Table 1. Mean values of total biomass of plants (mg dw/plant produced during the experimental treatment for perennial ryegrass (PRG) and timothy, both northern and southern-adapted populations. Confidence intervals (95%) are presented in brackets (lower, upper).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Populations | Temp.  °C | | autumn period | | | | | | |  |
|  |  | Early | | | | Intermediate | | | Late | |
| PRG southern | 6 | 93 | | (75, 111) | 53 | | (39, 67) | 20 | | (8, 32) |
| 9/3\* | 145 | | (114, 176) | 94 | | (78, 110) | 17 | | (5, 29) |
| 12 | 307 | | (262, 352) | 80 | | (60, 100) | 30 | | (16, 44) |
| PRG northern | 6 | 166 | | (137, 195) | 55 | | (37, 73) | 16 | | (4, 28) |
| 9/3\* | 147 | | (125, 169) | 91 | | (64, 118) | 32 | | (14, 50) |
| 12 | 259 | | (216, 302) | 129 | | (104, 154) | 33 | | (13, 53) |
| Timothy southern | 6 | 55 | | (43, 67) | 49 | | (37, 61) | 16 | | (8, 24) |
| 9/3\* | 108 | | (90, 126) | 77 | | (65, 89) | 14 | | (6, 22) |
| 12 | 172 | | (135, 209) | 88 | | (70, 106) | 21 | | (11, 31) |
| Timothy  northern | 6 | 76 | | (56, 96) | 41 | | (29, 53) | 17 | | (7, 27) |
| 9/3\* | 84 | | (70, 98) | 67 | | (57, 77) | 19 | | (11, 21) |
| 12 | 237 | | (188, 296) | 87 | | (71, 103) | 22 | | (18, 26) |

\*day/night

Table 2. Freezing tolerance as LT50 value (temperature with 50% plant survival) of perennial ryegrass (PRG) and timothy after different temperature and autumn period treatments. Confidence intervals (95%) are presented in brackets (lower, upper).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Autumn period | | | | | |
| Population | Temp. °C | Early | | Intermediate | | Late | |
|  | LT50 | | LT50 | | LT50 | |
| PRG southern | 6 | -14.0 | (-14.4, -13.6) | -14.6 | (-15.1, -14.1) | -11.6 | (-12.2, -11.0) |
| 9/3\* | -14.2 | (-14.6, -13.8) | -13.8 | (-14.3, -13.3) | -10.7 | (-11.2, -10.2) |
| 12 | -12.2 | (-12.6, -11.8) | -10.3 | (-10.8, -9.8) | -7.0 | (-7.6, -6.3) |
| PRG northern | 6 | -15.8 | (-15.2, -16.4) | -17.3 | (-18.0, -16.5) | -13.6 | (-14.2, -13.0) |
| 9/3\* | -15.4 | (-16.0, -14.9) | -15.8 | (-16.3, -15.4) | -12.9 | (-13.5, -12.3) |
| 12 | -13.9 | (-14.4, -13.5) | -11.7 | (-12.3, -11.1) | -7.0 | (-7.6, -6.4) |
| Timothy southern | 6 | -15.1 | (-15.7, -14.4) | -14.9 | (-15.8, -14.1) | -10.5 | (-11.1, -9.8) |
| 9/3\* | -14.2 | (-14.9, -13.6) | -16.8 | (-17.7, -16.0) | -9.9 | (-9.2, -10.5) |
| 12 | -11.1 | (-11.7, -10.6) | -11.4 | (-11.9, -10.9) | -7.7 | (-8.3, -7.1) |
| Timothy northern | 6 | -17.7 | (-18.5, -16.9) | -17.4 | (-18.3, -16.5) | -11.8 | (-12.5, -11.1) |
| 9/3\* | -16.0 | (-16.6, -15.3) | -17.1 | (-17.6, -16.6) | -12.2 | (-12.9, -11.5) |
| 12 | -12.7 | (-13.3, -12.1) | -12.3 | (-13.0, -11.7) | -8.2 | (-8.9, -7.6) |

\*day/night