

The Effectiveness of the Fertilizers Applied in the Plum and Cherry Orchards at the Fruit Research Station Cluj-Napoca

Gabriela ROMAN¹⁾, Marilena MARGHITAS²⁾, Eugenia HARSAN¹⁾,
Stefan WAGNER¹⁾, Bianca VLAICU¹⁾

¹⁾ Fruit Research Station Cluj, Str. Horticultorilor, nr. 5, cod 400457; gabrielaroman33@yahoo.com

²⁾ University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca

SUMMARY

Fertilizing is an important step of the agrotechnical complex in the plum and cherry orchards (Koskela *et al.*, 2010; Botu *et al.*, 2010). This ensures high fruit productions every year (Davidescu *et al.*, 1981; Rusu, 1993). This study focuses on the effects of applying different fertilizers on plum and cherry species. During 2010 these effects were monitored for the 'Carpatin' plum varietie and 'Germersdorf' cherry varietie. The planting distance for cherry trees is 6/3 m and for plum trees it's 4/3m. The experience was done on 6 variants each consisting of 6 randomly chosen trees: V₁ – untreated, the control; V₂ – fertilized with 20 t/ha of manure + N₆₀ + P₅₀ + K₆₀/ha; V₃ – fertilized N₈₀ + P₆₀ + K₈₀/ha; V₄ – fertilized with 30 t/ha of manure + N₈₀ + P₅₀ + K₁₂₅/ha; V₅ – fertilized cu N₉₀ + P₆₀ + K₁₂₀/ha; V₆ – fertilized with 40 t/ha of manure + P₇₀ + K₁₀₀/ha. In order to determine the effectiveness of the fertilizers had been applied growth dynamics, phenological observations, average productions and the quality of the fruit were monitored. The biggest growth sprout for the plum trees was observed at the V₆ variant, where the trees' total height increased by 2,95 m, the crown diameter increased by 2,10 m and the trunk diameter increased by 23 cm. In comparison to the control these dimensions show an increase of 18%, 12% and respectively 15%. For the cherry trees the biggest height, crown and trunk diameter development were also observed for the V₆ variant. Experiments have proven the effect that organic fertilizers have in the orchards. Fertilizing improves vegetative growth and therefore an increased fruit production.

Keywords: plum, sweet cherry, fertilizer

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