

Productivitatea noului soi se ridică la 100-120 t/ha masă verde și 22-25 t/ha SU, în anii cu condiții climatice normale. Producția de sămânță: 130-300 kg/ha.

"Dacia-Tetra" este recomandat în toate zonele țării cu condiții ecologice favorabile trifoiului roșu.

#### Reference

MAA-CSIOS, 1996, Documentația privind propunerile de înregistrare de noi soiuri și hibrizi de plante agricole, 136-137.

Not. Bot. Hort. Agrobot. Cluj  
1996/1997, XXVI-XXVII

### ECOLOGICAL ROSES - A POSSIBLE ALTERNATIVE FOR MODERN ROMANIAN LANDSCAPE ARCHITECTURE

ADRIANA FLORINCESCU, ȘT. WAGNER, D. ZAHARIA

#### Abstract:

ADRIANA FLORINCESCU, ȘT. WAGNER, D. ZAHARIA, 1997, Ecological roses - a possible alternative for modern Romanian landscape architecture (in English), Not. Bot. Hort. Agrobot. Cluj, XXVI-XXVII.

This paper is referring to several ecological roses which are relatively recently introduced in Romanian rose collections. These roses have a high hardiness and a good disease resistance and they have to be pruned only once every 4 - 5 years. Therefore the environment damages are low (less pesticides are used; they can be planted on slopes and can prevent the soil erosion and landslid).

The paper is referring to the behaviour of ten varieties of groundcover roses under the climate conditions in Cluj area and tries to extend the interest of Romanian landscape architects, designers and producers in using groundcover roses.

**Keywords:** groundcover roses, ecology, appraisal by points, landscape architecture

**Address:** Universitatea de Științe Agricole și Medicină Veterinară, Disciplina de Arhitectură peisagistică, 3400, Cluj-Napoca, str. Mănăștur nr. 3, România

**Received:** 14.02.1997

Groundcover roses are relatively recently introduced in Romanian collections. They are still very little used in landscape architecture for that their ornamental and technological potential is not being yet so well known.

The groundcover roses had imposed themselves on a world scale due to some qualities such as: a higher hardiness, a high disease resistance, an abundant blooming, the variety of the colours, an ecological technology (less pesticides and sprays, less technological works: the pruning can be done once every 4 - 5 years), the possibility of planting them on slopes, preventing soil erosion and landslid.

In this context, the presentation of the performances of some groundcover roses appears very useful for increasing the intensity in using these ecological roses in Romanian landscape architecture.

### Material and method

The biological material was represented by ten groundcover roses: Snow Carpet, Bonica, Candy Rose, Swany, Lavander Dream, Angela, Nozomi, Ferdy, Heidi and Yesterday. The appraisal by points was the method used for all the studied characteristics. The study established the ornamental value, the blooming, the hardiness and the disease resistance of the ten groundcover roses. The values of the results represent a two years average.

The ornamental value was established using a scale from 1 to 100 points. A file with 14 characteristics was completed for each variety (shrub shape, vigour, foliage, disease resistance, flower stem, blooming intensity, inflorescence, flower bud shape, open flower shape, flower persistence, petals' falling, flower bud colour, open flower colour, fragrance). The obtained points were discussed as a general appreciation, so that each rose variety which scored from 100 possible points:

90 - 100 points is an excellent variety

80 - 90 points is a very good variety

70 - 80 points is a good variety

60 - 70 points is an unvaluable variety

50 - 60 points is a very unvaluable

The blooming of groundcover roses was observed by establishing the number of days, the number of full blooming periods and by the point appraisal on a scale from 1 to 10 points. The evaluation of the hardiness of the groundcover roses was achieved by using a scale from 1 to 4 points:

1 - low hardiness (the frosts affected 70 - 100 % from the length of the shoots).

2 - satisfying hardiness (the frosts affected 50 - 70 % from the length of the shoots).

3 - good hardiness (the frosts affected 25 - 50 % from the length of the shoots).

4 - very good hardiness (the frosts affected 0 - 25 % from the length of the shoots).

The evaluation of the disease resistance of groundcover roses was achieved all along the vegetation period, using a point appraisal from 1 to 8 points, therefore the varieties obtaining:

1 - 4 points had a very low disease resistance

4 - 5 points had a low disease resistance

5 - 6 points had an average disease resistance

6 - 7 points had a good disease resistance

7 - 8 points had a very good disease resistance

### Results and discussion

The experimental data shown in table 1 represent the appraisal by points of the ornamental value in ten groundcover roses. The total number of points has been established between 70.0 (Swany) and 81.9 (Bonica). Very many variants from the studied ones obtained 70.0 - 73.0 points (Snow Carpet, Swany, Nozomi, Yesterday, Heidi, Ferdy). Candy Rose obtained 74.0 and Lavander Dream 74.4 points.

Ornamental value in ten groundcover roses

Table 1

No	Characteristic	Variety									
		Snow Carpet	Bonica	Candy Rose	Swany	Lavander Dream	Angela	Nozomi	Ferdy	Heidi	Yesterday
1	shrub shape	4.1	5.0	3.2	4.9	3.7	4.9	5.0	4.8	3.7	3.8
2	vigour	7.0	7.9	7.5	7.2	7.3	9.3	7.5	9.5	7.6	7.5
3	foliage	7.6	8.6	7.9	7.5	6.9	9.0	7.9	7.9	7.6	7.1
4	disease resistance	7.5	7.5	7.3	7.4	7.3	7.2	7.4	7.0	7.3	7.2
5	flower stem	4.6	5.0	4.5	4.5	4.8	5.0	5.0	4.3	4.9	4.3
6	blooming intensity	5.4	6.3	5.3	5.3	6.4	6.9	4.8	4.9	6.7	6.6
7	inflorescence	3.0	4.1	2.6	3.0	3.7	4.3	2.8	3.4	3.9	4.2
8	flower bud shape	3.3	4.6	3.7	2.7	3.0	3.0	3.0	3.1	3.0	2.8
9	open flower shape	7.3	7.8	7.3	5.6	7.0	7.0	7.3	6.5	6.6	6.6
10	flower persistence	6.1	6.9	6.9	7.9	6.5	7.5	6.7	7.3	7.5	6.6
11	petals' falling	2.3	3.7	3.3	2.3	4.7	4.3	3.5	3.3	2.8	3.8
12	flower bud colour	6.2	5.8	5.6	5.5	5.3	4.9	4.0	4.4	4.2	4.3
13	open flower colour	5.1	4.9	4.6	4.5	4.4	3.9	3.0	3.4	3.2	3.3
14	fragrance	1.1	3.8	4.3	1.7	3.4	3.4	2.5	2.8	3.0	2.8
	Total	70.6	81.9	74.0	70.0	74.4	80.6	70.4	72.6	71.5	70.9

This score indicates that these varieties are recommended to be cultivated in Cluj area due to their high ornamental qualities. Bonica (81.9 points) and Angela (80.6 points) are very valuable varieties to be planted in this area, too.

Table 2 shows some aspects of the blooming of ten groundcover roses. The longest blooming period was registered in Snow Carpet, Bonica and Angela varieties (131 ; 134 ; 137 days). The shortest blooming period was registered in Nozomi and Ferdy varieties (63 ; 50 days). These two varieties presented only one period of blooming (June - July). All the other varieties were reflorent, presenting two blooming periods (June - July, August - September).

Blooming of ten groundcover roses

Table 2

Variety	Blooming		
	Number of days	Number of periods	Points
Snow Carpet	131	2	7.2
Bonica	134	2	7.3
Candy Rose	105	2	6.3
Swany	119	2	6.8
Lavander Dream	113	2	6.6
Angela	137	2	7.5
Nozomi	63	1	5.3
Ferdy	50	1	5.5
Heidi	113	2	6.6
Yesterday	108	2	6.3

Table 3 represents the hardiness and the disease resistance in ten groundcover roses. The score concerning the hardiness is situated between 2 points (Candy Rose) and 4 points (the majority of the varieties). Snow Carpet, Bonica, Angela, Nozomi, Ferdy and Yesterday presented a very good hardiness (4 points). The young shoots were unaffected or very little affected by winter frosts (0 - 25 % of the length of the branches). Swany, Lavander Dream and Heidi presented a good hardiness (25 - 50 % of the length of the shoots was affected by winter frosts : 3 - 3.5 points) and Candy Rose presented a satisfying hardiness.

Hardiness and disease resistance in ten groundcover roses

Table 3

Variety	Characteristics	
	Hardiness	Disease resistance
Snow Carpet	4.0	7.3
Bonica	4.0	7.2
Candy Rose	2.0	7.3
Swany	3.0	6.0
Lavander Dream	3.5	7.3
Angela	4.0	7.3
Nozomi	4.0	7.3
Ferdy	4.0	6.9
Heidi	3.5	7.3
Yesterday	4.0	6.9

The score concerning disease resistance indicates that the most resistant varieties to *Diplocarpon rosae*, *Sphaerotheca pannosa* var. *rosae* and *Phragmidium mucronatum* are Snow Carpet, Bonica, Candy Rose, Lavander Dream, Angela, Nozomi and Heidi. These varieties presented a very good disease resistance (7.2 - 7.3 points). All the other varieties presented a good disease resistance to the most frequent rose disease.

### Conclusions

1. The ornamental value consisting of 14 characteristics of the studied roses was high, therefore Bonica and Angela can be considered the best of the ten studied varieties. All the others can be successfully cultivated for their high ornamental qualities.
2. Eight of ten groundcover roses have long, reflorent periods of blooming; only Nozomi and Ferdy have a shorter, single blooming period.
3. All the studied groundcover roses presented a good and a very good hardiness and disease resistance to the most frequent rose pathogens.
4. All the groundcover roses which had been studied during 2 years presented a good field

behaviour, therefore they are recommended to be planted under Cluj area climatic conditions for their high ornamental value, reflorent blooming, good hardiness and disease resistance.

#### Rezumat

FLORINCESCU ADRIANA, ST. WAGNER, D. ZAHARIA, 1997, *Trandafirii de peisaj, o alternativă pentru arhitectura peisagistică modernă în România*. Not. Bot. Hort. Agrobot. Cluj, XXVI-XXVII. Lucrarea tratează comportarea a 10 soiuri de trandafiri din grupa "de peisaj" recent introduse în colecțiile românești: Snow Carpet, Bonica, Candy Rose, Swany, Lavander Dream, Angela, Nozomi, Ferdy, Heidi și Yesterday. S-a aplicat metoda bonității asupra valorii ornamentale a soiurilor (s-au luat în studiu 14 caracteristici: forma tufei, vigoarea, frunzișul, rezistența față de boli, tija și pedunculul floral, intensitatea înfloritului, inflorescența, forma bobocului, forma florii deschise, persistența florii, modul de cădere al petalelor, culoarea la deschidere, culoarea la înflorire, parfumul); înflorirea soiurilor, rezistența la ger și boli pe o perioadă de 2 ani în condițiile climatice ale zonei Clujului. Rezultatele obținute confirmă valoarea decorativă și biologică a soiurilor studiate și pledează pentru introducerea acestora în amenajarea spațiilor verzi publice și private.

#### References

1. Costache G., 1992, Disease resistance of some rose varieties (in Rom) Rev. Horticultura, no. 11-12.
2. Mattock J.S., 1995, The Genus Rosa as a Groundcover Plant, American Rose Ann., p. 16-19.
3. Wagner, S.T., 1992, Hardiness behavior of some rose varieties (in Rom), Rev. Horticultura, no. 3.

Not.Bot.Hort.Agrobot. Cluj  
1996/1997, XXVI-XXVII

#### INSTALAREA UNOR SPECII, AMESTECURI SIMPLE SI COMPLEXE, PE O PAJISTE DE *Festuca rubra-Agrostis tenuis*, ERBICIDATA CU "GLIFOSATE"

I.ROTAR, Mariana RUSU\*, FL.PRICA\*

#### Abstract

ROTAR, I., Mariana RUSU, FL.PRICA, 1997, *Post Glyphosate treatments establishment of some grasses*. ( In Roumanian ). Not.Bot.Hort.Agrobot. Cluj., XXVI-XXVII. The sward dominated by *Festuca rubra-Agrostis tenuis* was treated to reduce the *Nardus* component and others weed by spraying with Glyphosate. Treatments were applied in the autumn of 1993. In the spring of 1994 a mixture of *Phleum pratense*, *Festuca rubra*, *Dactylis glomerata*, *Trifolium repens* and *Lotus corniculatus* was oversown. Establishment of each species and botanical composition of the pasture were measured over the next three years. *Nardus* and weed was largely replaced by *Phleum/Festuca* mixture.

**Key words:** Glyphosate treatments, oversown species establishment, mountain regions.

**Address:** Universitatea de Științe Agricole și Medicină Veterinară, Disciplina de Praticultură, 3400 Cluj-Napoca, str. Mănăstur 3, România.

**Received** 20.03.1997.

Îmbunătățirea valorii furajere a pajiștilor de munte, se poate realiza prin mai multe metode. Mai des utilizate sunt fertilizarea, în special cu îngrășăminte pe bază de azot (Alice DONOSE-PISICĂ și col., 1987; THÖNI și col., 1991; JEANGROS și col., 1996 etc.), folosirea unor sisteme de pășunat moderne (JEANNIN și col., 1981; LĂPUȘAN și col., 1983 etc.), mai rar supraînsămânțarea și distrugerea covorului vegetal existent și înlocuirea lui, cu specii mai valoroase sub aspect furajer (PUJA și col., 1980; BĂRBULESCU și col., 1986; ROTAR și col., 1995 etc.).

\* Institutul de Montanologie Cristian-Sibiu, România.