

## MILK PRODUCTION AND AGE IMPACT ON OVARIAN ACTIVITY DURING *POSTPARTUM* PERIOD

Audronė Rekešiūtė<sup>1</sup>, Kęstutis Tarvainis, Alma Račkauskaitė<sup>2</sup>, Vida Juozaitienė<sup>3</sup>, Henrikas Žilinskas<sup>1</sup>, Vytuolis Žilaitis<sup>4</sup>

<sup>1</sup>Laboratory of animal reproduction Large animal clinic  
Veterinary academy Lithuanian University of Health Sciences

<sup>2</sup>Lithuanian farm animal genetic resources coordinating center  
Institute of animal science of Lithuanian University of Health Sciences

<sup>3</sup>Animal breeding department Veterinary academy Lithuanian University of Health Sciences

<sup>4</sup>Large animal clinic Veterinary academy Lithuanian University of Health Sciences  
Tilzes st. 18, Kaunas LT-47181, Lithuania

Corresponding author: Audronė Rekešiūtė,  
E-mail: audrone.rekesiute@lsmuni.lt

**Abstract:** The aim of this study was to evaluate milk production and age impact on ovarian activity in *postpartum* period. The material for this study were collected from 32 clinically healthy holsteinized cows which were selected by days average after parturition, by daily milk production and by age. Cows were divided into groups: **by milk production** (production average of 14–21 days *postpartum*) analogue of age: 1) < 30 l (N=14), 2) 31–40 l (N=13), 3) > 41 l (N=5); **by age** analogue of production: 1) I lactation (N=5), 2) II lactation (N=17), 3) III lactation (N=10). Ultrasound of reproductive system were performed with Caresono HD 9300 VET to track dynamic of ovarian size and changes of functional units. Rectal examination were performed 6 time repeated for each cow every 7±1.5 days.

It was found that dynamic of ovarian size depend on productivity in *postpartum* period (P<0.001) also dynamic of reproductive system is better expressed when productivity higher. Cows with the medium and high yield maximum size of ovary reach at 22–29 days *postpartum*. It was found that dynamic of right ovary area depend on the cow age (P<0.05). It also was found that cows with productivity >41 l per day follicles begin develop from 14–21 days when with low and medium yield from 6–13 days *postpartum*. Regardless of productivity corpus luteum begin develop from 6–13 day. During 22–29 days *postpartum* follicles begin develop for the first lactation cows and during 6–13 – for second and third lactation, and regardless of cow age corpus luteum begin growth during 6–13 days *postpartum*.

**Keywords:** ovarian activity, production, reproduction, *postpartum*