**Table (1): Effect of salinity stress on survival percentage of *Solidago altissima* explants grown *in vitro*.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Treatments | Subculture 1 | **Subculture 2** | **Subculture 3** | **Mean B** |
| **0 ppm**  **1000 ppm**  **2000 ppm**  **3000 ppm**  **4000 ppm**  **5000 ppm**  **6000 ppm**  **7000 ppm**  **8000 ppm**  **9000 ppm**  **10000 ppm**  **11000 ppm** | 100.0  100.0  100.0  100.0  91.67  83.33  83.33  75.00  58.33  41.67  25.00  00.00 | 100.0  100.0  100.0  100.0  100.0  91.67  91.67  75.00  66.67  50.00  41.67  00.00 | 100.0  100.0  100.0  100.0  100.0  100.0  100.0  83.33  83.33  58.33  66.67  00.0 | 100.0  100.0  100.0  100.0  97.22  91.67  91.67  77.78  69.44  50.00  44.44  00.00 |
| **Mean A** | 71.53 | 76.39 | 82.64 |  |
| **LSD A**  **B**  **A×B** | 5.158  10.32  17.87 | | | |

**Table (2): Effect of salinity stress on growth parameters of *Solidago altissima* explants grown *in vitro*.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatments | **Shootlet number/explant** | | | | **Shootlet length (cm)** | | | | **Leaves umber/shootlet** | | | |
| **Sub. 1** | **Sub. 2** | **Sub. 3** | **Mean B** | **Sub. 1** | **Sub. 2** | **Sub. 3** | **Mean B** | **Sub. 1** | **Sub. 2** | **Sub. 3** | Mean B |
| **Control**  **1000 ppm**  **2000 ppm**  **3000 ppm**  **4000 ppm**  **5000 ppm**  **6000 ppm**  **7000 ppm**  **8000 ppm**  **9000 ppm**  **10000 ppm** | 10.75  3.42  2.58  2.08  1.33  1.42  1.08  1.08  1.08  1.00  1.00 | 10.75  3.67  3.33  2.58  1.58  1.58  1.33  1.25  1.17  1.08  1.00 | 12.00  4.17  3.83  3.17  2.83  2.58  2.42  2.00  1.83  1.42  1.25 | 11.17  3.75  3.25  2.61  1.92  1.86  1.61  1.44  1.36  1.17  1.08 | 2.18  1.42  1.46  1.37  1.04  1.11  1.15  0.98  1.14  0.63  0.57 | 2.72  2.02  2.27  1.67  1.77  1.43  1.23  1.11  1.26  0.81  0.71 | 3.01  2.23  2.44  1.40  2.04  1.84  1.38  1.25  1.36  0.94  0.92 | 2.64  1.89  2.06  1.48  1.62  1.66  1.26  1.11  1.25  0.79  0.73 | 9.02  7.12  8.85  8.72  8.01  7.96  8.08  8.11  8.11  5.33  4.67 | 9.09  9.19  9.99  8.10  8.92  8.60  8.15  7.29  7.63  6.71  7.54 | 9.85  9.50  10.37  8.45  9.54  8.92  8.42  7.58  7.50  6.79  7.46 | 9.32  8.60  9.74  8.42  8.83  8.49  8.22  7.66  7.75  6.28  6.56 |
| **Mean A** | 2.439 | 1.667 | 3.409 |  | 1.186 | 1.546 | 1.710 |  | 7.634 | 8.292 | 8.580 |  |
| **LSD A**  **B**  **A×B** | 0.2868  0.5491  0.9511 | | | | 0.1930  0.3860  0.6686 | | | | 0.5723  1.096  1.898 | | | |

**Table (3): Effect of salinity stress on pigments, indol, phenol and proline of *Solidago altissima* explants grown *in vitro*.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatments** | Pigments mg/100g fw | | | **Indol mg/100g fw** | **Phenole mg/100g fw** | **Proline mg/100g fw** |
| **Chl. A** | **Chl. B** | **Caro.** |
| **Control**  **1000 ppm**  **2000 ppm**  **3000 ppm**  **4000 ppm**  **5000 ppm**  **6000 ppm**  **7000 ppm**  **8000 ppm**  **9000 ppm**  **10000 ppm** | 99.69  75.46  95.68  48.06  54.44  46.51  89.72  51.47  78.54  31.99  49.26 | 52.40  36.24  57.61  49.98  46.97  32.26  87.93  61.03  112.5  51.31  45.28 | 127.0  96.44  111.3  80.70  62.43  73.96  98.86  57.50  84.77  72.71  61.23 | 670.2  401.0  600.1  560.0  410.7  398.3  407.8  339.7  603.9  280.3  221.3 | 208.7  654.1  597.5  671.5  823.4  470.1  420.2  1031.0  10.57.0  1065.0  1754.0 | 0.187  0.197  0.320  0.387  0.547  1.678  0.940  0.972  0.797  0.677  3.337 |
| **LSD** | 4.331 | 10.94 | 6.862 | 224.5 | 99.77 | 0.9784 |

**Table (4): Effect of salinity stress on rooting behavior and acclimatization plantlets of *Solidago altissima*.**

|  |  |  |  |
| --- | --- | --- | --- |
| Treatments | **Rooting behaviour** | | **Acclimtization stage** |
| **Root number** | **Root length (cm)** | **Survival %** |
| **Control**  **1000 ppm**  **2000 ppm**  **3000 ppm**  **4000 ppm**  **5000 ppm**  **6000 ppm**  **7000 ppm**  **8000 ppm**  **9000 ppm**  **10000 ppm** | 3.14  3.14  2.75  2.92  2.75  3.83  3.42  3.83  4.67  4.92  4.92 | 3.33  3.00  2.83  2.83  2.70  2.77  2.17  1.97  1.43  1.57  1.30 | 100  100  97  97  98  97  98  99  97  98  97 |
| **LSD** | 1.591 | 0.727 | NS |