**Table 1S.** Vv of stem tissues and the number of vascular bundles in three stem segments of *V. sativa* control plants and changes following PGR application (first year) (mean ± standard error, coefficient of variation, D.F. = 48)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Vv1 epidermis | Vv collenchyma | Vv cortex parenchyma | Vv sclerenchyma | Vv phloem | Vv xylem+sclpar | Vv cyl parenchyma | Vv cavity | No. vasc bundles |
| Seg. 3 | Con | 2.9±0.36  (27.5) | 1.9±0.08  (9.7) | 17.7±0.42  (18.0) | 3.9±0.31  (17.7) | 8.8±0.61  (15.6) | 17.4±1.70  (21.8) | 17.2±2.32  (30.1) | 30.2±2.21  (16.4) | 20.6±0.40  (4.3) |
|  | C12 | 3.3±0.49  (33.5) | 2.2±0.35  (35.8) | 18.1±2.19  (27.1) | 3.9±0.34  (19.5) | 10.9±0.83  (17.1) | 16.1±1.91  (26.5) | 18.8±0.80  (9.5) | 26.8±1.82  (15.2) | 19.8±0.66  (7.5) |
|  | C2 | 3.9±0.40  (23.4) | 1.9±0.41  (49.1) | 19.3±1.15  (13.4) | 4.2±0.59  (31.3) | 10.5±1.23  (26.2) | 17.7±2.58  (32.7) | 33.6±4.06  (27.1)\* | 9.1±3.60  (88.9)\* | 19.2±0.97  (11.3) |
|  | C3 | 3.5±0.31  (20.1) | 2.1±0.25  (27.1) | 22.8±1.10  (10.8)\* | 3.1±0.16  (11.4)\* | 10.8±0.49  (10.0)\* | 12.7±1.71  (30.0) | 21.7±2.55  (26.3) | 23.3±2.09  (20.1) | 18.0±0.00  (0.0)\* |
|  | C4 | 3.5±0.50  (31.9) | 2.6±0.25  (21.4)\* | 21.9±1.91  (19.5) | 3.6±0.19  (11.9) | 10.3±1.19  (25.9) | 15.0±3.03  (45.1) | 21.5±2.12  (22.0) | 21.6±0.29  (3.0)\* | 19.4±0.75  (8.6) |
|  | C5 | 3.1±0.62  (44.1) | 2.5±0.30  (26.4) | 19.4±0.99  (11.4) | 4.4±0.54  (27.7) | 10.3±0.63  (13.7) | 15.3±1.68  (24.5) | 23.1±1.59  (15.4) | 21.9±2.91  (29.7) | 20.0±0.71  (7.9) |
|  | C6 | 3.8±0.45  (26.2) | 3.2±0.44  (30.5)\* | 18.5±0.54  (6.5) | 3.7±0.21  (12.9) | 11.0±0.81  (16.4) | 16.0±1.20  (16.8) | 21.3±2.37  (24.9) | 22.4±3.47  (34.6) | 19.6±0.75  (8.5) |
| Seg. 4 | Con | 3.0±0.51  (38.2) | 1.8±0.27  (32.9) | 19.1±1.87  (21.9) | 5.1±0.26  (11.4) | 10.4±0.78  (16.6) | 18.7±1.40  (16.7) | 15.2±2.13  (31.4) | 26.6±1.54  (13.0) | 18.6±0.24  (2.9) |
|  | C1 | 3.4±0.44  (29.1) | 2.6±0.29  (25.1) | 19.9±2.23  (25.0) | 4.4±0.57  (29.2) | 10.2±0.56  (12.4) | 14.9±2.51  (37.6) | 17.7±1.74  (22.0) | 26.9±2.77  (23.0) | 18.2±0.37  (4.6) |
|  | C2 | 3.5±0.35  (22.3) | 1.7±0.28  (36.7) | 22.6±0.97  (9.5) | 3.7±0.15  (9.0)\* | 11.6±1.07  (20.7) | 18.1±2.16  (26.7) | 13.7±1.72  (28.1) | 25.1±1.34  (12.0) | 18.2±0.37  (4.6) |
|  | C3 | 3.1±0.35  (25.4) | 1.9±0.43  (49.6) | 25.9±0.54  (4.7)\* | 4.0±0.22  (12.4)\* | 11.5±0.72  (14.1) | 15.2±1.03  (15.1) | 15.0±2.13  (31.7) | 23.2±0.73  (7.0) | 17.4±0.51  (6.6) |
|  | C4 | 2.9±0.49  (37.5) | 1.6±0.15  (20.1) | 25.6±2.71  (23.7) | 4.0±0.39  (21.7)\* | 11.6±1.22  (23.5) | 15.2±2.44  (35.8) | 15.8±2.94  (41.5) | 23.2±1.92  (18.6) | 17.4±0.60  (7.7) |
|  | C5 | 3.8±0.69  (41.2) | 2.1±0.32  (34.0) | 19.6±1.80  (20.5) | 4.9±0.73  (33.2) | 11.7±0.38  (7.3) | 17.4±2.91  (37.4) | 15.8±1.46  (20.8) | 24.8±2.49  (22.5) | 18.4±0.51  (6.2) |
|  | C6 | 2.9±0.67  (51.1) | 2.3±0.54  (52.5) | 25.3±2.51  (22.2) | 3.7±0.52  (31.5)\* | 11.4±0.84  (16.5) | 17.0±1.42  (18.6) | 13.0±1.31  (22.6) | 24.3±1.41 (13.0) | 17.2±0.86  (11.2) |
| Seg. 5 | Con | 3.6±0.41  (24.9) | 1.4±0.26  (41.0) | 25.9±2.51  (21.7) | 3.9±0.26  (14.7) | 12.5±0.26  (4.7) | 21.5±2.31  (24.1) | 12.7±1.64  (28.8) | 18.5±0.94  (11.3) | 16.8±0.37  (5.0) |
|  | C1 | 3.4±0.13  (8.8) | 1.6±0.31  (42.9) | 23.9±1.10  (10.3) | 3.8±0.42  (24.4) | 11.6±1.17  (22.5) | 17.8±2.61  (32.7) | 16.5±2.93  (39.7) | 21.3±2.02 (21.2) | 16.4±0.68  (9.2) |
|  | C2 | 3.8±0.19  (10.9) | 1.6±0.46  (64.5) | 25.7±1.33  (11.6) | 3.2±0.40  (28.3) | 12.8±0.96  (16.8) | 21.4±2.48  (25.8) | 12.0±0.81  (15.1) | 19.6±2.28  (26.0) | 16.6±0.51  (6.9) |
|  | C3 | 4.9±0.54  (24.4) | 2.3±0.40  (39.6) | 29.5±1.16  (8.8) | 3.8±0.45  (26.5) | 12.4±0.69  (12.5) | 18.6±2.10  (25.2) | 12.8±1.18  (20.6) | 15.7±2.91  (41.5) | 14.0±0.32  (5.1)\* |
|  | C4 | 3.9±0.49  (28.1) | 2.6±0.49  (42.4) | 26.4±1.74  (14.8) | 4.1±0.36  (19.6) | 13.6±1.39  (22.9) | 19.4±2.71  (31.2) | 14.3±1.38  (21.7) | 15.7±2.74 (38.9) | 15.0±0.44  (6.7)\* |
|  | C5 | 3.5±0.44  (27.6) | 1.6±0.28  (38.9) | 23.7±2.30  (21.7) | 4.3±0.48  (25.0) | 12.7±0.85  (14.9) | 19.6±2.01  (22.9) | 16.5±2.09  (28.4) | 18.2±2.38  (29.2) | 16.4±0.81  (11.1) |
|  | C6 | 3.5±0.30  (19.2) | 2.6±0.23  (20.4)\* | 25.0±1.74  (15.6) | 4.1±0.49  (27.3) | 15.3±1.02  (14.9)\* | 19.7±1.75  (19.8) | 13.2±1.41  (23.9) | 16.7±2.45  (32.8) | 16.4±0.81  (11.2) |

\* - indicates that differences within one species were significant between the years, according to t-test, *P*˂0.05

1 - Vv – Volume density of the tissue (%)

2 - C1-C6, first year of study. Plots C1, C2 and C3 treated once with TE: 1.6 l/ha, 2.4 l/ha and 3.2 l/ha, respectively. Plots C4, C5 and C6 treated twice - the first treatment the same as previous, the second 1.6 l/ha TE to all three plots.

**Table 2S.** Vv of stem tissues and the number of vascular bundles in three stem segments of *V. sativa* control plants and changes following PGR application (second year) (mean ± standard error, coefficient of variation, D.F. = 48)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Vv1 epidermis | Vv collenchyma | Vv cortex parenchyma | Vv sclerenchyma | Vv phloem | Vv xylem+sclpar | Vv cyl parenchyma | Vv cavity | No. vasc bundles |
| Seg. 3 | Con | 2.7±0.29  (23.9) | 2.3±0.26  (25.0) | 16.9±0.39  (5.1) | 3.5±0.09  (5.6) | 8.2±0.21  (5.8) | 13.8±1.14  (18.5) | 20.4±1.83  (20.1) | 32.1±0.99  (6.9) | 21.6±1.08  (11.1) |
|  | C1-2 2 | 3.1±0.31  (22.4) | 2.5±0.39  (35.2) | 16.9±1.11  (14.7) | 4.0±0.29  (16.6) | 9.8±1.11  (25.2) | 16.8±1.66  (22.2) | 21.8±1.86  (19.0) | 25.2±4.58  (40.6) | 20.0±0.84  (9.4) |
|  | C2-2 | 2.8±0.24  (19.3) | 2.5±0.30  (27.0) | 16.2±0.94  (13.0) | 3.5±0.40  (25.5) | 8.9±0.70  (17.6) | 16.8±1.69  (22.5) | 26.5±1.20  (10.2)\* | 23.0±1.83  (17.8)\* | 20.4±0.24  (2.7) |
|  | C3-2 | 3.4±0.44  (29.4) | 2.6±0.55  (46.8) | 16.9±0.68  (9.0) | 4.3±0.45  (23.2) | 8.5±0.55  (14.3) | 19.6±1.84  (21.0)\* | 18.5±1.81  (21.9) | 26.2±3.86  (33.0) | 20.6±0.51  (5.5) |
|  | C4-2 | 2.5±0.65  (57.7) | 2.6±0.39  (33.5) | 13.9±0.76  (12.2)\* | 3.6±0.30  (19.0) | 9.4±0.45  (10.7)\* | 17.0±1.20  (15.7) | 19.3±2.17  (25.2) | 31.8±2.59  (18.2) | 22.2±0.86  (8.7) |
|  | C5-2 | 2.7±0.42  (34.5) | 2.1±0.31  (33.6) | 18.2±1.13  (13.9) | 3.5±0.32  (21.0) | 9.6±0.67  (15.7) | 11.0±0.91  (18.5) | 21.1±1.48  (15.7) | 32.0±0.93  (6.5) | 20.6±0.51  (5.5) |
|  | C6-2 | 2.5±0.54  (47.8) | 2.5±0.15  (13.5) | 18.4±1.46  (17.8) | 3.6±0.11  (7.1) | 10.4±0.96  (20.7) | 16.1±1.94  (27.0) | 18.1±2.56  (31.8) | 28.5±2.69  (21.1) | 21.8±0.73  (7.5) |
| Seg. 4 | Con | 2.8±0.30  (24.4) | 2.3±0.20  (20.2) | 16.8±0.83  (11.0) | 4.3±0.20  (10.1) | 9.4±0.68  (16.1) | 16.7±0.68  (9.1) | 19.7±1.94  (22.0) | 28.1±2.14  (17.0) | 20.2±0.80  (8.9) |
|  | C1-2 | 3.3±0.17  (12.3) | 1.7±0.26  (33.5) | 17.4±1.28  (16.5) | 4.0±0.43  (24.0) | 9.3±0.83  (19.8) | 15.8±1.20  (17.0) | 21.2±2.30  (24.2) | 27.3±3.83  (31.3) | 20.0±1.34  (15.0) |
|  | C2-2 | 2.9±0.59  (46.0) | 2.9±0.35  (27.2) | 17.6±0.77  (9.8) | 4.2±0.28  (15.1) | 8.4±0.77  (20.5) | 13.8±0.93  (15.1)\* | 22.0±2.34  (24.2) | 28.7±2.46  (19.1) | 20.4±0.51  (5.6) |
|  | C3-2 | 4.0±0.65  (35.8) | 1.6±0.31  (44.7) | 19.6±0.88  (10.0)\* | 5.5±0.33  (13.7)\* | 10.0±0.77  (17.2) | 19.7±0.60  (6.9)\* | 14.2±1.10  (17.3)\* | 25.5±1.44  (12.6) | 19.4±0.68  (7.8) |
|  | C4-2 | 2.6±0.64  (54.5) | 1.8±0.24  (29.6) | 16.8±0.52  (7.0) | 3.7±0.38  (23.3) | 9.3±0.54  (12.8) | 14.9±1.44  (21.7) | 17.7±1.53  (19.3) | 33.1±2.28  (15.4) | 21.6±0.93  (9.6) |
|  | C5-2 | 3.0±0.36  (26.7) | 2.1±0.32  (34.3) | 21.0±0.90  (9.6)\* | 3.3±0.26  (17.9)\* | 9.5±0.93  (22.0) | 11.7±0.85  (16.4)\* | 18.2±0.66  (8.1) | 31.3±2.34  (16.7) | 19.6±0.68  (7.7) |
|  | C6-2 | 2.4±0.17  (16.1) | 2.2±0.10  (10.4) | 20.0±0.92  (10.3)\* | 3.7±0.13  (7.8)\* | 10.7±0.92  (19.4) | 14.0±2.34  (37.3) | 15.9±1.88  (26.5) | 31.2±1.91  (13.7) | 20.0±0.63  (7.1) |
| Seg. 5 | Con | 3.5±0.22  (14.1) | 2.4±0.16  (14.6) | 18.3±0.57  (7.0) | 5.3±0.20  (8.3) | 13.0±0.44  (7.6) | 23.8±1.73  (16.3) | 18.5±3.28  (39.6) | 15.2±2.61  (38.4) | 17.6±0.24  (3.1) |
|  | C1-2 | 3.2±0.49  (34.2) | 1.9±0.23  (27.9) | 21.5±1.66  (17.3) | 4.9±0.38  (17.1) | 11.1±0.78  (15.7) | 22.3±2.89  (29.0) | 16.9±1.52  (20.1) | 18.3±3.32  (40.5) | 18.0±0.84  (10.4) |
|  | C2-2 | 3.2±0.60  (41.7) | 1.9±0.19  (21.9) | 22.5±2.14  (21.3) | 4.2±0.37  (20.0)\* | 10.3±1.35  (29.4) | 18.2±2.60  (31.9) | 20.5±2.00  (21.9) | 19.2±3.75  (43.7) | 19.0±0.45  (0.4)\* |
|  | C3-2 | 3.6±0.53  (33.4) | 1.9±0.48  (57.2) | 21.7±0.91  (9.4)\* | 6.2±0.52  (18.9) | 13.3±0.43  (7.2) | 23.9±2.09  (19.6) | 12.7±1.37  (24.1) | 16.8±1.27  (16.9) | 18.0±0.32  (3.9) |
|  | C4-2 | 3.1±0.53  (38.7) | 1.3±0.20  (33.7)\* | 19.6±1.40  (16.0) | 4.2±0.37  (19.9)\* | 11.4±0.98  (19.2) | 16.3±1.69  (23.2) | 16.5±1.22  (16.4) | 27.6±2.02  (16.3)\* | 19.6±0.93  (10.6) |
|  | C5-2 | 3.3±0.45  (30.3) | 2.1±0.44  (46.9) | 25.2±0.87  (7.7)\* | 3.9±0.41  (23.6)\* | 12.6±0.88  (15.5) | 12.5±1.12  (20.0)\* | 15.9±0.58  (8.1) | 24.6±2.43  (22.1)\* | 16.8±0.86  (11.4) |
|  | C6-2 | 2.9±0.38  (29.0) | 1.6±0.29  (41.0)\* | 24.3±1.20  (11.0)\* | 4.1±0.30  (16.4)\* | 13.7±1.14  (18.7) | 18.5±2.59  (31.3)\* | 16.0±2.06  (28.7) | 18.9±1.73  (20.5) | 18.0±0.32  (3.9) |

\* - indicates that differences within one species were significant between the years, according to t-test, *P*˂0.05

1 - Vv – Volume density of the tissue (%)

2 - C1-2-C6-2, second year of study. Plots C1, C2 and C3 treated once with TE: 1.6 l/ha, 2.4 l/ha and 3.2 l/ha, respectively. Plots C4, C5 and C6 treated twice - the first treatment the same as previous, the second 1.6 l/ha TE to all three plots.

**Table 3S.** Vv of stem tissues and the number of vascular bundles in three stem segments of *V. pannonica* control plants and changes following PGR application (first year) (mean ± standard error, coefficient of variation, D.F. = 48)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Vv1 epidermis | Vv collenchyma | Vv cortex parenchyma | Vv sclerenchyma | Vv phloem | Vv xylem+sclpar | Vv cyl parenchyma | Vv cavity | No vasc bundles |
| Seg. 3 | Con | 3.7±0.19  (11.2) | 2.8±0.30  (24.5) | 20.2±0.65  (7.2) | 5.1±0.30  (13.4) | 11.0±0.73  (14.9) | 18.7±0.34  (4.1) | 36.4±1.66  (10.2) | 2.2±0.96  (97.9) | 13.6±0.68  (11.2) |
|  | C1 2 | 5.6±0.56  (22.5)\* | 2.9±0.34  (26.5) | 20.8±1.63  (17.5) | 4.6±0.42  (20.8) | 10.8±0.38  (7.9) | 22.4±0.89  (8.9)\* | 30.6±2.12  (15.5) | 2.4±0.69  (64.4) | 13.0±0.63  (10.9) |
|  | C2 | 3.8±0.40  (23.7) | 3.4±0.67  (44.4) | 25.0±0.64  (5.8)\* | 4.2±0.37  (19.8) | 11.4±0.83  (16.4) | 18.9±0.56  (6.6) | 29.8±1.44  (10.8)\* | 3.5±1.20  (75.6) | 12.8±0.58  (10.2) |
|  | C3 | 3.5±0.61  (38.9) | 2.6±0.52  (43.7) | 24.4±2.10  (19.3) | 4.0±0.71  (39.8) | 11.8±1.08  (20.5) | 18.2±1.28  (15.7) | 31.0±2.61  (18.9) | 4.4±2.48  (125.9) | 12.6±0.24  (4.3) |
|  | C4 | 3.3±0.42  (28.4) | 3.4±0.41  (26.7) | 21.1±0.83  (8.7) | 4.7±0.42  (20.0) | 13.2±0.66  (11.1) | 18.5±1.12  (13.6) | 32.7±2.11  (14.4) | 3.1±1.13  (82.3) | 13.0±0.32  (5.4) |
|  | C5 | 3.7±0.33  (19.9) | 2.5±0.28  (25.2) | 24.0±1.08  (10.0)\* | 4.5±0.22  (10.8) | 12.7±0.56  (9.9) | 20.1±1.03  (11.5) | 30.1±0.94  (7.0)\* | 2.4±1.15  (108.4) | 12.4±0.24  (4.4) |
|  | C6 | 4.0±0.75  (41.6) | 3.9±0.26  (15.1)\* | 21.6±1.14  (11.9) | 4.5±0.38  (19.0) | 12.1±0.57  (10.5) | 19.9±1.49  (16.7) | 32.8±0.45  (3.1) | 1.2±0.65  (124.2) | 12.8±0.20  (3.5) |
| Seg. 4 | Con | 4.2±0.67  (36.2) | 2.4±0.06  (5.8) | 24.8±1.16  (10.5) | 4.7±0.44  (20.7) | 11.3±0.33  (6.5) | 19.8±0.47  (5.4) | 29.2±1.11  (8.5) | 3.6±0.57  (35.2) | 12.0±0.32  (5.9) |
|  | C1 | 4.7±0.91  (43.3) | 2.1±0.42  (45.0) | 23.7±1.32  (12.4) | 3.8±0.13  (7.6) | 10.6±0.87  (18.4) | 22.3±1.17  (11.8) | 27.0±2.37  (19.5) | 5.7±1.44  (56.7) | 12.0±0.32  (5.9) |
|  | C2 | 4.7±0.84  (40.1) | 2.8±0.53  (42.2) | 28.6±0.73  (5.7)\* | 4.2±0.21  (10.9) | 10.4±0.62  (13.4) | 19.2±1.57  (18.2) | 24.4±1.40  (12.9)\* | 5.6±1.15  (45.8) | 12.6±0.60  (10.6) |
|  | C3 | 4.0±0.29  (16.5) | 2.1±0.46  (49.5) | 25.4±1.63  (14.3) | 3.8±0.20  (12.0) | 12.2±0.74  (13.6) | 17.5±0.89  (11.3) | 29.8±1.86  (13.9) | 5.2±1.26  (54.4) | 12.4±0.40  (7.2) |
|  | C4 | 3.1±0.40  (28.5) | 2.9±0.15  (12.1)\* | 24.1±1.14  (10.5) | 4.2±0.78  (41.8) | 12.9±0.86  (14.9) | 17.6±1.36  (17.4) | 31.3±2.15  (15.4) | 4.0±0.93  (52.7) | 11.8±0.37  (7.1) |
|  | C5 | 3.8±0.71  (41.9) | 2.3±0.16  (15.5) | 25.8±0.74  (6.4) | 3.9±0.34  (19.5) | 13.0±0.91  (15.7) | 19.7±1.28  (14.6) | 27.3±0.97  (7.9) | 4.1±1.22  (66.8) | 12.2±0.37  (6.9) |
|  | C6 | 3.9±0.37  (21.0) | 2.1±0.27  (28.7) | 26.2±1.49  (12.7) | 3.3±0.55  (37.5) | 11.7±0.67  (12.9) | 18.9±1.05  (12.5) | 30.0±1.51  (11.2) | 3.8±0.82  (47.7) | 12.0±0.00  (0.0) |
| Seg. 5 | Con | 4.8±0.71  (32.9) | 3.3±0.33  (23.0) | 29.9±1.32  (9.8) | 3.7±0.69  (41.5) | 12.2±0.72  (13.1) | 19.5±0.92  (10.5) | 21.5±1.91  (19.9) | 5.1±1.09  (47.5) | 11.4±0.51  (10.0) |
|  | C1 | 4.2±0.70  (37.3) | 2.7±0.35  (28.9) | 29.6±1.92  (14.5) | 4.3±0.65  (34.0) | 11.4±0.72  (14.1) | 21.8±1.68  (17.3) | 21.9±4.71  (48.1) | 4.1±1.23  (67.8) | 12.6±0.60  (10.6) |
|  | C2 | 5.7±0.74  (28.9) | 2.7±0.55  (44.7) | 31.3±1.51  (10.7) | 3.6±0.47  (29.2) | 13.6±1.06  (17.4) | 20.3±2.01  (22.2) | 17.9±1.65  (20.7) | 4.8±1.18  (54.9) | 12.0±0.55  (10.2) |
|  | C3 | 5.6±1.23  (48.8) | 2.3±0.55  (53.1) | 28.2±0.94  (7.4) | 3.9±0.70  (40.6) | 12.8±0.99  (17.3) | 20.9±0.59  (6.4) | 22.0±2.16  (22.0) | 5.9±0.57  (21.7) | 12.0±0.71  (13.2) |
|  | C4 | 4.3±0.58  (29.6) | 2.2±0.33  (33.2) | 30.5±1.42  (10.4) | 3.6±0.48  (30.2) | 11.2±0.55  (11.0) | 17.9±1.77  (22.1) | 24.6±2.94  (26.8) | 5.7±0.91  (35.7) | 11.2±0.73  (14.7) |
|  | C5 | 5.1±0.65  (28.9) | 2.5±0.14  (12.5) | 29.8±1.24  (9.3) | 4.0±0.24  (13.5) | 13.5±0.99  (16.4) | 21.6±1.56  (16.2) | 19.5±2.19  (25.1) | 4.0±1.11  (61.9) | 12.0±0.32  (5.9) |
|  | C6 | 4.6±0.81  (39.7) | 3.3±0.73  (49.1) | 27.3±1.94  (15.9) | 5.1±0.67  (29.3) | 11.3±0.33  (6.6) | 23.8±1.53  (14.3)\* | 22.8±2.22  (21.8) | 1.8±0.70  (88.8) | 12.0±0.32  (5.9) |

\* - indicates that differences within one species were significant between the years, according to t-test, *P*˂0.05

1 - Vv – Volume density of the tissue (%)

2 - C1-C6, first year of study. Plots C1, C2 and C3 treated once with TE: 1.6 l/ha, 2.4 l/ha and 3.2 l/ha, respectively. Plots C4, C5 and C6 treated twice - the first treatment the same as previous, the second 1.6 l/ha TE to all three plots.

**Table 4S.** Vv of stem tissues and the number of vascular bundles in three stem segments of *V. pannonica* control plants and changes following PGR application (second year) (mean ± standard error, coefficient of variation, D.F. = 48)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Vv1 epidermis | Vv collenchyma | Vv cortex parenchyma | Vv sclerenchyma | Vv phloem | Vv xylem+sclpar | Vv cyl parenchyma | Vv cavity | No vasc bundles |
| Seg. 3 | Con | 3.9±0.90  (51.5) | 3.7±0.39  (23.7) | 18.5±0.99  (11.9) | 5.8±0.66  (25.6) | 9.0±0.52  (13.0) | 20.4±2.42  (26.6) | 25.9±1.19  (10.3) | 12.8±1.90  (33.2) | 15.4±0.81  (11.8) |
|  | C1-2 2 | 4.0±0.58  (32.5) | 4.4±0.50  (25.3) | 17.5±0.99  (12.7) | 5.3±0.93  (39.3) | 9.0±0.06  (1.5) | 17.9±1.69  (21.1) | 32.5±2.57  (17.7)\* | 9.3±3.80  (91.2) | 15.0±0.84  (12.5) |
|  | C2-2 | 3.8±0.75  (44.0) | 4.1±0.89  (48.2) | 16.7±1.79  (24.0) | 5.1±0.33  (14.3) | 10.8±0.71  (14.8) | 19.6±0.33  (3.8) | 29.4±3.07  (23.3) | 10.5±3.66  (77.7) | 15.0±0.55  (8.2) |
|  | C3-2 | 3.1±0.39  (28.4) | 2.3±0.14  (13.2)\* | 20.5±0.53  (5.8) | 4.8±0.54  (25.1) | 8.9±1.04  (26.3) | 15.0±1.20  (18.0) | 31.9±1.27  (8.9)\* | 13.5±1.98  (32.7) | 14.6±0.60  (9.2) |
|  | C4-2 | 3.4±0.20  (13.2) | 3.7±0.65  (39.7) | 20.5±0.55  (6.0) | 5.5±0.53  (21.6) | 9.9±0.31  (7.1) | 22.6±1.86  (18.4) | 24.8±1.44  (13.0) | 9.7±2.72  (62.8) | 14.0±0.55  (8.7) |
|  | C5-2 | 3.3±0.44  (30.0) | 2.8±0.47  (37.8) | 19.4±0.60  (6.9) | 5.3±0.45  (19.2) | 8.8±1.21  (30.8) | 18.4±0.93  (11.4) | 31.0±2.48  (17.9) | 11.1±2.05  (41.2) | 14.0±0.71  (11.3) |
|  | C6-2 | 3.7±0.33  (20.1) | 3.1±0.34  (24.3) | 21.0±0.87  (9.2) | 5.4±0.54  (22.4) | 8.3±0.21  (5.6) | 18.1±0.84  (10.4) | 23.3±1.39  (13.4) | 17.1±0.88  (11.5) | 13.8±0.37  (6.1) |
| Seg. 4 | Con | 3.8±0.67  (39.2) | 2.5±0.50  (43.9) | 19.9±1.89  (21.3) | 6.5±0.34  (11.8) | 8.8±0.40  (10.1) | 19.1±3.65  (42.8) | 27.8±1.53  (12.3) | 11.5±3.47  (67.4) | 13.8±0.58  (9.4) |
|  | C1-2 | 3.7±0.52  (31.2) | 2.5±0.16  (14.0) | 20.5±1.33  (14.5) | 5.0±0.32  (14.5)\* | 9.3±0.43  (10.3) | 18.6±0.82  (9.9) | 31.3±1.90  (13.5) | 9.0±1.85  (46.2) | 12.8±0.58  (10.2) |
|  | C2-2 | 4.5±0.81  (40.7) | 2.9±0.32  (24.5) | 20.6±0.83  (9.0) | 4.1±0.15  (8.4)\* | 10.6±0.30  (6.3)\* | 19.4±1.14  (13.2) | 22.3±1.88  (18.8) | 15.6±2.70  (38.7) | 12.8±0.37  (6.5) |
|  | C3-2 | 4.2±0.30  (16.1) | 2.2±0.42  (42.2) | 20.3±1.27  (14.0) | 5.2±0.44  (19.1)\* | 9.6±0.37  (8.6) | 15.3±0.25  (3.7) | 31.2±1.89  (13.6) | 12.0±1.95  (36.4) | 13.0±0.63  (10.9) |
|  | C4-2 | 4.5±0.71  (35.4) | 2.6±0.37  (31.6) | 20.0±1.12  (12.5) | 5.9±0.71  (26.6)\* | 10.0±0.49  (11.1) | 24.8±2.15  (19.4) | 22.5±1.59  (15.8) | 9.7±1.39  (32.0) | 13.6±0.87  (14.3) |
|  | C5-2 | 3.8±0.50  (29.2) | 2.0±0.38  (42.8) | 19.4±1.00  (11.5) | 5.9±0.39  (14.9) | 10.0±0.39  (8.7) | 18.8±0.39  (4.7) | 27.7±1.90  (15.3) | 12.4±1.45  (26.2) | 13.2±0.73  (12.4) |
|  | C6-2 | 4.8±0.65  (30.5) | 2.6±0.41  (35.9) | 22.5±0.80  (7.9) | 5.7±0.31  (12.1) | 9.4±0.41  (9.6) | 18.5±0.53  (6.4) | 19.7±1.51  (17.1)\* | 16.7±1.68  (22.6) | 12.6±0.24  (4.3) |
| Seg. 5 | Con | 5.0±0.54  (24.6) | 2.4±0.35  (31.6) | 22.3±0.59  (5.9) | 6.4±0.50  (17.5) | 11.7±1.05  (20.1) | 22.3±3.31  (33.2) | 22.6±2.58  (25.6) | 7.3±2.65  (81.1) | 13.0±0.77  (13.3) |
|  | C1-2 | 5.3±1.26  (53.7) | 3.0±0.48  (36.1) | 22.5±1.08  (10.7) | 4.5±0.29  (14.3)\* | 11.6±1.24  (23.8) | 18.3±0.80  (9.7) | 25.8±1.19  (10.3) | 9.0±2.65  (65.8) | 11.8±0.80  (15.1) |
|  | C2-2 | 3.8±0.82  (47.5) | 2.6±0.46  (39.0) | 28.9±5.36  (41.5) | 4.7±0.33  (16.1)\* | 9.2±1.18  (28.8) | 16.5±0.89  (12.0) | 21.2±1.95  (20.5) | 13.0±2.84  (48.8) | 12.2±0.20  (3.7) |
|  | C3-2 | 4.7±0.52  (24.7) | 2.3±0.23  (21.8) | 25.0±1.52  (13.6) | 4.3±0.30  (15.3)\* | 9.7±0.72  (16.5) | 17.8±0.69  (8.7) | 23.0±1.36  (13.2) | 13.1±1.67  (28.6) | 11.6±0.93  (17.9) |
|  | C4-2 | 4.3±0.48  (25.1) | 3.1±0.48  (34.8) | 20.6±0.92  (9.9) | 5.7±0.56  (21.9) | 11.8±1.04  (19.7) | 25.4±0.89  (7.8) | 19.4±2.27  (26.2) | 9.8±3.17  (72.8) | 12.8±0.86  (15.0) |
|  | C5-2 | 3.8±0.55  (32.4) | 2.2±0.21  (21.9) | 24.9±1.36  (12.2) | 5.1±0.86  (37.5) | 10.1±0.44  (9.8) | 19.8±1.03  (11.6) | 21.2±1.64  (17.3) | 13.0±0.69  (11.9) | 12.6±0.40  (7.1) |
|  | C6-2 | 5.6±0.91  (36.5) | 3.0±0.37  (27.0) | 25.9±1.13  (9.8)\* | 5.8±0.55  (21.5) | 10.7±0.63  (13.3) | 20.0±1.03  (11.5) | 22.1±0.82  (8.3) | 6.9±0.89  (28.7)\* | 10.6±0.40  (8.4)\* |

\* - indicates that differences within one species were significant between the years, according to t-test, *P*˂0.05

1 - Vv – Volume density of the tissue (%)

2 - C1-2-C6-2, second year of study. Plots C1, C2 and C3 treated once with TE: 1.6 l/ha, 2.4 l/ha and 3.2 l/ha, respectively. Plots C4, C5 and C6 treated twice - the first treatment the same as previous, the second 1.6 l/ha TE to all three plots.