-D1 |
| Acc. No. 219340 | 16.1a-o | 18a-o | 1a-i | 13.8a-u | 97w | 15.9a-Q | 8.8d-f1 | 1.355a-w | 25.3M-d1 |
| Acc. No. 223329 | 80.3E-G | 110xy | 3k-n | 74.7KL | 100w | 34.3m-U | 9.1m-k1 | 1.297a-t | 37.4w-B1 |
| Acc. No. 228077 | 58.2g-G | 81m-y | 2b-m | 49.7q-L | 100w | 26.1a-U | 9.2m-k1 | 1.399e-x | 21.7t-Q |
| Acc. No. 228079 | 48.3a-G | 73f-y | 1b-k | 48.7m-L | 100w | 30.6a-U | 9h-j1 | 1.345a-w | 21.3r-P |
| Acc. No. 228080 | 24.2a-v | 34a-u | 1a-i | 23.5a-E | 98.5w | 31.1a-U | 9.5w-n1 | 1.297a-t | 42.3D1-L1 |
| Acc. No. 228081 | 26.5a-x | 36a-u | 1a-k | 27.2a-H | 98.3w | 16.9a-R | 8.6c-c1 | 1.344a-w | 22.0v-R |
| Acc. No. 228082 | 54a-G | 101u-y | 2b-m | 48.9n-L | 100w | 42.2H-U | 10O-p1 | 1.378b-x | 22.7z-W |
| Acc. No. 228083 | 47.5a-G | 75i-y | 2b-m | 41.8c-L | 96.6vw | 25.5a-U | 9.6y-o1 | 1.323a-w | 26.0Q-g1 |
| Acc. No. 228084 | 36.3a-F | 49a-y | 2b-m | 29.9a-I | 100w | 36.8q-U | 9.7A-o1 | 1.344a-w | 25.3M-d1 |
| Acc. No. 228085 | 39.1a-G | 62a-y | 2b-m | 37a-L | 100w | 37.3t-U | 8.8d-h1 | 1.338a-w | 22.7z-W |
| Acc. No. 228086 | 31.6a-C | 62a-y | 2b-l | 28.7a-H | 100w | 39.9C-U | 13.2q1-r1 | 1.321a-w | 15.5a-h |
| Acc. No. 228088 | 29.4a-z | 39a-w | 2b-m | 24.1a-E | 100w | 33.6i-U | 9.7B-p1 | 1.29a-t | 24.0G-a1 |
| Acc. No. 228089 | 33.3a-D | 50a-y | 1b-k | 27.5a-H | 99.7w | 29.5a-U | 10M-p1 | 1.358a-w | 22.0v-R |
| Acc. No. 228090 | 47.2a-G | 52a-y | 1b-k | 42.9e-L | 100w | 39B-U | 8.8d-h1 | 1.356a-w | 22.3w-S |
| Acc. No. 228246 | 46a-G | 93s-y | 1b-k | 40.1a-L | 100w | 45.3O-U | 10L-p1 | 1.354a-w | 18.7d-B |
| Acc. No. 228247 | 40a-G | 51a-y | 2b-l | 35.4a-L | 100w | 37.6v-U | 9j-j1 | 1.323a-w | 23.5E-Y |
| Acc. No. 228522 | 43.2a-G | 67a-y | 2b-l | 43.8h-L | 96.7vw | 29.3a-U | 9.5u-n1 | 1.439k-x | 26.6S-i1 |

**Annex 2.** Continued

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| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| Acc. No. 228811 | 37.6a-F | 74h-y | 2b-m | 33.6a-J | 100w | 46Q-U | 8.5c-b1 | 1.445l-x |  14.3a-d |
| Acc. No. 228812 | 28.7a-z | 52a-y | 1a-k | 25.5a-E | 99.5w | 40.4C-U | 9.5w-n1 | 1.508wx | 16.6b-q |
| Acc. No. 228813 | 40.5a-G | 63a-y | 2b-l | 35.6a-L | 100w | 45.9Q-U | 10.2U-p1 | 1.553x | 15.0a-g |
| Acc. No. 228911 | 61l-G | 60a-y | 2b-m | 52.8t-L | 100w | 33.8j-U | 8.1a-M | 1.367a-x | 18.7d-B |
| Acc. No. 228912 | 16.7a-p | 31a-t | 1ab-k | 17.4a-y | 79.3l-w | 24.1a-U | 9.5u-n1 | 1.294a-t | 16.5b-p |
| Acc. No. 228913 | 28.5a-z | 32a-t | 1a-k | 25.7a-E | 100w | 34k-U | 9.4q-m1 | 1.362a-w | 22.5y-U |
| Acc. No. 229814 | 35.2a-E | 48a-y | 2b-m | 30.6a-I | 100w | 42G-U | 9.7D-p1 | 1.313a-u | 22.8A-W |
| Acc. No. 230044 | 24.5a-v | 29a-t | 1a-i | 14.9a-u | 100w | 22.2a-U | 9.9F-p1 | 1.348a-w | 15.8b-j |
| Acc. No. 230525 | 35.8a-F | 61a-y | 1b-k | 34.2a-J | 98.9w | 38.9A-U | 9.8H-p1 | 1.372a-x | 14.6a-e |
| Acc. No. 230526 | 30.6a-C | 42a-x | 1b-k | 30.7a-I | 99.6w | 40.6D-U | 9g-j1 | 1.371a-x | 24.6K-c1 |
| Acc. No. 230661 | 36.8a-F | 69b-y | 2b-m | 30.2a-I | 100w | 43.1J-U | 10.8j1-p1 | 1.286a-r | 14.8a-f |
| Acc. No. 232196 | 31.8a-C | 62a-y | 1b-k | 29.6a-H | 100w | 14.6a-O | 10.2X-p1 | 1.467r-x | 13.0ab |
| Acc. No. 235502 | 35a-E | 57a-y | 1b-k | 24.9a-E | 100w | 9.8a-E | 10.5d1-p1 | 1.323a-w | 15.3a-g |
| Acc. No. 235503 | 14.6a-l | 29a-t | 1a-k | 14.9a-u | 100w | 15.6a-Q | 7.7a-x | 1.409e-x | 23.3D-Y |
| Acc. No. 235506 | 37.2a-F | 63a-y | 2b-l | 34.5a-K | 100w | 37.6v-U | 7a-g | 1.437j-x | 17.6c-v |
| Acc. No. 235507 | 29.7a-B | 33a-t | 1a-k | 26.1a-E | 100w | 39.1B-U | 7.4a-n | 1.373a-x | 26.6S-i1 |
| Acc. No. 235508 | 31.9a-C | 27a-t | 2b-m | 26.9a-G | 100w | 20.4a-U | 8.7d-e1 | 1.311a-u | 40.5A1-I1 |
| Acc. No. 237079 | 27a-y | 57a-y | 2b-l | 23.6a-E | 99.4w | 40.4C-U | 10K-p1 | 1.436j-x | 14.5a-e |
| Acc. No. 237080 | 43.9a-G | 44a-x | 2b-m | 38.1a-L | 100w | 32.3f-U | 9.1m-k1 | 1.313a-u | 36.0u1-z1 |
| Acc. No. 237993 | 40.3A-G | 47a-y | 1b-l | 32.8a-J | 100w | 27.7a-U | 8.9e-h1 | 1.409e-x | 24.0G-a1 |
| Acc. No. 241134 | 23.6a-v | 38a-w | 1a-f | 25.8a-E | 75.6k-w | 15.9a-Q | 11.5o1-q1 | 1.279a-q | 14.3a-d |
| Acc. No. 241729 | 34.6a-E | 34a-u | 1a-h | 26.1a-E | 81.7m-w | 14.2a-O | 8.8d-h1 | 1.295a-t | 28.7c1-p1 |
| Acc. No. 241730 | 38a-F | 51a-y | 2b-l | 34.5a-K | 100w | 38.1x-U | 9.1m-k1 | 1.293a-t | 22.7z-W |
| Acc. No. 241734 | 28a-z | 40a-w | 2b-m | 23.5a-E | 85o-p | 11.8a-I | 8.9f-h1 | 1.342a-w | 20.3k-K |
| Acc. No. 241736 | 13.7a-j | 15a-n | 1abc | 15.7a-u | 90.5r-w | 19.1a-T | 8.4c-X | 1.27a-p | 23.3D-Y |
| Acc. No. 241737 | 19.3a-r | 21a-q | 1b-k | 15.5a-u | 65.7h-r | 6.9a-x | 9.5v-n1 | 1.379b-x | 22.7z-W |
| Acc. No. 241739 | 37a-F | 47a-y | 1a-k | 35.6a-L | 79.8l-w | 13.8a-M | 8.9e-h1 | 1.409e-x | 22.6z-V |
| Acc. No. 241748 | 25.1a-v | 29a-t | 2b-l | 20.5a-C | 100w | 28.6a-U | 8.7d-e1 | 1.341a-w | 22.8A-W |
| Acc. No. 241750 | 28.8a-z | 47a-y | 2b-m | 29.3a-H | 100w | 31.2b-U | 8.7d-f1 | 1.345a-w | 24.5I-c1 |
| Acc. No. 241752 | 33.6a-E | 48a-y | 2b-l | 30.6a-I | 100w | 36.1p-U | 9.5t-m1 | 1.382b-x | 24.4H-c1 |
| Acc. No. 241756 | 43.1a-G | 83o-y | 2b-m | 37.6a-L | 100w | 44.6L-U | 8.9g-j1 | 1.324a-w | 20.7m-K |
| Acc. No. 241757 | 48.6a-G | 58a-y | 2b-m | 41.2b-L | 100w | 46.1Q-U | 9.7C-p1 | 1.437j-x | 20.7m-K |
| Acc. No. 241807 | 24.7a-v | 51a-y | 2b-l | 24.1a-E | 100w | 36.6q-U | 8.1a-K | 1.453p-x | 21.1q-N |
| Acc. No. 241813 | 32.6a-D | 56a-y | 1b-k | 33.9a-J | 100w | 33.1h-U | 9.4p-l1 | 1.369a-x | 25.8P-f1 |
| Acc. No. 241814 | 17.2a-p | 40a-w | 1a-k | 19.3a-C | 75.5k-w | 10.1a-E | 10.8i1-p1 | 1.437j-x | 21.3r-O |
| Acc. No. 244805 | 38.2a-F | 80l-y | 1b-k | 36.8a-L | 100w | 30.4a-U | 9.5w-n1 | 1.432h-x | 23.3D-Y |
| Acc. No. 241809 | 34.5a-E | 59a-y | 1b-k | 33.9a-J | 98.9w | 35.2o-U | 10.8j1-p1 | 1.338a-w | 26.7S-i1 |
| NC-01 | 41.7a-G | 37a-v | 1b-l | 34.6a-K | 100w | 30.2a-U | 9.2m-k1 | 1.318a-u | 22.7z-W |

**Annex 2.** Continued

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| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| NC-02 | 59.3i-G | 61a-y | 2b-m | 42.2d-L | 100w | 41.3F-U | 9.1m-k1 | 1.352a-w | 22.5y-U |
| NC-03 | 60.7k-G | 17a-o | 2b-m | 12.1a-s | 96.5u-w | 21.6a-U | 11.3m1-p1 | 1.286a-r | 18.7d-B |
| NC-05 | 19.8a-r | 26a-s | 2b-m | 16.6a-v | 93.8t-w | 12.8a-K | 7.9a-E | 1.352a-w | 20.7n-K |
| NC-06 | 31.7a-C | 36a-u | 1b-l | 30.8a-J | 100w | 24.1a-U | 8.6c-d1 | 1.341a-w | 20.6i-H |
| NC-07 | 13.7a-j | 15a-n | 1a-k | 12.4a-t | 78.3l-w | 34.1k-U | 8.7d-e1 | 1.38b-x | 21.3r-P |
| NC-08 | 28.1a-z | 30a-t | 2b-l | 25a-E | 92.4s-w | 20.7a-U | 7.8a-D | 1.351a-w | 21.3r-P |
| NC-09 | 46.7a-G | 48a-y | 2b-m | 41.4b-L | 100w | 37.7v-U | 10.4b1-p1 | 1.289a-t | 27.5Y-m1 |
| NC-10 | 34.9a-E | 33a-u | 1a-h | 40a-L | 88.1o-w | 6.8a-w | 8.6c-b1 | 1.387d-x | 22.7z-W |
| NC-11 | 48.1a-G | 47a-y | 2b-m | 36.8a-L | 100w | 33.5i-U | 8.9e-h1 | 1.348a-w | 27.0V-l1 |
| NC-12 | 37a-F | 41a-w | 1b-k | 32.8a-J | 100w | 34k-U | 8.6c-d1 | 1.326a-w | 22.5y-U |
| NC-13 | 32.4a-D | 49a-y | 2b-m | 32.2a-J | 99.6w | 38.8A-U | 9.2m-k1 | 1.346a-w | 26.9U-l1 |
| NC-14 | 46.5a-G | 40a-w | 2b-m | 51.6r-L | 100w | 31.8d-U | 8.1a-I | 1.291a-t | 39.1y1-G1 |
| NC-15 | 31.6a-C | 26a-s | 2b-m | 39.1a-L | 100w | 30a-U | 8.6c-c1 | 1.325a-w | 41.3A1-K1 |
| NC-16 | 15.6a-n | 20a-p | 2b-l | 15.5a-u | 87.4o-w | 17.6a-S | 8.8d-h1 | 1.413e-x | 21.5s-P |
| NC-17 | 18.1a-q | 25a-s | 2b-m | 15.5a-u | 89.5p-w | 11.6a-H | 7.9a-G | 1.329a-w | 24.5I-c1 |
| NC-18 | 44.8a-G | 28a-t | 2b-m | 36.7a-L | 100w | 24.3a-U | 7.5a-s | 1.26a-l | 38.2x1-D1 |
| NC-19 | 37.1a-F | 43a-x | 2b-m | 33.2a-J | 100w | 42.2H-U | 9.7z-o1 | 1.387d-x | 22.3x-T |
| NC-20 | 12.2a-h | 23a-r | 2b-m | 12.2a-s | 89.3p-w | 17.6a-S | 10.3Z-p1 | 1.347a-w | 22v-R |
| NC-22 | 44.7a-G | 53a-y | 2b-m | 41.8c-L | 100w | 42.5H-U | 8.8d-h1 | 1.247a-h | 23.3D-Y |
| NC-24 | 21a-s | 20a-q | 1a-f | 13.7a-u | 67.3h-s | 7.8a-A | 8.5c-Z | 1.505vwx | 36.0u1-z1 |
| NC-25 | 60j-G | 51a-y | 2d-n | 58.6A-L | 100w | 34k-U | 8.4c-X | 1.235a-f | 41.8B1-L1 |
| NC-28 | 42.1a-G | 31a-t | 2b-l | 35.7a-L | 100w | 31.1a-U | 8.7d-e1 | 1.34a-w | 29.2d1-p1 |
| NC-29 | 63p-G | 65a-y | 2f-n | 58.8B-L | 100w | 37.4u-U | 8.2b-R | 1.288a-t | 43.0E1-L1 |
| NC-30 | 41.6a-G | 65a-y | 2b-m | 37.3a-L | 100w | 48.5STU | 7.1a-k | 1.34a-w | 20.3k-K |
| NC-32 | 37.4a-F | 46a-x | 2b-m | 34.3a-K | 88.9p-w | 17.5a-S | 10.4a1-p1 | 1.382b-x | 37.4w-B1 |
| NC-33 | 35.5a-E | 23a-r | 1b-k | 31.1a-J | 98.6w | 26.1a-U | 8.9f-i1 | 1.259a-l | 26.0Q-g1 |
| NC-34 | 74.3z-G | 77j-y | 2f-n | 71.2JKL | 100w | 34.3m-U | 8a-J | 1.266a-p | 41.2A1-K1 |
| NC-35 | 47.2a-G | 55a-y | 2b-m | 40.7b-L | 98.6w | 42.1H-U | 8.2b-P | 1.343a-w | 22.0V-R |
| NC-36 | 42.1a-G | 54a-y | 2b-m | 37.2a-L | 99.3w | 33.3h-U | 9.5r-m1 | 1.365a-w | 19.3g-F |
| NC-37 | 37.3a-F | 37a-v | 1b-k | 38.5a-L | 99.5w | 31.6c-U | 8.6c-b1 | 1.417f-x | 31.3l1-t1 |
| NC-38 | 82.6FG | 87p-y | 3lmn | 75.2L | 100w | 50.3U | 8.8d-h1 | 1.411e-x | 44.7l1-M1 |
| NC-39 | 62.8o-G | 61a-y | 3f-n | 57.4x-L | 93.8t-w | 29.1a-U | 8.2b-R | 1.267a-p | 44.6l1-M1 |
| NC-40 | 58.6h-G | 70c-y | 2b-m | 56.6v-L | 100w | 45.1N-U | 9.9J-p1 | 1.383c-x | 22.0v-R |
| NC-41 | 51.5b-G | 65a-y | 2b-m | 47k-L | 94.4uvw | 39.6B-U | 10.8h1-p1 | 1.384c-x | 14.4a-e |
| NC-43 | 62.6o-G | 58a-y | 2c-n | 53.9u-L | 100w | 39.4B-U | 9j-j1 | 1.31a-u | 23.9G-Z |
| NC-44 | 40.7a-G | 64a-y | 2b-l | 36.7a-L | 100w | 36.5p-U | 9.9J-p1 | 1.299a-t | 22.0v-R |
| NC-45 | 73.2x-G | 69b-y | 3g-n | 60.9D-L | 100w | 40.7E-U | 9.5v-n1 | 1.266a-p | 51.8N1-P1 |
| NC-46 | 54.1b-G | 114y | 2b-m | 52.3s-L | 99.2w | 37.2s-U | 9.4q-m1 | 1.389d-x | 20.1j-J |

**Annex 2.** Continued

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| NC-47 | 43.4a-G | 74g-y | 1b-k | 44.2h-L | 100w | 44.1L-U | 10.2W-p1 | 1.386c-x | 20.7n-K |
| NC-48 | 45.1a-G | 57a-y | 1a-h | 41.3b-L | 94.9uvw | 36.4p-U | 9.7z-o1 | 1.412e-x | 17.1b-s |
| NC-49 | 57.9f-G | 68a-y | 1b-l | 57.9z-L | 100w | 35.9p-U | 9.9l-p1 | 1.402e-x | 18.0c-x |
| NC-50 | 37.4a-F | 53a-y | 2b-m | 41.9c-L | 100w | 26.1a-U | 8.1a-H | 1.317a-u | 19.0f-D |
| NC-51 | 38.4a-F | 65a-y | 2b-m | 36.8a-L | 100w | 32.5f-U | 8.993j-j1 | 1.413e-x | 24.0G-a1 |
| NC-52 | 73.4y-G | 76j-y | 2b-m | 75.4L | 100w | 47.2R-U | 8.6d-e1 | 1.263a-n | 41.1A1-J1 |
| NC-53 | 47.9a-G | 53a-y | 2b-m | 42.3d-L | 100w | 38.9A-U | 8.6d-d1 | 1.376b-x | 28.7c1-p1 |
| NC-54 | 27.6a-z | 45a-x | 2b-m | 23.3a-E | 94.1uvw | 29.5a-U | 8.9f-i1 | 1.26a-l | 17.3b-t |
| NC-55 | 11.2a-f | 13a-l | 2b-m | 12.2a-s | 83.9n-w | 12.4a-J | 9.5w-n1 | 1.344a-w | 24.7K-c1 |
| NC-56 | 36.4a-F | 16a-o | 2b-m | 18.8a-B | 56.4g-m | 3.1a-k | 7.1a-j | 1.269a-p | 35.0s1-y1 |
| NC-57 | 26.1a-w | 16a-o | 2b-l | 18.6a-B | 96.9w | 21.4a-U | 10.2T-p1 | 1.263a-n | 24.5J-c1 |
| NC-58 | 13.3a-i | 15a-n | 2b-m | 8.9a-p | 93.6t-w | 14.7a-P | 10P-p1 | 1.255a-k | 20.0i-H |
| NC-59 | 47.2a-G | 50a-y | 2b-l | 43.2f-L | 100w | 32.6f-U | 8.8d-h1 | 1.415e-x | 23.3D-Y |
| NC-60 | 65.1r-G | 76j-y | 2b-m | 57.8y-L | 100w | 49.1TU | 10.4a1-p1 | 1.357a-w | 22.0v-R |
| NC-61 | 31.2a-C | 47a-y | 1a-j | 34.3a-K | 98.8w | 32.6f-U | 8.6d-d1 | 1.442k-x | 17.0b-r |
| NC-62 | 26.7a-y | 13a-m | 2b-m | 10.4a-q | 64.8h-q | 11.6a-H | 8.8d-h1 | 1.37a-x | 24.0G-a1 |
| NC-63 | 12.2a-h | 16a-o | 2b-m | 10.8a-q | 83.1n-w | 11.9a-I | 10.1R-p1 | 1.383c-x | 18.3c-z |
| KK25/MAIAWA/19 | 62.6o-G | 75i-y | 2e-n | 61.1D-L | 100w | 30.5a-U | 9.1l-j1 | 1.372a-x | 41.7A1-L1 |
| KK25/NAGAGA/184 | 45.1a-G | 32a-t | 2b-l | 5.4a-j | 7ab | 2.2a-h | 9j-j1 | 1.317a-u | 50.1N1O1 |
| SAB-9 | 46.9a-G | 44a-x | 3j-m | 25.6a-E | 62.6g-o | 3.3a-m | 7.6a-v | 1.326a-w | 45.2J1-M1 |
| SCR-28 | 26.4a-w | 24a-r | 1a-k | 26.7a-F | 98.1w | 23.8a-U | 7.1a-h | 1.357a-w | 39.3y1-G1 |
| SAB-14 | 76.3B-G | 47a-y | 2b-m | 67.1F-L | 100w | 37.5v-U | 9.1h-j1 | 1.356a-w | 37.5w1-C1 |
| SCR-24 | 49.1a-G | 32a-t | 1a-i | 45.8j-L | 100w | 24.1a-U | 8.2b-S | 1.31a-u | 30.0e1-r1 |
| SCR-14 | 36.1a-F | 49a-y | 2b-m | 31.7a-J | 100w | 37.1r-U | 7.4a-o | 1.335a-w | 29.3d1-q1 |
| SCR-19 | 30.3a-C | 34a-u | 1a-k | 31.1a-J | 100w | 30.6a-U | 9.1m-k1 | 1.411e-x | 30.4g1-r1 |
| Line smc-21 | 38.9a-G | 37a-v | 2b-m | 34.6a-K | 99.4w | 21.2a-U | 6.4ab | 1.292a-t | 36.0u1-z1 |
| Line SEC-8 | 41.2a-G | 19a-p | 1a-d | 39.6a-L | 100w | 20.3a-U | 8.1a-K | 1.186a | 41.3A1-K1 |
| SAB-17 | 35.2a-E | 14a-n | 1a-i | 26.8a-G | 100w | 14.1a-N | 8.2b-S | 1.39d-x | 30.0e1-r1 |
| SCR-6 | 42.1a-G | 55a-y | 2b-m | 39.5a-L | 100[ | 38x-U | 7.6a-v | 1.294a-t | 26.0Q-g1 |
| SCR-37 | 11.7a-g | 16a-o | 2b-m | 10.4a-q | 77.1l-w | 10.4a-F | 8.1a-H | 1.45n-x | 28.7c1-p1 |
| SCR-36 | 33.8a-E | 47a-y | 2b-m | 26.2a-E | 79.8l-w | 9.3a-C | 8.9e-h1 | 1.368a-x | 25.3M-d1 |
| SCR-9 | 45.3a-G | 53a-y | 2b-m | 41.5c-L | 99.5w | 34.1l-U | 9.1m-k1 | 1.441k-x | 32.0n1-u1 |
| SCR-25 | 31.5a-C | 40a-w | 2b-l | 27.6a-H | 95.1uvw | 32.7g-U | 7.9a-H | 1.338a-w | 30.7h1-s1 |
| SCR-35 | 53.9b-G | 60a-y | 1b-k | 47.6l-L | 100w | 33.6i-U | 11.1l1-p1 | 1.381b-x | 28.5b1-p1 |
| SCR-34 | 56.7e-G | 49a-y | 2b-m | 50q-L | 98w | 27.9a-U | 8.3c-W | 1.269a-p | 31.9m1-u1 |
| SCR-7 | 36.7a-F | 41a-w | 2b-m | 30.4a-I | 100w | 47.1R-U | 8.5c-a1 | 1.476t-x | 25.3M-d1 |
| SCR-11 | 39.1a-G | 7a-i | 1ab | 11.4a-r | 79.3l-w | 6.1a-s | 9.7A-o1 | 1.378b-x | 28.1Z-n1 |
| SCR-15 | 43.4a-G | 34a-u | 2b-m | 40.6b-L | 100w | 16.7a-R | 8.7d-e1 | 1.442k-x | 38.8y1-F1 |

**Annex 2**. Continued

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| SCR-1 | 24.3a-v | 18a-o | 1b-k | 19.3a-C | 77.5l-w | 6.6a-v | 8.6c-d1 | 1.322a-w | 28.7c1-p1 |
| SCR-22 | 29.2a-z | 32a-t | 2b-l | 27.9a-H | 99.1w | 22.9a-U | 8.3c-U | 1.414e-x | 27.1W-l1 |
| SCR-26 | 24.6a-v | 28a-t | 2b-m | 21.1a-D | 98.8w | 26.1a-U | 8.5c-b1 | 1.394e-x | 26.8T-j1 |
| SCR-20 | 44.6a-G | 53a-y | 2b-m | 43.8h-L | 100w | 31.2b-U | 9.2m-k1 | 1.38b-x | 32.0n1-u1 |
| SCR-3 | 44.3a-G | 37a-v | 2b-l | 37.7a-L | 100w | 28.1a-U | 7.8a-A | 1.348a-w | 30.7h1-s1 |
| SCR-13 | 29.6a-B | 26a-s | 2b-m | 28.4a-H | 100w | 25.1a-U | 8.2b-O | 1.4f-x | 32.9p1-v1 |
| Hirna | 78.8D-G | 55a-y | 2c-n | 74.7KL | 100w | 18.7a-T | 7.3a-m | 1.255a-k | 45.9L1M1 |
| Ayenew | 51.1b-G | 67a-y | 2b-m | 49.3p-L | 100w | 43.6K-U | 10.1N-p1 | 1.256a-k | 28.5b1-p1 |
| Kufanzik | 49.3a-G | 33a-u | 2b-m | 37.7a-L | 100w | 27.5a-U | 8.1a-H | 1.32a-v | 37.6w1-C1 |
| Tinkie | 45a-G | 29a-t | 2b-m | 38.3a-L | 100w | 22.3a-U | 8.6c-c1 | 1.289a-t | 43.2F1-L1 |
| Chercher | 14.8a-m | 24a-r | 1b-k | 18.8a-B | 100w | 25.6a-U | 7.5a-q | 1.339a-w | 19.3g-F |
| Dursitu | 23.4a-u | 30a-t | 1a-g | 28.4a-H | 99.7w | 32.1e-U | 10.5c1-p1 | 1.353a-w | 22.3x-T |
| Babile | 35.8a-F | 52a-y | 2c-n | 61.9E-L | 100w | 39.2B-U | 8.4c-Z | 1.323a-w | 32.7o1-u1 |
| Gofta | 40.5a-G | 22a-q | 1a-g | 38.3a-L | 87.7o-w | 10.9a-G | 10.7h1-p1 | 1.297a-t | 30.0e1-r1 |
| Hundene | 41.5a-G | 19a-p | 2b-l | 30.1a-I | 100w | 23.8a-U | 9.2m-k1 | 1.296a-t | 32.7o1-u1 |
| Haramaya | 34.8a-E | 30a-t | 1b-k | 38.6a-L | 100w | 36p-U | 9.5u-n1 | 1.356a-w | 31.3k1-t1 |
| Fidise | 30.9a-C | 17a-o | 2b-m | 25.7a-E | 98.3w | 12.8a-K | 8.1a-O | 1.351a-w | 45.5K1-M1 |
| Red wolayta | 3.7a | 30a-t | 2b-l | 17.5a-y | 59.3g-n | 7.5a-z | 9.4s-m1 | 1.341a-w | 24.2G-b1 |
| AFR-702-1 | 69.3u-G | 33a-t | 2b-m | 28a-H | 97.1w | 17.5a-S | 8.4c-Y | 1.446l-x | 34.0r1-x1 |
| IBADO | 30.5a-C | 28a-t | 2b-m | 27.7a-H | 98.6w | 26.2a-U | 9l-j1 | 1.295a-t | 38.8y1-F1 |
| OMO-95 | 23.3a-u | 26a-s | 2b-m | 18.4a-A | 90.1q-w | 29a-U | 9.1i-j1 | 1.364a-w | 16.7b-q |
| ETAW-01-L-1-7A   | 32.3a-D | 24a-r | 1a-h | 16a-u | 71.2j-v | 12.2a-J | 9.5v-n1 | 1.387d-x | 17.2b-s |
| SARI-1 | 32.7a-D | 66a-y | 2b-l | 41.6c-L | 97w | 30.6a-U | 8.14a-L | 1.318a-v | 16.0b-k |
| ETAW-01-L-7-6K  | 29.9a-C | 56a-y | 2b-m | 49o-L | 100w | 33.1h-U | 9.6y-m1 | 1.355a-w | 40.0z1-H1 |
| ETAW- 01-L-7-20A  | 17.8a-q | 23a-q | 4n | 12.2a-s | 93.1t-w | 12.7a-k | 9.6x-n1 | 1.336a-w | 35.3t1-y1 |
| Awash-1 | 76.5C-G | 105v-y | 2b-m | 54.1u-L | 100w | 45.9P-U | 7.3a-m | 1.4e-x | 18.8e-B |
| Awash Melka | 16.6a-p | 18a-o | 2b-m | 9.1a-p | 29.6b-f | 0.6abc | 7.5a-s | 1.347a-w | 21.2r-O |
| Deme | 68t-G | 56a-y | 2b-m | 67.3H-L | 100w | 28.2a-U | 8.8d-h1 | 1.262a-m | 53.8O1P1 |
| Dinknesh | 60.2j-G | 63a-y | 1a-k | 44.9i-L | 68.4i-t | 9.3a-C | 10.4b1-p1 | 1.353a-w | 21.8u-Q |
| Batu | 62.1n-G | 66a-y | 2b-m | 71.2JKL | 100w | 21.3a-U | 9.2m-k1 | 1.435i-x | 44.3H1-M1 |
| DRK | 42.2a-G | 55a-y | 2b-m | 57.1w-L | 100w | 29.6a-U | 9.8G-p1 | 1.274a-q | 45.2J1-M1 |
| Beshbesh | 8.6a-c | 31a-t | 2b-m | 13.7a-u | 96.8w | 19.6a-U | 7.8a-C | 1.287a-s | 18.1c-y |
| Roba | 33.6a-E | 48a-y | 2c-n | 18.5a-B | 100w | 21.9a-U | 9k-j1 | 1.339a-w | 20.9p-M |
| KAT-B1 | 37.1a-F | 24a-r | 1b-k | 29.2a-H | 100w | 26a-U | 7.1a-h | 1.445l-x | 40.0z1-H1 |
| KAT-B9 | 66.9s-G | 66a-y | 3h-n | 45.1i-L | 100w | 27a-U | 7.1a-e | 1.437j-x | 38.0w1-D1 |
| Nasir | 56.9e-G | 82n-y | 2e-n | 42.4d-L | 100w | 42.8l-U | 8.7d-e1 | 1.451o-x | 23.8F-Z |
| Nazareth-2 | 21.4a-t | 58a-y | 2b-m | 19.1a-C | 100w | 37.7w-U | 6.2a | 1.404e-x | 18.7d-B |
| Cranscope | 85.5G | 49a-y | 2b-m | 43.1e-L | 100w | 28.2a-U | 7.4a-p | 1.25a-j | 37.3v1-A1 |

**Annex 2.** Continued

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| Ser 125 | 38.4a-F | 54a-y | 2b-m | 41.1b-L | 100w | 26.6a-U | 8.2b-S | 1.446l-x | 27.6Y-n1 |
| Mexican 142 | 17.3a-p | 50a-y | 2b-m | 17.7a-z | 99.3w | 38.3z-U | 14.6r1s1 | 1.406e-x | 16.3b-n |
| Lehode | 40.3a-G | 45a-x | 2f-n | 41.7c-L | 100w | 31.7c-U | 9.3p-l1 | 1.199a-c | 32.0n1-u1 |
| Wedo | 72.4w-G | 51a-y | 3mn | 35.7a-L | 91.7s-w | 18.1a-T | 8.4c-Z | 1.318a-u | 30.1f1-r1 |
| MAZ-112 | 32.2a-D | 17a-o | 2b-l | 16.3a-v | 45.1e-i | 5.9a-r | 8.1a-N | 1.268a-p | 41.1A1-K1 |
| MAZ-151 | 64.4q-G | 15a-n | 2b-m | 14.3a-u | 19.7a-e | 3.5a-n | 8.7d-e1 | 1.354a-w | 39.3y1-G1 |
| MAZ-172 | 46.8a-G | 3a-e | 1a-h | 5a-i | 6.4ab | 5.4a-p | 8.4c-X | 1.322a-w | 44.1H1-L1 |
| MAZ-174 | 52.1b-G | 5a-f | 1a-h | 6.3a-j | 6.9ab | 0.3ab | 9j-j1 | 1.46q-x | 41.9C1-L1 |
| MAZ-179 | 39.8a-G | 7a-i | 1a-i | 8.9a-p | 18.9a-d | 3.2a-l | 8.5c-a1 | 1.385c-x | 38.7y1-E1 |
| MAZ-180 | 13.7a-j | 6a-g | 2b-l | 7.1a-k | 64.4g-p | 2.7a-j | 7.7a-w | 1.448m-x | 44.0H1-L1 |
| MAZ-198 | 18.3a-r | 17a-o | 2b-l | 15.2a-u | 85.8o-w | 16.8a-R | 7.8a-B | 1.248a-i | 26.1Q-g1 |
| MAZ-200 | 42.9a-G | 1ab | 1a-e | 2.7a-e | 2.7a | 1.8a-g | 8.1b-P | 1.364a-w | 48.7M1N1 |
| MAZ-202 | 55.4d-G | 30a-t | 2e-n | 22.1a-E | 47.4f-j | 6.8a-w | 9.4q-m1 | 1.248a-i | 55.3P1 |
| MAZ-203 | 48.7a-G | 0a | 0a | 0a | 0a | 0a | 9j-j1 | 1.461q-x | 51.7N1-P1 |
| MAZ-204 | 51.3b-G | 12a-k | 2b-l | 17.1a-x | 39.2c-g | 4.8a-o | 8.3c-W | 1.413e-x | 44.4H1-M1 |
| MAZ-205 | 40.4a-G | 12a-l | 2b-l | 17.2a-x | 50.6f-k | 5.8a-q | 8.5c-a1 | 1.351a-w | 38.0w1-D1 |
| MAZ-215 | 44a-G | 41a-w | 2b-n | 36.3a-L | 89.6p-w | 31.9e-U | 8.6c-d1 | 1.33a-w | 38.0w1-D1 |
| MAZ-217 | 14.3a-l | 10a-k | 2b-m | 12.3a-s | 74.7k-w | 8.8a-B | 8.9e-h1 | 1.244a-g | 44.7I-M1 |
| MAZ-153 | 22.9a-u | 3a-d | 1a-g | 2.9a-f | 12.5ab | 1.6a-f | 6.7abc | 1.359a-w | 53.3O1p1 |
| SMARC-4 | 54.9c-G | 32a-t | 1a-k | 29a-H | 55.5gh | 6.8a-w | 8.6c-b1 | 1.397e-x | 14.5a-e |
| RAZ-28-8 | 58.3g-G | 6a-h | 1b-k | 8.7a-o | 14.8abc | 5.9a-r | 9.6y-o1 | 1.361a-w | 21.1q-N |
| RAZ-28 | 56.3e-G | 4a-e | 1a-g | 5.1a-i | 7.3ab | 5.7a-q | 7.8a-D | 1.206a-d | 32.0n1-u1 |
| RAZ-9 | 53.5b-G | 2ab | 1a-e | 3.8a-h | 3.8a | 3.6a-n | 8.1a-O | 1.336a-w | 31.3l1-t1 |
| RAZ-2 | 32.5a-D | 0a | 0a | 0a | 0a | 0a | 7.5a-r | 1.341a-w | 21.9u-R |
| RAZ-138 | 49.6a-G | 2a-d | 1a-e | 3a-g | 3a | 0.31ab | 8.1a-N | 1.272a-p | 28.4a1-o1 |
| RAZ-36 | 22.4a-t | 0a | 0a | 0a | 0a | 0a | 9.4s-m1 | 1.348a-w | 18.0c-x |
| RAZ-34 | 30.9a-C | 19a-p | 2b-m | 7.9a-l | 42d-h | 5.8a-q | 9j-j1 | 1.437j-x | 18.8e-B |
| RAZ-44 | 16.5a-p | 0a | 0a | 0a | 0a | 0a | 9.7C-p1 | 1.334a-w | 19.3g-E |
| RAZ-42 | 29.4a-z | 1ab | 1a-e | 0a | 0a | 0a | 8.1a-N | 1.377b-x | 18.4c-A |
| RAZ-11-1 | 30.4a-C | 1ab | 1a-e | 1.1ab | 1.1a | 1.07a-e | 8.6d-d1 | 1.267a-p | 23.0B-X |
| RAZ-11 | 8.4a-c | 0a | 0a | 0a | 0a | 0a | 7.2a-l | 1.282a-r | 18.4c-A |

**Annex 2.** Continued

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Genotype | INS (%) | NH | NH/S | FPD (%) | SPD (%) | SWL (%) | SCW (%)  | SD | HSW |
| RAZ-120 | 45.3a-G | 0a | 0a | 0a | 0a | 0a | 7.8a-D | 1.319a-v | 26.3R-h1 |
| RAZ-19 | 26.7a-y | 5a-f | 1a-e | 5.6a-j | 10.3ab | 0.6abc | 7a-d | 1.263a-o | 21.7t-Q |
| RAZ-111 | 49.2a-G | 2abc | 1a-e | 2.9a-f | 3.9a | 0.69a-d | 8.9d-h1 | 1.35a-w | 30.8i1-s1 |
| RAZ-114 | 16.1a-o | 2abc | 1a-g | 1.5abc | 1.9a | 0.21ab | 8.1a-K | 1.321a-w | 24.7K-c1 |
| RAZ-40 | 10.2a-e | 0a | 0a | 0a | 0a | 0a | 7.5a-q | 1.297a-t | 37.8w1-C1 |
| RAZ-119 | 26.4a-w | 2abc | 1a-e | 2.4a-d | 2.4a | 0.2ab | 7.6a-t+ | 1.383b-x | 26.0Q-g1 |
| Mean | 35.3 | 41.1 | 1.6 | 28.8 | 86.7 | 24.0 | 8.9 | 1.4 | 26 |

\*Values sharing the same letter within the column are not statistically significant.

INS(%), Infested seeds; NH, number of holes; NH/S, number of holes per seed; FPD(%), first progeny damage; SPD(%), second progeny damage; SWL(%), seed weight loss; SCW(%), seed coat weight; SD, seed density; and HSW, hundred seed weight.