

## TALL FESCUE VARIETY (*FESTUCA ARUNDINACEA* SCHREBER) NAPOCA 2

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### **Abstract**

*Syntetic tall fescue variety Syn J-2 was tested between 2009-2011 in five Centers of variety testing ( Șimleul Silvaniei, Dej, Satu Mare, Sibiu and Rădăuți) from I.S.T.I.S. Bucuresti. The testing was done regarding feed production as well as regarding the morfo-physiological traits, such as: regrowth capacity after scythe, drought resistance, disease and fall resistance. Because of the very good results registered at the tests done in the five Centers of testing for three years, syntetic variety Syn J-2 was registered under the name of NAPOCA 2-the variety has medium waist of plants, very good regrown capacity after scythe, fall resistance as well as good drought and disease resistance, suitable for the establishment of sown meadow utilised as pastures in then conveys of meadows.*

**Keywords:** tall fescue, syntetic variety , grassland

### **INTRODUCTION**

*Festuca arundinacea* is a valuable fodder plant for meadows and lawns, given its agricultural and landscape qualities: high perennial, winter, drought, disease and ironing resistance and high production capacity.

In recent years in Romania there were created new varieties of tall fescue, and variety NAPOCA 2, created by USAMV Cluj-Napoca is highlighted by its suitability for the production of fodder and the establishment of

convoys for pasture. Syntetic variety of tall fescue Syn J-2 was tested between 2009-2011 in five Centers of variety testing (Șimleul Silvaniei, Dej, Satu Mare, Sibiu and Rădăuți) from I.S.T.I.S. Bucuresti. The testing was done regarding the production of fodder, as well as in regards of morfo-physiological attributes like: regrowth after scything, drought resistance, disease and drop resistance.

## MATERIAL AND METHOD

Three synthetic varieties of tall fescue were used: Syn J-2 perspective variety, as well as the registered varieties VIO JUCU and JUCU 5 taken as a control of feed production capacity. It was sown in

five Centers for variety testing under different soil-climatic conditions: Șimleul Silvaniei, Dej, Satu Mare, Sibiu and Rădăuți), using the method of randomized blocks in three replicates.

## RESULTS AND DISCUSSION

Analyzing the production results of dry matter obtained in the second year of vegetation (figure 1), the three varieties of tall fescue are found to have a higher production of dry matter obtained at CTS Sibiu

where were sufficient precipitations (over 20 t S.U ha), variety NAPOCA 2 surpassing the control at Sibiu, Simleul Silvaniei and Dej.

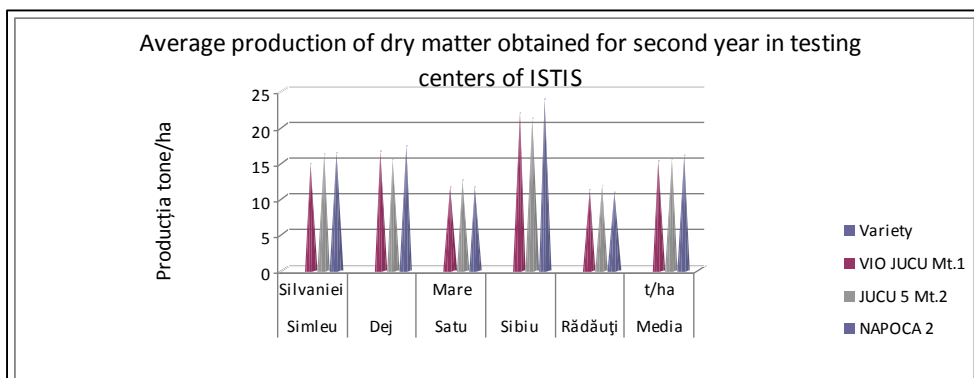


Fig. 1. The production of dry matter obtained in the second year of vegetation at three varieties of tall fescue in I.S.T.I.S.

Regarding the production of dry matter registered at the three varieties of tall fescue studied, averagely on five test centers, syntetic variety NAPOCA 2 surpassed VIO JUCU, the difference being signifiant positive (table 1).

In the third year of vegetation, the highest production of dry matter was made at CTS Sibiu and Satu Mare, the NAPOCA 2 variety exceeding the witness VIO JUCUI in CTS Sibiu, Satu Mare, Șimleul Silvaniei and Rădăuți (figure 2)

Table 1

The influence of tall fescue variety over dry matter production

Variety	Dry matter production U(t/ha)	Difference(t/ha)	Semnification
VioJucu	15.12	0.00	Mt.
Jucu 5	15.46	0.34	***
Napoca 2	15.94	0.81	***

DL (5%) 0.15 (t/ha)

DL (1%) 0.1 (t/ha)

DL (0.1%) 0.26 (t/ha)

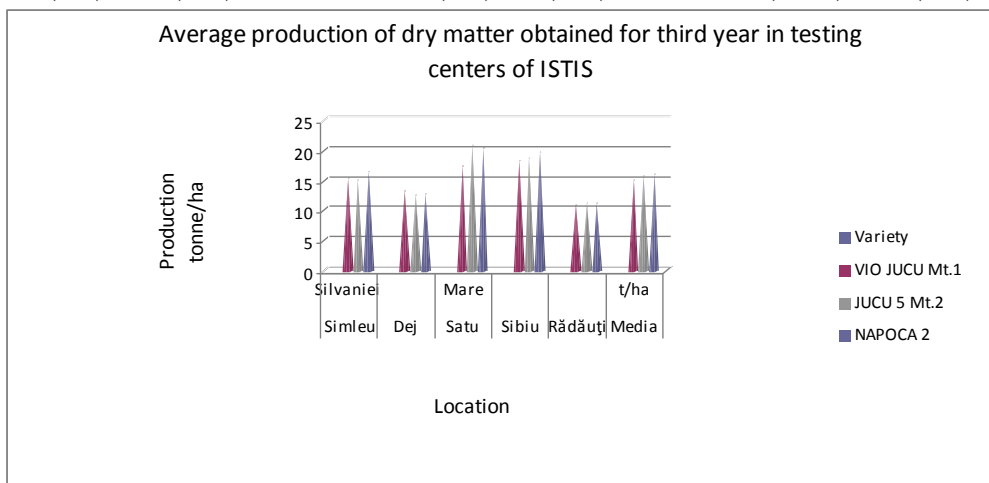


Fig. 2. Production of dry matter obtained in the third year of vegetation for three varieties of tall vescu from I.S.T.I.S.

Taking into account the recorded production results on average for two years, there is a high production capacity of dry matter of the three high-breasted varieties created at U.S.A.M.V. Cluj-Napoca, especially NAPOCA 2 (figure 3).

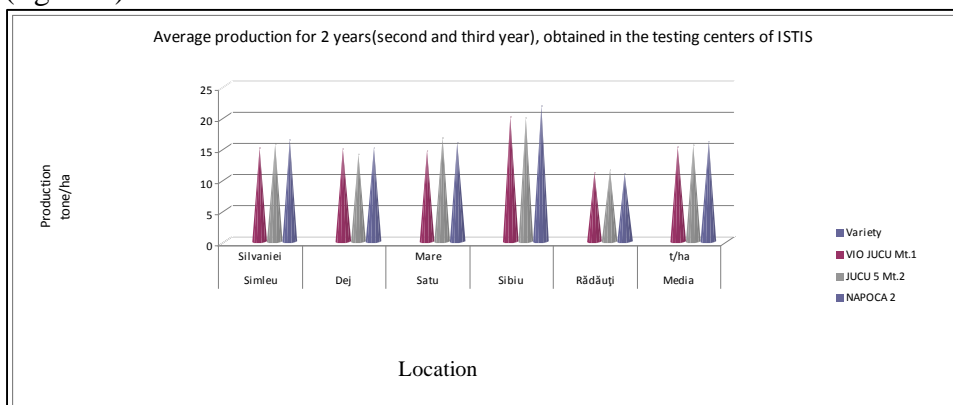


Fig. 3. Production of dry matter obtained on average of two years of vegetation at three tall fescue varieties in the five C.S.S studied at I.S.T.I.S.

The highest dry matter production, averagely over two years of production, was made at the Sibiu Variety Test Center, where the

highly tested strains of varieties recorded over 20 tons per hectare (table 2).

Table 2

The influence of location over the production of dry matter registered at three tall fescue varieties: VIO JUCU, JUCU 5 and NAPOCA2 (average of second and third years)

Location	Production dry matter (t/ha)	Difference	semnification
Media	15.51	-	Mt.
Șimnleul Silvaniei	15.60	0.09	-
Dej	14.58	-0.92	000
Satu Mare	15.64	0.14	-
Sibiu	20.46	4.95	***
Rădăuți	11.24	-4.26	000

DL (5%) 0.17 (t/ha)

DL (1%) 0.23 (t/ha)

DL (0.1%) 0.32 (t/ha)

Taking into consideration the influence of interacting tall fescue variety X location, on the production of dry substance, it's noticed that tall fescue variety NAPOCA 2, which under the conditions that were at Sibiu, realised constant productions of over 20 tons of dry matter per hectare (table 3). The tall fescue varieties were studied in the five

Centers of testing of ISTIS Bucuresti from the point of view of morfo-physiological attributes like: regrowth capacity after scythe, drought resistance, disease and fall resistance.

Tall fescue variety NAPOCA 2 is remarked by a very good regeneration capability after sew, drought resistance, disease and fall resistance (figure 4).

Table 3

Influence of variety interaction X location, on the production of dry substance to three syntetic varieties of tall fescue created at U..A.S.V.M. Cluj -Napoca

Variety	Location	Dry matter production (t/ha)	Diference(t/ha)	Semnification
VioJucu	Șimnleul Silvaniei	14.92	-	Mt.
Jucu 5		15.57	0.65	***
Napoca 2		16.32	1.40	***
VioJucu	Dej	14.85	-	Mt.
Jucu 5		13.92	-0.93	000
Napoca 2		14.98	0.13	-
VioJucu	Satu Mare	14.50	-	Mt.
Jucu 5		16.55	2.05	***
Napoca 2		15.88	1.38	***
VioJucu	Sibiu	20.02	-	Mt.
Jucu 5		19.83	-0.18	-
Napoca 2		21.53	1.52	***
VioJucu	Rădăuți	11.33	-	Mt.
Jucu 5		11.43	0.10	-
Napoca 2		10.97	-0.37	0

DL (5%) 0.34 (t/ha)

DL (1%) 0.45 (t/ha)

DL (0.1%) 0.59 (t/ha)

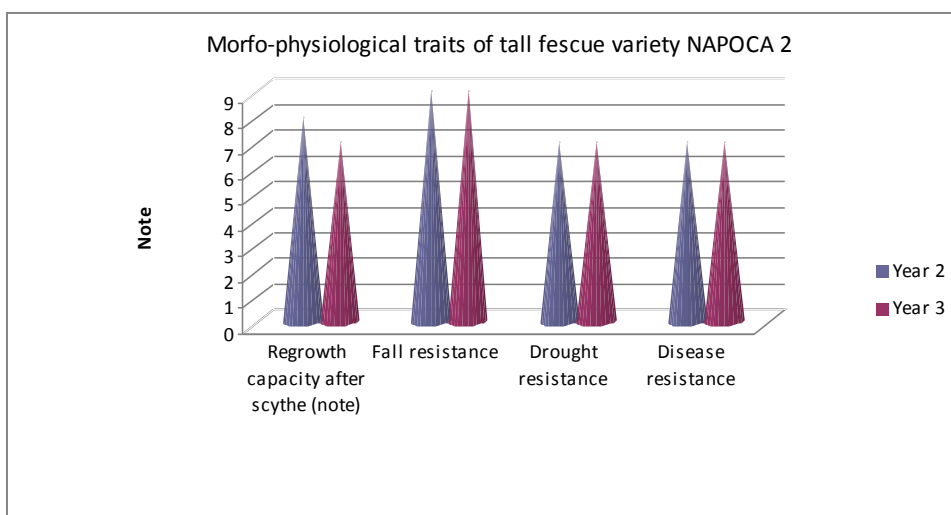


Fig. 4. Morfo-physiological traits of tall fescue variety NAPOCA 2, recorded averagedly in five centers of study, in the second and third year of vegetation

## CONCLUSIONS

Because of the very good results registered at the tests done in the five Centers of testing for three years, syntetic variety Syn J-2 was registered under the name of NAPOCA 2-the variety has medium waist of plants, very good

regrown capacity after sew, fall resistance as well as good drought and disease resistance, suitable for the establishment of sown meadows utilised as pastures in the conveys of meadows.

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