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The physico-chemical properties of milk from Black-and-White and Red-and-White cows over the spring-summer period regarding a lactation phase

S u m m a r y

The investigations covered the cows of Black-and-White breed with HF genes' share (304 animals) maintained in 10 farms at the Lubelszczyzna region and of Red-and-White breed (104 units) from 4 farms in the Bieszczady. The animals chosen were between 1st and 4th lactation. The milk samples were collected from each cow at the spring-summer period, i.e. from the end of May to mid July considering a lactation phase, that is to 120, 121-200 and over 200 day. In each milk sample the chemical composition was determined, i.e. percentage content of fat, protein, casein, lactose and dry matter, density, freezing point, active and titratable acidity, thermal stability as well as urea content and somatic cell count. Additionally, the size of fat globules of milk cows in 2nd lactation was established, 15 samples from each stage of lactation. It was found out that the milk from Black-and-White cows showed a higher concentration of the basic components at the lower protein-fat ratio as compared to Red-and-White breed milk. Besides, it was proved that Black-and-White cows' milk was more useful for the treatment at high temperatures owing to higher thermal stability. The milk of Red-and-White breed cows, however, was characterized by higher percentage of fat globules of big size and better protein-fat relation. This fact is advantageous for cheese-making, butter and dairy products.