Research on the Cultivation of Artichokes (*Cynara Scolymus* L.) in Various Conditions of Fertilization in the Jucu, Cluj

**Simona VAIDA, Marcel M. DUDA, Dan I. VÂRBAN, Sorin MUNTEAN**

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, România, 3-5 Mănăstur str., Cluj-Napoca, România, simonavaida2@gmail.com

**SUMMARY**

In this paper we present results of the research made between 2008-2010 on the influence of cultivation, density and fertilization on the plant’s morphology and leaf production. Experiences had been located in the experimental field of Jucu, CJ. We took four cultivation of artichokes in the study: “Unirea”, “Violet”, “Agrosel 656” and “Chişinău”. They were placed in the experimental field of Jucu - Cluj, made in two densities (3.57 pl/sqm and 2.38 pl/sqm) and three levels of fertilization (unfertilized, fertilized with 20 t/ha farmyard manure and 40 t/ha manure in the fall plowing).

Harvesting has been done manually with a sickle, two times (17 July and 10 October) in 2008, three times (15 July, 1 September and 15 October) in 2009 and two times (15 July and 30 September) 2010. The statistical interpretation of the data has been done by analysis of variance.

The correlation coefficient between the average size of plant and production for the cultivar "Unirea" is very significant to the density of 3.57 pl / sqm, respectively, significantly density of 2.38 pl / sqm. This shows that the two variables are directly related - with increasing waist and production increases. Medium affect plant production 66% at density of 3.57 pl / sqm (R² = 0.66), and 29% at density of 2.38 pl / sqm (R² = 0.29).

For the cultivation of "Unirea" we observed very significant differences compared to the control (F0) in 2008, the F40 version, the total production of fresh leaves. Significant distinct differences are observed in F40 to F0, for the density of 3.57 pl / sqm, the cultivation of "Agrosel 656". Total production of fresh leaves was between 9.75 and 31 t/ha. The most productive variant was: the variety “Unirea", fertilization 40 t/ha manure and distances between plants of 70 x 40 cm (2.38 spl/qm). There is a direct correlation between fertilization and close-largest plant density per unit area. Between the average height of the artichoke’s plants and production there is a positive correlation in all cultivars, which means that production increases with increasing plant height.

The most important indicator pursued - the production of leaves - we noted the variety “Unirea”, which showed differences of production, especially in fertilization 40 t / ha manure from unfertilized variant (control). High density (3.57 pl / sqm) provided higher yields of leaves and are recommended for production. Production is positively influenced by the growth medium of plants from all cultivars in both densities. The average yield of drying was 6 / 1.

**Keywords:** artichoke cultivation, plant height, fresh leaves production.

**REFERENCES**