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Recent innovative concept of perspective development of the science of biologically highly valuable feeding animals in the context of the creative heritage of academician G.O. Bogdanov

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Abstract. *Posted conceptual provisions of the priorities of Ukrainian science of feeding cattle on the farm of a new generation developed by Academician G.O. Bogdanov in the creative union of scientists of his scientific school.*

Keywords: creative legacy, the science of nutrition, concept development, genetic potential performance standards of feeding, feed mixtures, feed, premixes.

Background. Strategically important science in existence and progress of human society and the role of the founders of scientific schools, prominent scientists personalities in the development of science and technology innovation can not be overstated. Ahead of time, they define priority routes, methods, innovative technology solutions in solving key problems of society. These outstanding scientists who were bright, strategically important creative contributions to the development of national agricultural research and, above all, the science of high-grade, normalized feeding farm animals in the context of their genetic potential productivity, reproductive capacity, producing environmentally safe, high-quality products livestock in modern stressful conditions and technological radioactive pollution belongs to Academician G.O. Bogdanov.

The creative union with famous scientists - continuing his scientific school, Academician G.O. Bogdanov grounded for the next 20-30 years the priority ways and means of highly profitable livestock Ukraine through key factors normalized, biologically valuable physiologically adapted economically justified new animal feed high intensity species and genotypes in Ukraine.

Analysis of cattle in countries with developed livestock indicates that created a new breed of cattle with high potential for dairy and meat productivity is extremely sensitive to imbalance of nutrients and bioactive compounds in traditional commercial diets at standardizing the old standards of feeding, which requires improving the system of fundamental valuation, technology feeding, maximize quality and

biological value of feeds in real terms increased environmental stress in most regions of Ukraine [1-10,15,20,27,29].

Results. Contribution school academic scientists G.O. Bogdanov in the development of national standards and technology of feeding cattle:

• A systematic and detailed scientific analysis of the latest technology and standardization of feeding dairy and beef cattle in the world and in Ukraine;

• Grounded key to optimizing the concentration of metabolizable energy in 1 kg of dry matter of feed rations, as the main factor coefficient of digestibility of nutrients out of the gross exchange energy, metabolizable energy efficiency to sustain life, the synthesis of protein and fat production, the total energy needs of the animals and accentuated the need for differentiation standards of energy supply cattle depending on the concentration of metabolizable energy in dry matter;

• Identified key role maximize dry matter intake of feed per 100 kg body weight as one of the most important physiological factors of breast meat and animal performance, providing total daily intake of metabolizable energy;

• The parameters of the minimum required concentration of metabolizable energy in 1 kg of dry matter of diets based on milk and meat productivity, calculated according to the rules of feeding the required minimum, average and maximum concentrations of metabolizable energy in the dry matter of differentiation in relation to physiological periods, phases of lactation, milk yield , body weight of cows;

• Included new indicators normalized power animal: fissionable and not in the rumen protein, digestible protein, neutral detergent and acid detergent fiber, selenium, niacin, essential amino acids (lysine, methionine + cystine, leucine, histidine), cation-anion equivalent (balance);

• Scientifically grounded physiological, zootechnical, technological, environmental and economic benefits of a stable system year-round feeding cattle feed quality of forage warehouses in most regions of Ukraine over the traditional seasonal feeding system using green fodder;

• Developed and scientifically proved effective concept premix production of a new generation;

• Grounded formulation, priority, fundamental advantages and possible disadvantages of full Forage mixture some, the new rules of balanced nutrition, prepared and distributed to feed tables mobile mixer-distributor;

• The world experience and specific practices prevention of digestive, metabolic, nutritional diseases highly productive cows in different physiological periods and phases of lactation;

• A waste technology growing and fattening bulls domestic breeds with high downhole condition for lean beef protein. Development and refinement of new national standards for the following key provisions:

• The basis of valuation of feeding and nutritional evaluation of feed energy exchange is accepted;

• Standards of energy, protein and other nutrients and bioactive substances expressed per 1 kg of dry matter feed intake;

• The main factor and criterion of efficiency and transformation (conversion) in net metabolizable energy (productive) adopted metabolizable energy concentration in 1 kg of dry matter;

• Priority concept of rationing power supply cattle determined using physiologically based, minimally required concentration of metabolizable energy per unit (1 kg) of dry matter feed intake combined with a physiologically maximum dry matter intake per 100 kg;

• The higher the concentration of metabolizable energy in 1 kg of dry matter, the higher exchange rate of transformation of energy in clean energy lactation and growth, the less can be a general need to exchange energy to produce the same level of yield growth or weight gain;

• The concentration of metabolizable energy in 1 kg of dry matter differentiated depending on the level of dairy and beef cattle performance and weight, maintenance, feeding and meat cattle.

• The higher productivity of livestock, the higher the concentration of metabolizable energy in 1 kg of dry matter feed intake.

• The new rules feeding cattle considered fissionable level (60-70%) and fissionable (30-40%) in the rumen protein. The higher the performance, the higher the level is not fissionable protein in feed intake;

• For the first time given the generalized approximate rules essential amino acids, including lysine, methionine + cystine, leucine + isoleucine, histidine and their content in the feed;

• A new addition to the improved supply of carbohydrate animals are summarized global standards neutral detergent and acid detergent fiber. On average content of neutral detergent fiber taken at the level of 30-40% of the dry matter feed intake and acid-detergent - 20-25%.

• Grounded practical innovative methods of high-performance full feeding cows farms in Ukraine to reach their genetic potential milk production and reproductive ability [1,2,5,6,15-29].

Recent innovative research areas and further development of the science of normalized feeding cattle developed continuing scientific school of Academician G.O. Bogdanov.

The priorities of the scientific and methodological approaches for further development of the science of normalized feeding cattle with the practical achievement of the genetic potential of milk and meat productivity, reproductive capacity, continuing productive longevity of cows from 2-2,5 to 4-5 or more lactations and prevention of immune deficiency, digestive disorders and nutritional diseases in the next 10-20 years in farming Ukraine should be [1,2,3,4,5,6,7,14,15,19,20,22,26,27,28 29]:

• Extensive testing, development and implementation at the national level scientists developed new rules Ukraine highly valuable feeding livestock;

• A comprehensive laboratory evaluation and detailed composition, energy and biological value and nutritional value of the available feed resources and feed in the zonal aspect for 30-35 or more elements in accordance with the new rules;

• Experimental specification of norms of feeding animals with high-performance features into account waste, hygiene conditions, technological and stress factors, extreme temperature and weather changes;

• Rationale rules physiologically maximum dry matter intake of feed per 100 kg body weight due to the concentration of metabolizable energy in dry matter, Waste largest body weight, lactation phases, levels of performance, technique training and feeding feed consisting of feed mixtures;

• Experimental specification standards not fissionable and fissionable protein in the diets of animals in connection with the performance, structure rations technology processing, storing, preserving and feeding of feed;

• Scientific substantiation rules amino acid nutrition of livestock and the development of effective methods and technologies to protect protein and essential amino acids in the rumen of splitting the purpose of prolonged assimilation in the intestines;

• Optimization of protein supply standards towards a decrease in the diets of cows;

• Optimization of carbohydrate nutrition standards in the context of justification optimal levels of neutral detergent and acid detergent fiber in feeds and diets;

• Development and organization of practical recipes using local and zonal address premixes new generation of high biological, productive action, anti-stress, immune-stimulating, anti radionuklide, inhibit metane properties of feed composition on actual farms.

Conclusion.

In order to solve practical problems normalized, biologically valuable animal feed, to achieve their genetic potential productivity, reproductive ability, productive longevity in feed and process conditions Livestock Ukraine in 2015-2030's recommended use of these new rules feeding cattle. Their practical implementation ensures that the milk production of cows 8-10 thousand. кg of milk, obtaining at least 90 calves from 100 cows continue their productive longevity 4-5 lactations, increased average daily increments bulls for breeding and fattening to 900-1200 g, provide cost-effective, competitive driving dairy and beef cattle.

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