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APPLICATION OF GERMINATION TESTS OF PURSLANE (*PORTULACA OLERACEA* L.)

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Introduction

Unconventional vegetables (HNC) they are excellent sources of nutrients, minerals, vitamins and other essential biomolecules for human nutrition. Purslane (*Portulaca Oleracea* L.) is an HNC abundant in omega-3 and is considered the plant species that has the highest amount of this acid. Omega-3 is an essential nutrient for human health.In the last decades, the population's eating habits have been modified, the search for products that bring in themselves cultural and representative value of peoples and regions is a growing demand, as well as the search for foods with greater availability of nutrients. In view of this demand for HNC, it is necessary to develop technologies and disseminate information on the production of seedlings of such vegetables so that the cultivation can supply the market.The objective of the research was to evaluate the germination performance of purslane seeds under different test conditions.

Material and Methods

The experimental design used was completely randomized, with eight treatments and four replications of 25 seeds. The tests were conducted in a B.O.D. the first count was performed at 5 days and the second count was performed 14 days after the assembly of each test, as described by the RAS (Rules for Seed Analysis-MAPA). The treatments were composed by the different germination tests, namely: T1:25ºC, 12h light; T2: (Pre-cooling at 10ºC/3 days) 25ºC, 12h light; T3:(Pre-cooling at 5ºC/7 days) 25ºC, 16h light; T4:(Pre-cooling at 5ºC/7 days) KNO3 2g/L, 25ºC, 16h light; T5:KNO3 2g/L, 25°C, 16h light; T6: (Cleaning in 1% NaClO solution) 35ºC, 12h light; T7: (Cleaning in 2% NaClO solution) 35ºC, 12h light and T8: 35ºC,12h light.

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Results and/or Main findings

The results presented in figure 1 were submitted to analysis of variance and test of means. It was observed that disinfection with NaClO and the use of higher temperature contributed to increase the germination percentage of the seeds. Tests 1 and 2 showed the highest values for hard seeds. Test 6 provided a higher percentage of germination in relation to tests 1, 2, 4 and 5. The use of KNO3 did not significantly increase the germination percentage of the seeds.

Figure 1: Results

Treatments: SN: Normal seedlings after 14 days of evaluation; SH: Hard seeds; SA: Abnormal seedlings SD: Dead seeds; G: Germination.

Test	SN (average)	SH(average)	SA (average)	SD (average)	G (percentage)
25°C, 12h/L	1,5 c	23,3 a	0 a	0 b	6 c
PC1 -25°C, 12/L	1,5 c	21,8 a	0 a	2 ab	6 c
PC2-25°C, 16h/L	10,3 abc	6,3 b	1 a	8 ab	41 abc
PC2- KNO_3 2g/L, 25°C, 16h/L	6,5 bc	4 b	4 a	11 a	26 bc
KNO_3 2g/L, 25°C, 16h/L	5,5 bc	5 b	6 a	9 ab	22 bc
NC1- 35°C, 12h/L	16,5 a	0 b	8 a	3 ab	66 a
NC2 - 35°C/12h/L	14,3 ab	0 b	3 a	8 ab	57 ab
35°C/12h/L	15,3 ab	0,8 b	2 a	7 ab	61 ab

Pre-cooling at 10°C/3 days - PC1; Pre-cooling at 5°C/7 days - PC2; Light - L; Cleaning in 1% NaClO solution - NC1; Cleaning in 2% NaClO solution - NC2;

Conclusion

Treatment six showed better results. In addition, disinfection contributed to the improvement of germination and higher temperatures promote a better germination percentage of Purslane; The results demonstrate the need for further investigation on the appropriate conditions to promote the germination of the species.

Acknowledgments

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