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ACID-BASE RELATIONSHIPS IN THE BODY OF FARM ANIMALS OF DIFFERENT AGES AND PRODUCTIVITY

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ABSTRACT

They revealed the disorders of acid-base balance in the organism of animals within the age aspect and at different levels of productivity. Subcompensated acidosis was established during the first day of life among chickens, ducklings and calves. The balance of acid-base ratios differed in the blood, first of all, by a significant and negative shift of the buffer bases (-3.0 ± 0.8 mmol/L), $p\text{CO}_2 = 5.5 \pm 0.9$ kPa, pH_{ist} of venous blood makes 7.34 ± 0.07 on average. Acidic substances predominated in the urine of calves, $\text{pH} = 6.23 \pm 0.18$, ($P < 0.05$). The chickens, ducklings and calves of older ages, the roosters of the parent livestock had no violations of the acid-base balance of blood. All parameters were within the physiological norm. The nature of acid-base relationships in the blood of laying hens largely depended on egg production. At an egg production of 95%, they found the acidosis of the metabolic nature of the subcompensated phase. The peculiarities of acid-base relation development in ontogenesis and at high productivity of cattle and poultry must be taken into account in zootechnical practice.

Key words: acid-base balance, cattle, poultry, age aspect, productivity.