Table 1: Variation in root biomass and root length of different maize genotypes as affected by *Striga* infestation under pot conditions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotypes | Dry root biomass (g) | | Root length (cm) | | Fresh root biomass (g) | |
| Striga-infested | Normal | Striga-infested | Normal | Striga-infested | Normal |
| CHFB04-OB | 1.06bcdef | 1.25a | 17.62ab | 21.35ab | 4.56bcde | 4.90a |
| KPAS04 | 0.60def | 0.85abc | 12.30defghi | 24.05a | 3.60bcdefg | 4.25abc |
| OKOMASA | 0.38ef | 0.73abc | 8.92ij | 13.07efg | 1.68efg | 2.93abc |
| KOBN03-OB | 0.80cdef | 0.43bc | 13.02cdefgh | 14.73cdefg | 3.78bcdefg | 2.40abc |
| NYAZ03-Y | 0.36ef | 0.47abc | 13.48cdefg | 15.93bcdefg | 2.10cdefg | 2.13abc |
| NYAZ04-W | 0.45def | 0.53abc | 12.72cdefghi | 21.30ab | 2.31cdefg | 2.40abc |
| GUMA03-OB | 0.83cdef | 0.40c | 14.28abcdefg | 16.33bcdefg | 4.38bcdef | 2.00bc |
| GBRM04-BA | 0.18ef | 0.53abc | 7.26 j | 14.33cdefg | 1.29g | 1.87c |
| TZE-Y-DT-STR-C4 | 1.17bcdef | 0.43bc | 11.31fghi | 16.37bcdefg | 4.83abc | 2.27abc |
| DORKE SR | 0.74cdef | 1.00abc | 15.4abcde | 16.75bcdef | 3.38bcdefg | 4.35abc |
| NYAN03 | 0.42ef | 0.67abc | 12.26defghi | 20.13abc | 2.40cdefg | 3.80abc |
| TZE-W-DT-STR-C4 | 0.23ef | 0.80abc | 10.79ghij | 13.65defg | 1.62fg | 3.35abc |
| NYIA03 | 1.11bcdef | 0.50abc | 16.62abc | 18.03bcde | 4.38bcdef | 2.17abc |
| NYLA04 | 0.90cdef | 1.20ab | 10.77ghij | 16.70bcdef | 4.41cdef | 4.83ab |
| TAAN04 | 0.51def | 0.33c | 11.31fghi | 12.60efg | 2.22cdefg | 1.77c |
| NYSW03-Y | 0.09f | 0.53abc | 9.00ij | 13.13efg | 1.02g | 2.77abc |
| DT-STR-W-C2 | 0.36ef | 0.83abc | 11.67efghi | 20.03abc | 1.59fg | 3.57abc |
| SISF03-0B | 2.67a | 0.43bc | 17.79a | 15.57bcdefg | 7.53a | 2.03abc |
| KOBN04-R | 0.35ef | 0.63abc | 9.36hij | 17.73bcdef | 1.83defg | 2.83abc |
| TAIS03 | 1.86abc | 0.97abc | 15.15abcdef | 14.43cdefg | 5.73ab | 3.30abc |
| CHMA04 | 1.57abcd | 0.87abc | 13.72bcdefg | 19.47abcd | 4.76abc | 2.70abc |
| IWD-C3-SYN-F2 | 1.78abc | 0.65abc | 16.20abcd | 10.50g | 5.76ab | 3.90abc |
| NYFA04 | 0.84cdef | 0.67abc | 14.64abcdefg | 15.47bcdefg | 2.06cdefg | 3.43abc |
| GH120 DYF/D POP | 2.09ab | 1.10abc | 12.06efghi | 18.40abcde | 4.62bcd | 4.45abc |
| NYFA03 | 1.25bcde | 0.67abc | 11.82efghi | 11.87fg | 2.74cdefg | 2.57abc |
| Mean | 0.90 | 0.70 | 12.78 | 16.48 | 3.22 | 3.08 |
| SEM | 0.06 | 0.05 | 0.52 | 0.51 | 0.20 | 0.20 |

*SEM: Standard error of mean; genotypes having the same letters (vertical direction) are not significantly different at 5% level of probability*

Table 2: Variation in leaf area and shoot biomass of different maize genotypes as affected by *Striga* infestation under pot conditions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotypes | Leaf Area (cm2) | | Fresh Shoot Weight (g) | | Dry Shoot Weight (g) | |
| Striga-infested | Normal | Striga-infested | Normal | Striga-infested | Normal |
| CHFB04-OB | 87.47ab | 136.5ab | 41.32bcde | 85.90a | 5.32bcdef | 8.95ab |
| KPAS04 | 82.32abc | 150.7a | 37.44cde | 88.45a | 5.34bcdef | 10.20a |
| OKOMASA | 68.04bcd | 87.2e | 14.88fgh | 38.93bcd | 2.88efg | 3.97d |
| KOBN03-OB | 74.40abcd | 113.4bcde | 38.10bcde | 33.27cd | 5.18bcdef | 3.77d |
| NYAZ03-Y | 59.91bcde | 95.6cde | 23.14efgh | 28.43cd | 3.16defg | 3.30d |
| NYAZ04-W | 76.83abcd | 106.2cde | 31.00cdef | 41.10bcd | 3.87cdefg | 4.50d |
| GUMA03-OB | 69.22abcd | 103.7cde | 30.99cdefg | 46.00bcd | 3.75cdefg | 4.37d |
| GBRM04-BA | 74.68abcd | 89.9de | 11.04gh | 38.77cd | 2.61fg | 4.03d |
| TZE-Y-DT-STR-C4 | 63.07bcd | 99.6cde | 26.22defgh | 38.50cd | 3.69cdefg | 3.90d |
| DORKE SR | 73.03abcd | 107.5cde | 40.70bcde | 56.35bc | 5.70bcdef | 6.35bcd |
| NYAN03 | 84.96abc | 118.47bc | 24.76efgh | 53.43bcd | 3.22defg | 5.53cd |
| TZE-W-DT-STR-C4 | 67.61bcd | 109.0bcde | 33.12cdef | 68.20ab | 4.83bcdef | 7.95abc |
| NYIA03 | 68.75bcd | 97.1cde | 47.16abc | 47.40bcd | 6.75abc | 4.63d |
| NYLA04 | 86.09abc | 104.4cde | 33.36cdef | 43.47bcd | 5.31bcdef | 4.57d |
| TAAN04 | 68.87bcd | 110.4bcde | 29.07cdefg | 25.67d | 4.08cdef | 3.40d |
| NYSW03-Y | 33.09e | 115.9bcd | 7.00h | 44.40bcd | 0.63g | 4.97cd |
| DT-STR-W-C2 | 58.67cde | 100.8cde | 33.78cdef | 55.87bc | 4.11cdef | 6.07bcd |
| SISF03-0B | 97.57a | 100.1cde | 57.81ab | 45.60bcd | 9.12a | 4.60d |
| KOBN04-R | 83.14abc | 108.9bcde | 26.04defgh | 43.90bcd | 3.33defg | 4.03d |
| TAIS03 | 72.56abcd | 108.4cde | 63.78a | 35.90cd | 7.83ab | 3.73d |
| CHMA04 | 76.52abcd | 111.1bcde | 39.34bcde | 42.70bcd | 6.18abcde | 4.10d |
| IWD-C3-SYN-F2 | 49.37de | 107.1cde | 40.05bcde | 29.00cd | 6.48abcd | 4.05d |
| NYFA04 | 73.46abcd | 108.4cde | 27.68cdefg | 45.13bcd | 4.52bcdef | 3.90d |
| GH120 DYF/D POP | 48.93de | 92.0cde | 45.75abcd | 49.40bcd | 7.68ab | 4.75d |
| NYFA03 | 79.58abc | 96.3cde | 32.00cdef | 35.80cd | 6.78abc | 4.93cd |
| Mean | 71.13 | 107.15 | 33.42 | 46.46 | 3.64 | 4.98 |
| SEM | 3.51 | 1.78 | 2.31 | 2.44 | 0.28 | 0.27 |

*SEM: Standard error of mean; genotypes having the same letters (vertical direction) are not significantly different at 5% level of probability*

Table 3: Variation in plant height, days to anthesis and days to pollen shed of different maize genotypes as affected by *Striga* infestation during field screening in the 2013 cropping season

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Genotype | Plant height | | Days to 50% anthesis | | Days to 50% pollen shed | |
| Striga-infested | Normal | Striga-infested | Normal | Striga-infested | Normal |
| CHFB04-OB | 149.13abcd | 159.27abcde | 58.33cde | 59.67cdefgh | 66.67bcd | 68.00abcd |
| KPAS04 | 132.77bcdef | 145.87defgh | 58.00de | 60.00bcdefgh | 66.33cde | 68.33abc |
| OKOMASA | 131.10cdef | 135.33efghi | 61.67b | 64.00a | 66.67bcd | 70.67a |
| KOBN03-OB | 138.53abcdef | 153.57cdefg | 57.67def | 62.00abcde | 65.00defgh | 68.67abc |
| NYAZ03-Y | 147.83abcd | 162.37abcd | 57.67def | 60.33abcdefg | 65.00defgh | 69.00ab |
| NYAZ04-W | 149.73abc | 168.23abcd | 55.00fg | 57.00ghij | 66.00cdef | 63.00efgh |
| GUMA03-OB | 142.67abcde | 174.35abc | 59.67bcd | 61.67abcdef | 67.67bc | 70.00ab |
| GBRM04-BA | 152.53abc | 172.97abc | 67.00a | 62.33abcd | 71.67a | 69.67ab |
| TZE-Y-DT-STR-C4 | 118.83f | 127.07hi | 53.00g | 55.00ijk | 61.67j | 59.33hi |
| DORKE SR | 138.40abcdef | 134.80fghi | 58.33cde | 59.00defgh | 66.00cdef | 69.00ab |
| NYAN03 | 149.83abc | 168.93abcd | 58.33cde | 58.67defghi | 65.33cdefg | 67.67abcd |
| TZE-W-DT-STR-C4 | 119.33f | 121.00i | 53.00g | 51.33k | 58.00k | 59.00i |
| NYIA03 | 144.33abcde | 183.10a | 57.67def | 57.00ghij | 65.33g | 61.67fghi |
| NYLA04 | 156.03ab | 165.10abcd | 61.00bc | 59.00defgh | 69.00b | 66.33bcde |
| TAAN04 | 150.53abc | 181.37ab | 58.67cde | 58.00fghi | 65.33cdefg | 66.33bcde |
| NYSW03-Y | 131.43cdef | 169.23abcd | 53.00g | 54.00jk | 58.67k | 61.00ghi |
| DT-STR-W-C2 | 129.53cdef | 129.67ghi | 57.00def | 63.67ab | 64.00efghij | 70.00ab |
| SISF03-0B | 130.63cdef | 157.90bcdef | 57.67def | 56.33hij | 65.00defgh | 63.00efgh |
| KOBN04-R | 132.10cdef | 165.50abcd | 56.67ef | 55.00jk | 63.67fghij | 64.33g |
| TAIS03 | 150.03abc | 148.70defgh | 57.00def | 60.33abcdefg | 63.33ghij | 67.00abcd |
| CHMA04 | 160.03a | 169.63abcd | 59.00bcde | 63.00abc | 67.00bcd | 69.67ab |
| IWD-C3-SYN-F2 | 125.90def | 131.00ghi | 56.67ef | 58.33fghi | 62.33ij | 65.00cdef |
| NYFA04 | 144.27abcde | 167.00abcd | 58.00de | 60.33abcdefg | 64.67defghi | 68.00abcd |
| GH120 DYF/D POP | 117.87f | 161.33abcd | 57.33def | 61.33abcdef | 62.67hij | 70.33a |
| NYFA03 | 122.77f | 131.53ghi | 57.33def | 63.00abc | 65.33cdefg | 70.67a |
| Mean | 129.15 | 155.39 | 57.79 | 59.21 | 63.11 | 66.63 |
| SEM | 2.96 | 2.50 | 0.34 | 0.43 | 0.49 | 0.46 |

*SEM: Standard error of mean; genotypes having the same letters (vertical direction) are not significantly different at the 5% level of probability*

Table 4: Variation in silking, anthesis-silking interval and striga plant rate of different maize genotypes as affected by *Striga* infestation during field screening in the 2013 cropping season

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Genotypes | Days to 50% silking | | Anthesis-silking interval | | Striga plant rating |
| Striga-infested | Normal | Striga-infested | Normal |
| CHFB04-OB | 67.67de | 66.00cdefgh | 9.33cde | 6.33bcd | 2.67bcd |
| KPAS04 | 67.67de | 67.00abcdef | 9.67bcd | 7.00bcd | 2.67bcd |
| OKOMASA | 72.00bc | 72.00a | 10.33abc | 8.00abc | 3.67a |
| KOBN03-OB | 67.00ef | 67.67abcdef | 9.33cde | 5.67bcd | 3.33ab |
| NYAZ03-Y | 66.33ef | 68.33abcde | 8.67cdef | 8.00abc | 3.67a |
| NYAZ04-W | 67.67de | 62.67fghij | 12.67a | 5.67bcd | 2.33cde |
| GUMA03-OB | 70.00cd | 70.00abc | 10.33abc | 8.33abc | 2.67bcd |
| GBRM04-BA | 75.00a | 70.00abc | 8.00cdef | 7.67abcd | 2.33cde |
| TZE-Y-DT-STR-C4 | 61.67g | 58.33j | 8.67cdef | 4.00d | 2.67bcd |
| DORKE SR | 67.00ef | 70.00abc | 8.67cdef | 11.00a | 2.33cde |
| NYAN03 | 67.00ef | 67.00abcdef | 8.67cdef | 8.33abc | 2.33cde |
| TZE-W-DT-STR-C4 | 59.67g | 58.00j | 6.67ef | 6.67bcd | 2.33cde |
| NYIA03 | 66.67ef | 61.00ij | 9.00cde | 6.00dbc | 3.33abcd |
| NYLA04 | 73.33ab | 66.67bcdefg | 12.33ab | 7.67abcd | 2.67bcd |
| TAAN04 | 67.33def | 66.67bcdefg | 8.67cdef | 8.67ab | 2.33cde |
| NYSW03-Y | 59.00g | 58.67ij | 6.00f | 4.67cd | 3.00abc |
| DT-STR-W-C2 | 66.00ef | 71.67ab | 9.00cde | 8.00abc | 3.00abc |
| SISF03-0B | 66.67ef | 61.67ghij | 9.00cde | 5.33bcd | 3.33ab |
| KOBN04-R | 66.67ef | 63.67efghi | 10.00abcd | 8.67ab | 3.67a |
| TAIS03 | 66.00ef | 67.33abcdef | 9.00cde | 7.00bcd | 2.00de |
| CHMA04 | 68.33de | 70.00abc | 9.33cde | 7.00dbc | 3.00abc |
| IWD-C3-SYN-F2 | 64.67ef | 64.00defgh | 8.00cdef | 5.67dbc | 1.67e |
| NYFA04 | 67.00ef | 66.67bcdefg | 9.00cde | 6.33bcd | 3.00abc |
| GH120 DYF/D POP | 64.67f | 69.00abcd | 7.33def | 7.67abcd | 3.67a |
| NYFA03 | 68.00de | 68.00abcde | 10.67abc | 5.00bcd | 3.33ab |
| Mean | 65.75 | 66.08 | 8.83 | 6.97 | 2.84 |
| SEM | 0.51 | 0.56 | 0.35 | 0.29 | 0.60 |

*SEM: Standard error of mean; genotypes having the same letters (vertical direction) are not significantly different at the 5% level of probability*

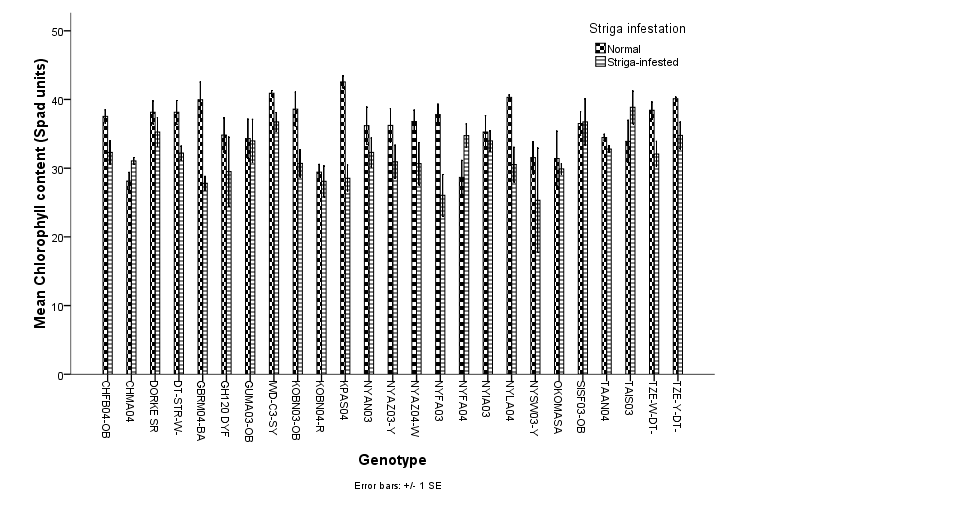


Figure 1: Changes in chlorophyll content of the genotypes during screening under greenhouse conditions in 2012

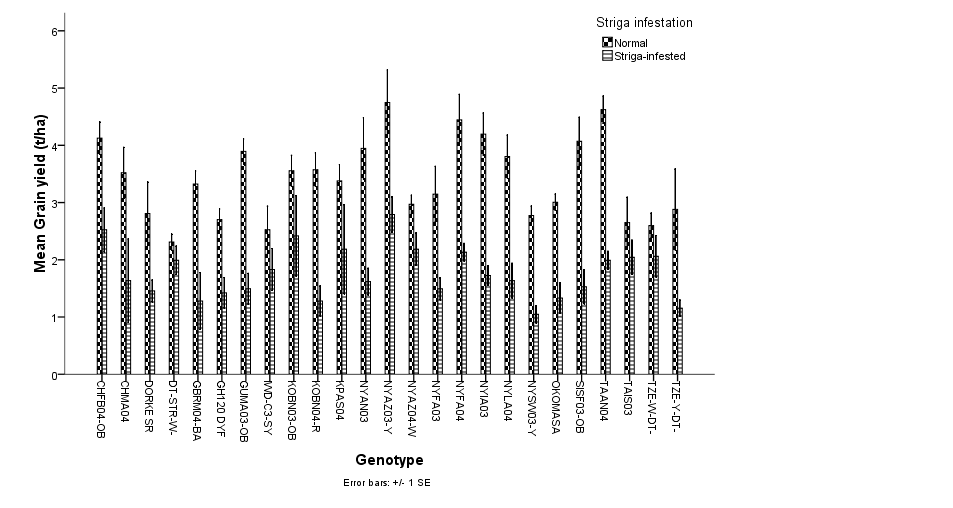


Figure 2: Changes in grain yield of the genotypes during screening in the 2013 cropping season

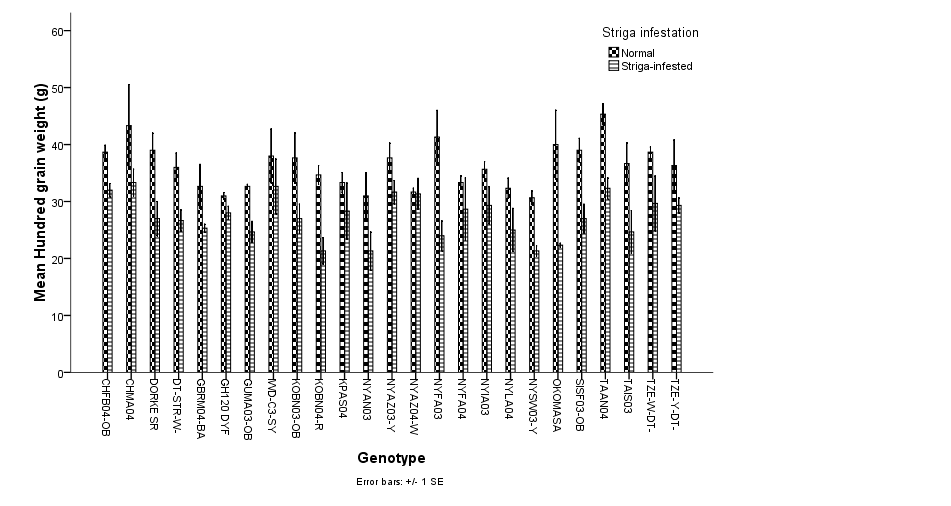


Figure 3: Change in hundred – grain weight of the genotypes during screening in 2013 cropping season