рактеризуется своими отличительными признаками и особенностями, разными информационными потребностями и индивидуальным уровнем знаний субъектов инновационной системы. Поэтому для дальнейшего исследования и совершенствования системы информационного обеспечения важно проанализировать эффективность использования информационных ресурсов применительно к каждому этапу инновационного процесса.

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THE METHODOLOGICAL BASIS OF ECONOMIC AND MATHEMATICAL MODELING OF THE DEVELOPMENT OF FODDAR RESOURSES OF DAIRY CATTLE-BREEDING

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Keywords: forecasting, econometric analysis, Excel, economic-mathematical methods, fodder resourses, optimal diet

Abstract: The use of economic and mathematical modeling to improve the structure of fodder resourses is one of the main conditions for increasing the efficiency of agricultural production, which has to be taken into account when training specialists.

Dairy cattle breeding occupies more than 1 5% in the structure of the commodity output of the Republic of Belarus and it is obvious that it should be economically beneficial both for the farms and for the state. It must develop intensively and be highly profitable. Consequently producers can achieve this goal only by improving the entire range of activities.

Along with the development of zootechnics and technical support, economic and mathematical modeling can also be referred to tools for improving the efficiency of work, allowing the analysis of current activities, determining prospects for development and seeking possible reserves.

Since a balanced diet is the basis for obtaining high-quality livestock products and at the same time it is a cost item. Therefore one of the priority tasks should the optimization of the feed ration. This task can be solved individually for each farm, for each age-sex group of animals. In addition the diet should be optimized for each time period.

The target setting is formulated as follows: to compose a diet that fully satisfies the biological needs of the animals for the content of nutrients, the ratio of individual groups and types of feeds, taking into account their actual production and feed availability and would be most effective for an agricultural enterprise.

The main variables in this economic and mathematical model are variables denoting the structure of sown areas, the number of animals, the amount of feed, feed and mineral additives of each type.

Limitations of the model reflect the conditions for the balance of nutrients in the diet which are recorded on the basis of zootechnical data.

The initial data for each sex-age group of cattle are: number of feed units; minimum and maximum feeding rates for individual species and forage groups; ratio between individual feed groups; the required nutrient content in the diet; feed of own production; purchased feed.

At the same time it is recommended to solve the problem on the basis of the available fodder base and the purchases made and then to solve it again with additions "what if" the fodder base is changed and / or additional fodder will be purchased.

Such a task is solved in Excel and requires knowledge of economic and mathematical modeling at the level of a 4th year student, but with simultaneous elaboration of specific zootechnical requirements.

Advantages of this approach are as follows.

1. Simplicity and ease to use.

2. The possibility of making adjustments taking into account changes in the composition and quality of feed.

3. Obtaining a certain result.

4. Overcoming the "barrier" experts can have when thinking about economic and mathematical modeling.

After calculating optimal diets for sex and age groups and time periods, a top-level model is created - a model for the optimal development of the crop sector with the aim of forming the optimal feed base while ensuring a given level of production of other types of crops.

It should be noted that this model is applicable to those farms where the crop sector is subordinated to the development of the livestock sector which usually takes place in farms with high rates of cattle productivity.

The drawbacks of this model include the complexity of its compilation, and as a consequence the need for specialists in the economic and mathematical profile. However the task is solvable if there is sufficient motivation and awareness of the need for such work and can be provided, for example, by retraining (advanced training) on the basis of BSATU.

The third level of modeling is the outlook for the future. A distinctive feature will be the requirement of long-term statistical data for a particular economy for building econometric models on the basis of which predictive indicators will be obtained for use in the already developed basic model of level 2.

This process does not require special additional data since the level of training of students of BSATU in combination with modern information technologies ensures the result.

Thus the use of economic and mathematical modeling is necessary to improve the efficiency of the functioning of agricultural enterprises. Therefore the specialists we are preparing should be able to use the methods of economic and mathematical modeling to solve practical problems.

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МЕТОД МЕЖОТРАСЛЕВОГО БАЛАНСА И СТРАТЕГИЧЕСКОЕ ПЛАНИРОВАНИЕ ИННОВАЦИОННОГО РАЗВИТИЯ АГРОПРОДОВОЛЬСТВЕННОГО КОМПЛЕКСА

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Ключевые слова: агропродовольственный комплекс, межотраслевой баланс, стратегическое планирование
Key words: agro-food complex, interbranch balance, strategic planning

Аннотация: обоснована целесообразность использования метода межотраслевого баланса для стратегического планирования развития агропродовольственного комплекса. Предложено применение модифицированной