

STUDY CONCERNING THE INFLUENCE OF CONDITIONS IN TIME OF GROWTH ON THE QUALITY AND SHELF LIFE OF THE ROSE FLOWERS

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Abstract

The quality of the rose flowers together with their longevity after the harvest is being influenced by a series of factors. In addition to the attributes characteristic to the species and the variety that gives flowers a certain storage capacity, they are influenced also by the gardening environment, the conditions in the capitalization process and by those from the buyer's apartments (Vlad, 2012).

Paying the required attention to all the factors, it is estimated that more than one third of the roses' life is influenced by the conditions of cultivation, while the remaining two thirds depend on the conditions in which they are kept after being harvested (Zaharia, 2005).

During their life time, the flowers located on the mother plant suffer numerous external influences, the result of which is a certain physiological state of their harvest. So, the pedological factors act simultaneously with the climatic ones and with the technology applied to the culture and the familiarization with their role concerning quality creates the possibility of guiding their action (Selaru, 1989).

In order for those who buy rose flowers to be able to enjoy their beauty and freshness as long as possible, we have searched as well for solutions that can be used to prolong their decorative period.

Key words: rose flowers, storage solutions, potassium alum.

INTRODUCTION

Flowers, symbol of beauty, gentleness and love of life, have delighted the man's eyes since the beginning of time. They were and still are always present in the human life, accompanying him all the way, in all his manifestations and events (Preda, 1996).

Among the cut flowers, the roses are very appreciated by the flower lovers because of the wide range of colors, the elegance of the flowers and the discreet and pleasant fragrance (Durkin, 2014).

During peak production and slow recovery times, which coincide with the warmer months of the year when there are plenty of flowers growing in the field, roses which are grown in greenhouses are capitalized slowly, with high losses and at prices that do not fully reward the efforts of the cultivator (Aarts, 2014).

It is known that there is not always a concordance between demand and production, the seasonality of demand being determined by certain

holidays and important events, and the seasonal character of production being determined by the variation of the greenhouse factors (Burdett., 2013).

Sometimes, after peak production period with low demand, there are times when the production fails to satisfy consumption, which is why by keeping the flowers under special conditions, the producer has the opportunity to make available any time, for the consumer, freshly cut roses from the varieties and qualities preferred by him. (Post, 1992).

MATERIAL AND METHODS

The experiments were carried out between 2017 and 2018 at Sântandrei (Oradea) using rose flowers of red varieties Baccara and yellow varieties Ophelia. Experiences included the following:

- V1 – flowers kept in water
- V2 – flowers kept in potassium alum 0.08%
- V3 – flowers kept in aluminum sulphate 0.1%
- V4 – flowers kept in sodium chloride 0.02%
- V5 – flowers kept in ferrous sulfate 0.08%

The flowers have been preserved in rooms with the temperature 18-280C.

RESULTS AND DISSCUTIONS

From Table 1, results that the shelf life of the rose flower was 7 days for the 2nd variant (flowers kept in 0.08% potassium aluminate solution), with a very significant difference compared to the 1st variant (flowers kept in the water).

Also, in the 5th variant (flowers kept in 0.08% ferrous sulfate solution) the shelf life of the flowers was 6 days, with a significant difference in the comparison with the control variant.

In the 4th variant (flowers kept in 0.02% sodium chloride) the shelf life of the flowers was 5 days, and in the 3rd variant (flowers kept in aluminum sulphate 0.1%) the shelf life was 4 days, both with significant differences from the control variant.

Table 1

Shelf life of the roses harvested at room temperature, depending on the solution used in vases (medium values, Sântandrei 2017-2018)

Variants	Shelf life		±D	The significance of the difference
	Absolute (days)	Relative (%)		
V1 – flowers kept in water	3	100	-	-
V2 – flowers kept in potassium alum 0,08%	7	233	4	***
V3 – flowers kept in aluminum sulphate 0,1%	4	133	1	*
V4 – flowers kept in sodium chloride 0,02%	5	167	2	*
V5 – flowers kept in ferrous sulfate 0,08%	6	200	3	**

LSD 5% - 1,33

LSD 1% - 2,25

LSD 0,1% -3,37

CONCLUSION

1. The best results were obtained in the 2nd variant (flowers kept in 0.08% potassium alum) where the shelf life in living room conditions was 7 days.

2. Obtaining high quality flowers with the potential of a long life is decided starting with the preparation of seedlings, substrates, and crops, then by the way in which are directed the environmental factors and culture technology.

3. The works applied to plants (bud, cuttings, phytosanitary treatments, irrigation, fertilization, soil loosening), if applied at the optimum time and in good conditions, contribute to obtaining good quality flowers.

4. Solutions containing copper sulphate have been found phytotoxic for roses, causing them to fall foliage and remain at the bud stage at which they were harvested.

5. By using preservative solutions before capitalization, as well as at purchasers (at room temperature), maintenance work is being eliminated while flowers are kept in water and the percentage of damaged flowers is reduced, which in the warmer times of the year is quite high, so consumers enjoy the beauty of the flowers in their apartments for as long as possible, without any special effort.

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