

THE ANALYSIS OF SOME ORNAMENTAL ROSE VARIETIES GROW IN THE GREEN SPACES FROM IAȘI

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Abstract

Species of the genus Rosa L. have importance for: creating green spaces, getting roses and their use as rootstock for cultivated varieties. The purpose of this paper is to highlight the possibilities of identifying potential ornamental species in the genus Rosa sp. The observations regarded six rose varieties: 'Queen Elizabeth', 'Golden Monica', 'Kardinal', 'Ingrid Bergman', 'Montana' and 'Diamond Jubilee'. There were studied six features defining the decorative value of these varieties, respectively: the foliage, the diseases resistance, the flowering intensity, the form of the flower, the colour of the petals and the odor.

Key words: roses, leafage, flower, blossoming, perfume.

INTRODUCTION

In the multitude of dendrological species which contain ornamental shrubs, spontaneous species of *Rosa L.* have a real importance for the design of green spaces, obtaining of noble roses, and many of them are utilised as parent stocks for cultivated sorts. (Mohan et al., 2010)

The conditions from Romania are generally favourable for this species.

One of the basic components of green spaces which assure an aesthetical aspect of localities and contributes to the welfare and good mood of people, which also assure a favourable working and living climate is represented by floral and roses landscapes designs (Wagner Șt., 2002).

Rose was considered from ancient times “Queen of flowers”, due to its multiple qualities and particularly great wealth and beauty flowers, scented and with various colours and shapes (Zaharia D. et al., 2003, Wagner Șt., 2002).

The necessity for diversifying the assortments is a priority, having in view the diversity of biological material and the results obtained in the world. Literature shows, which in this genus are known over 400 species with more than 20,000 sorts (Bernardis R., 2011, Mohan et al., 2010, Zaharia D. et al., 2003, Wagner Șt., 2002).

They are characterized through a series of characteristics, among which we mention: the bush shape; 1 - the vigour; 2 - the leafage; 3 - the resistance to diseases; 4 - the shank and the floral peduncle; 5 - the blooming intensity; 6 - the rose bud shape; 7 - the flower shape; 8 - the durability of the flower in the field; 9 - the colour at opening; 10 - the colour at blossoming; 11 - the manner of petals fall; 12. - the perfume.

MATERIALS AND METHODS

Evaluation of the ornamental value of some rose types was made with the green spaces in the city of Iasi.

The research was done on six varieties of rose existing in Iași county green space: 'Golden Monica', 'Ingrid Bergman', 'Queen Elizabeth', 'Kardinal', 'Diamond Jubilee', 'Montana'.

The 6 analysed types of roses in the green spaces in the city present the following characteristics:

1. 'Golden Monica' variety

A Hybrid Tea class type. It presents vigorous shrubs, 80/50 cm, erect growth and fast redeployment. The leaves are green, medium and shiny. The flowers are medium-large and well developed. The buds are slim, with golden-

yellow petals and a pleasant scent. They have good resistance against diseases. It is a type of rose for producing flowers cut in the field and unheated protected spaces (Figure 1a, 1b).

2. *'Ingrid Bergman'* variety

A Hybrid Tea class rose type. It has medium-vigour shrubs, 60/40 cm, compact and thick. The branches are erect, with medium leaves, dark green and with a skin-like aspect. The flowers have 30-40 large petals, velvety dark red in colour, slightly scented and presenting abundant inflorescence. They have good resistance against diseases. They are good for gardens and parks, in groups or massifs (Figure 2a and 2b).

3. *'Kardinal'* variety

A Hybrid Tea class rose type. This type has vigorous shrubs, 90/55 cm, with erect growth, thick branches and many thorns. The leaves are medium, dark green and shiny. The flowers are large, cardinal red in colour, slightly velvety and scented. They have good resistance against diseases. It is a type of rose for producing flowers cut in the field and protected spaces (Figure 3a and 3b).

4. *'Diamond Jubilee'* variety

A Hybrid Tea class rose type. It is a type of rose with medium vigour shrubs, 70/45 cm, and erect branches. The leaves are thick, dark green, semi-shiny. The flowers are large, with yellow-brownish petals, undated and pleasantly scented. They have rich inflorescence. They are easily attacked by fungus. They are used in massive or group plantations (Figure 4a and 4b).

5. *'Montana'* variety

A Floribunda class rose type. It presents medium-vigour shrubs, 70/45 cm, with semi-erect branches. The leaves are dark green and shiny. The flowers have 20-30 large petals, in groups of 5-7 flowers. They are red-orange in colour and have a faint scent. It is a type of rose resistant to diseases and cold weather. It is used in gardens and parks (Figure 5a and 5b).

6. *'Queen Elizabeth'* variety

A Floribunda class rose type. It presents vigorous shrubs, 120/60 cm, with erect and long branches. The leaves are large and shiny. The flowers are large and can be singled-out or in groups. The petals are pure, delicate pink and have a faint scent. It has good resistance to diseases. It is used alone, in groups, massifs or green fences (Figure 6a and 6b).



Figure 1a. *'Golden Monica'* variety



Figure 1b. *'Golden Monica'* variety



Figure 2a. *'Ingrid Bergman'* variety



Figure 2b. *'Ingrid Bergman'* variety



Figure 3a. *'Kardinal'* variety



Figure 5a. *'Montana'* variety



Figure 3b. *'Kardinal'* variety



Figure 5b. *'Montana'* variety



Figure 4a. *'Diamond Jubilee'* variety



Figure 6a. *'Queen Elizabeth'* variety



Figure 4b. *'Diamond Jubilee'* variety



Figure 6b. *'Queen Elizabeth'* variety

The observations were made in 6 periods, starting with the date of June 5th approximately every 2 weeks. In the end, we calculated the arithmetical mean for each characteristic in part and the total of points for the characteristics analyzed in each variety.

They consisted in studying 6 more important characteristics that define to the greatest extent the decorative value of these varieties and namely: 1. the leafage, 2. the resistance to diseases; 3. the blooming intensity; 4. the flower shape; 5. the colour of petals; 6. the perfume. The score a for each parameter studied was between 0-10 point and was given for each of the 6 periods analyzed (05.VI, 26 VI., 12.VII, 30 VII, 13 VIII, 01 IX).

RESULTS AND DISCUSSIONS

For the 6 varieties of roses analysis we drew up quality evaluation sheets that comprise the reliability characteristics and the data regarding which we made the observations (Tables 1-6). The results regarding the studied characteristics are the following:

1. The leafage. This characteristic was appreciated according to the density of leaves on the sprouts, the colour, the shininess, the manner it maintains on the bush during the vegetation period, the maximum grade being 10. Among the varieties taken in the study the highest score was registered by the variety *'Queen Elizabeth'* and *'Golden Monica'* with 60 points, and the lowest score was registered by the varieties *'Ingrid Bergman'* and *'Diamond Jubilee'* with 48 points.

2. Resistance to diseases. This represents one of the most important aspects about the culture of roses. The most frequent diseases are the black spotting, (*Diplocarpon rosae*), the scab (*Phragmidium disciflorum*) and the mildew (*Sphaerotheca pannosa*, var. *rosae*), the maximum grade is 8. The tolerance to these diseases is determined by dense, puckered, dark green foliage and with a thick cuticle.

The very good results were registered by three of the analyzed varieties, having the maximum score of 48 points, with the exception of the variety *'Diamond Jubilee'* which has proven sensitive to diseases, registering 44 points.

3. The intensity of blooming. This characteristic represents one of the most important qualities of the varieties of roses. In the case of this character, the maximum grade is 10.

The varieties *'Ingrid Bergman'*, *'Kardinal'*, *'Queen Elizabeth'*, *'Golden Monica'* distinguished themselves with a maximum score of 60 points, followed by *'Diamond Jubilee'* variety, with 54 points. The minimum score was registered by *'Montana'* varieties, with 48 points (Wagner Şt., 1985).

4. The bud shape. It is a trait characterising all varieties of climbing roses; taking into account both the shape and the dimensions of the flowers.

The varieties *'Golden Monica'*, *'Ingrid Bergman'*, *'Kardinal'*, *'Queen Elizabeth'* and *'Diamond Jubilee'*, distinguished themselves as having very beautiful flowers: registering a score of 54 points.

5. The colour at blossoming. It can be assessed rather subjectively according to the person executing the pre-operation. The maximum grade for this characteristic is considered 6, and the maximum grade is given to the varieties whose petals have an intense colour, well emphasized and that remains for one period of time (Wagner, Şt., 1985).

As regards the colour at flowering, the varieties *'Golden Monica'*, *'Ingrid Bergman'*, *'Kardinal'*, *'Montana'* and *'Queen Elizabeth'* distinguished themselves.

6. Perfume. It is also a much-appreciated characteristic, the maximum grade being 7. (Lammerts, W. E., 1951).

Of the 6 varieties analyzed, as regards the most perfumed one, we noticed the flowers of the *'Diamond Jubilee'* and *'Golden Monica'* varieties.

In the first variety the flowers are large, with yellow-brownish petals, undated and pleasantly scented, and the second variety with golden-yellow petals and a pleasant scent.

The quality evaluation operation of the rose characteristics offers us a general, subjective orientation, from some points of view regarding the decorative value of roses. Through this we can thus emphasize the very decorative varieties of roses (Miller N. F., 1962).

Table 1. The quality evaluation sheet for the 'Diamond Jubilee' variety

Crit. No.	Evaluated characteristic	Max. no. of points	Date of observations						Total points	Mean
			05 VI	26 VI	12 VII	30 VII	13 VIII	01 IX		
1.	Leafage	10	8	8	8	8	8	8	48	8.0
2.	Resistance to diseases	8	8	8	7	7	7	7	44	7.3
3.	The blooming intensity	10	9	9	9	9	9	9	54	9.0
4.	The bud shape	9	9	9	9	9	9	9	54	9.0
5.	The colour at blossoming	6	5	5	5	5	5	5	30	5.0
6.	The perfume	7	7	7	7	7	7	7	42	7.0
Total points									45.3	

Table 2. The quality evaluation sheet for the 'Golden Monica' variety

Crit. No.	Evaluated characteristic	Max. no. of points	Date of observations						Total points	Mean
			05 VI	26 VI	12 VII	30 VII	13 VIII	01 IX		
1.	Leafage	10	10	10	10	10	10	10	60	10.0
2.	Resistance to diseases	8	8	8	8	8	8	8	48	8.0
3.	The blooming intensity	10	10	10	10	10	10	10	60	10.0
4.	The bud shape	9	9	9	9	9	9	9	54	9.0
5.	The colour at blossoming	6	6	6	6	6	6	6	36	6.0
6.	The perfume	7	7	7	7	7	7	7	42	7.0
Total points									50.0	

Table 3. The quality evaluation sheet for the 'Ingrid Bergman' variety

Crit. No.	Evaluated characteristic	Max. no. of points	Date of observations						Total points	Mean
			05 VI	26 VI	12 VII	30 VII	13 VIII	01 IX		
1.	Leafage	10	8	8	8	8	8	8	48	8.0
2.	Resistance to diseases	8	8	8	8	8	8	8	48	8.0
3.	The blooming intensity	10	10	10	10	10	10	10	60	10.0
4.	The bud shape	9	9	9	9	9	9	9	54	9.0
5.	The colour at blossoming	6	6	6	6	6	6	6	36	6.0
6.	The perfume	7	4	4	4	4	4	4	24	4.0
Total points									45.0	

Table 4. The quality evaluation sheet for the 'Kardinal' variety

Crit. No.	Evaluated characteristic	Max. no. of points	Date of observations						Total points	Mean
			05 VI	26 VI	12 VII	30 VII	13 VIII	01 IX		
1.	Leafage	10	7	7	7	7	7	7	42	7.0
2.	Resistance to diseases	8	8	8	8	8	8	8	48	8.0
3.	The blooming intensity	10	10	10	10	10	10	10	60	10.0
4.	The bud shape	9	9	9	9	9	9	9	54	9.0
5.	The colour at blossoming	6	6	6	6	6	6	6	36	6.0
6.	The perfume	7	1	1	1	1	1	1	6	1.0
Total points									41.0	

Table 5. The quality evaluation sheet for the 'Montana' variety

Crit. No.	Evaluated characteristic	Max. no. of points	Date of observations						Total points	Mean
			05 VI	26 VI	12 VII	30 VII	13 VIII	01 IX		
1.	Leafage	10	9	9	9	9	9	9	54	9.0
2.	Resistance to diseases	8	8	8	8	8	8	8	48	8.0
3.	The blooming intensity	10	8	8	8	8	8	8	48	8.0
4.	The bud shape	9	8	8	8	8	8	8	48	8.0
5.	The colour at blossoming	6	6	6	6	6	6	6	36	6.0
6.	The perfume	7	2	2	2	2	2	2	12	2.0
Total points										41.0

Table 6. The quality evaluation sheet for the 'Queen Elizabeth' variety

Crit. No.	Evaluated characteristic	Max. no. of points	Date of observations						Total points	Mean
			05 VI	26 VI	12 VII	30 VII	13 VIII	01 IX		
1.	Leafage	10	10	10	10	10	10	10	60	10.0
2.	Resistance to diseases	8	8	8	8	8	8	8	48	8.0
3.	The blooming intensity	10	10	10	10	10	10	10	60	10.0
4.	The bud shape	9	9	9	9	9	9	9	54	9.0
5.	The colour at blossoming	6	6	6	6	6	6	6	36	6.0
6.	The perfume	7	1	1	1	1	1	1	6	1.0
Total points										44.0

CONCLUSIONS

The analysis of the behaviour of the 6 varieties, regarding the most important decorative characteristics emphasized the following aspects:

1. The most decorative leafage was ascertained in the 'Queen Elizabeth', 'Kardinal' and 'Golden Monica' varieties.

2. All the varieties analyzed, with exception for 'Diamond Jubilee' variety that has proven to be sensitive to diseases, have proven most resistant to the attack of diseases.

3. The varieties 'Ingrid Bergman', 'Kardinal', 'Queen Elizabeth', 'Golden Monica' distinguished themselves through a great intensity of blooming.

4. The most beautiful flowers have proven to be those from the varieties 'Golden Monica', 'Ingrid Bergman', 'Kardinal', 'Queen Elizabeth' and 'Diamond Jubilee'.

5. As regards the colour of flowers the most valuable varieties distinguished 'Golden Monica', 'Ingrid Bergman', 'Kardinal', 'Montana' and 'Queen Elizabeth'.

6. The most perfumed flowers, of the four varieties analyzed have proven to be the flowers of the varieties 'Diamond Jubilee' and 'Golden Monica'.

7. From the point of view of the total score, the most valuable variety is 'Golden Monica', registering a score of 50.0 points, distinguishing itself through vigorous shrubs, 80/50 cm, erect growth and fast redeployment.

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