**Supplementary Table 1:**

**Analysis of Variance for viable seeds of *Avena fatua and A. ludoviciana* at three locations (Gatton, Narrabri, and St. George) in response to seed burial duration and depth**

|  |  |  |
| --- | --- | --- |
| Source | Degree of freedom | Mean square |
|  | *Avena fatua* | *Avena ludoviciana* |
|  | Gatton | Narrabri | St. George | Gatton | Narrabri | St. George |
| Replication | 2 |  140 |  11 |  5 |  23 |  5 |  125 |
| Duration | 6 | 12465\* | 13471\* | 12630\* | 12119\* |  12284\* | 11640\* |
| Burial depth  | 2 |  522\* |  212\* |  1002\* |  305\* |  13 |  247\* |
| Duration x Burial depth | 12 |  232\* |  73\* |  239\* |  119\* |  22 |  66\* |
| Error | 40 |  54 |  34 |  25 |  34 |  12 |  27 |

\*significant at 5% level of significance

**Supplementary Table 2: Analysis of Variance for emergence pattern of *Avena fatua* and *Avena ludoviciana***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source | Degree of freedom (*A. fatua*) | Degree of freedom (*A. ludoviciana*) | Mean square (*A. fatua*) | Mean square (A*. ludoviciana*) |
| Replication |  2 |  2 |  66.0 |  12.7 |
| Population (P) |  1 |  1 |  68.7\* |  35.1\* |
| Cohorts (C) |  3 |  5 | 1891.4\* | 1701.9\* |
| P x C |  3 |  5 |  78.8\* |  25.7\* |
| Burial depth (BD) |  3 |  3 |  698.8\* |  198.6\* |
| P x BD |  3 |  3 |  64.2\* |  4.3 |
| C x BD |  9 | 15 |  135.7\* |  760.4\* |
| P x C x BD |  9 | 15 |  5.2\* |  18.0\* |
| Error | 62 | 94 |  2.5 |  2.6\* |

\*significant at 5% level of significance