

EFFECT OF GIBBERELIC ACID TREATMENT ON THE INITIAL GROWTH OF RED FESCUE

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Material and methods

Red fescue seed is small and with a small amount of reserve food, which causes low germination energy, all of which affect the very establishment of the crop. The aim of the study was to analyze the influence of pre-sowing treatments with gibberellic acid on the growth of roots and shoots of young red fescue plants. Maxima 1 (Dutch cultivar) red fescue seed was used for the experiment. Control and five treatments of different concentrations of gibberellic acid have been applied: control; 1.0 mmol L⁻¹; 1.5 mmol L⁻¹; 2.5 mmol L⁻¹; 4.0 mmol L⁻¹; 6.0 mmol L⁻¹. The seeds are set between filter paper in Petri dishes (80 mm) using 4 mL of solution. After 48 hours of treatment, the seeds were rinsed with distilled water on filter paper and placed in germination chamber for a period of ten days. Four repetitions with fifty seeds each were used. Young seedlings are planted in substrate containers that are stored in a greenhouse. Analysis was made 35 days after sprouting plants by taking 10 plants each. The following parameters were analyzed: dry mass of root and dry mass of shoot.

Results

Table 1. Effect of different concentrations of gibberellic acid, on the growth of roots and stems mass of red fescue

Gibberellic acid concentration (%)	Root length (mm)	Stem length (mm)
Ø	0,61b	2,11c
1	0,61b	2,06c
1,5	0,72ab	2,49ab
2,5	0,63ab	2,30abc
4	0,78a	2,67a
6	0,59b	2,29bc

Values followed by different small letters within columns are significantly different (P<0.05) according to the LSD test

Conclusion

The results obtained indicate that pre-sowing treatments with gibberellic acid at a concentration of 1.5 and 4.0 mmol L⁻¹ can significantly influence the more intense initial growth of young red fescue plants.