

## THE EFFECT OF GEOGRAPHICAL REGION ON LIFETIME MILK YIELD IN SIMMENTAL COWS

M.D. Petrović<sup>1\*</sup>, Z. Skalicki<sup>2</sup>, V. Bogdanović<sup>2</sup>, M. M. Petrović<sup>3</sup>,  
S. Bogosavljević-Bošković<sup>1</sup>, R. Đoković<sup>1</sup>, S. Rakonjac<sup>1</sup>

<sup>1</sup> University of Kragujevac, Faculty of Agronomy, Cara Dušna 34, 32 000 Čačak, Serbia.

<sup>2</sup> University of Belgrade, Faculty of Agriculture, Nemanjina 6, 11081 Zemun-Belgrade, Serbia.

<sup>3</sup> Institute of Animal Husbandry, Autoput 16, 11080 Zemun-Belgrade, Serbia.

\*Corresponding author: milunp@tfc.kg.ac.rs

### Abstract

This study was conducted to evaluate the phenotypic expression and variability of lifetime performance traits (lifetime yields of milk, fat and 4%FCM, milk fat content, milk yield per milking day, milk yield per day of productive life and milk yield per day of life) of 2548 Simmental cows housed on three farms in three different breeding regions: Zlatiborski Suvati (Zlatibor Pastures) dairy farm on Mt. Zlatibor, employing a loose housing system with lying and resting boxes (*lige boxen*), located at about 1000m a.s.l. (n=502), Dobričevo dairy farm in Čuprija, using tie-stall housing (n=956) and individual tie-stall farms in the Kotraž region, located at 400-700m a.s.l. (n=1090).

Simmental cows included in the study achieved the following: lifetime yields of milk, fat and 4%FCM - 14604, 554.8 and 14157 kg, respectively, milk fat content of lifetime milk yield - 3.81%, milk yield per milking day - 12.79, milk yield per day of productive life - 9.31 and milk yield per day of life - 5.46 kg. The marked variability of the traits, along with a certain percent of high-producing cows, enables further success in their selection.

The effect of *breeding region* on all lifetime performance traits was very highly significant ( $P < 0.001$ ) due to different housing systems, nutrition, care, climate, herd size and a number of other effects associated with the farm management practices used.

**Key words:** *Breeding region, lifetime productions, Simmental breed.*













