UDC 331

THE MAIN CONDITIONS FOR THE EFFECTIVE USE OF FODDER AND THE IMPORTANCE OF PREPARING IT FOR FEEDING

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Research in the field of feeding has confirmed that the main factors of adequate feeding of animals are: a complete set of essential nutrients, timely and optimally coordinated intake of these substances in the animal's body. For a sufficiently complete supply of nutrients to animals, feed rations should be balanced by approximately 20 clearly normalized indicators for cattle and 50-80 indicators for pigs and poultry. Moreover, the number of controlled characteristics increases with an increase in the level of intensification of animal husbandry [1, 2]. The basis for the intensive development of the livestock industry is full-fledged feeding, which is ensured by the production of a sufficient amount and variety of feed, reducing the loss of their nutritional value during harvesting and storage, as well as the correct and high-quality preparation of feed for feeding.

Long-term practice and extensive scientific research show that one of the powerful factors in the rational use of feed and improving the efficiency of animal husbandry in general is the correct preparation of feed for feeding. With the greatest efficiency, feed resources can only be used in processed form as part of balanced mixtures. At the same time, feed processing costs 3–4 times cheaper than the cost of animal products additionally obtained through this [3,4].

The digestibility of feed in animal organisms largely depends on the usefulness and balance of diets: with sufficient, but poorly balanced feeding, up to 35-40% of nutrients are not absorbed. In this regard, it is noted that the preparation of complete feed mixtures can significantly reduce the cost of expensive concentrated feeds and increase the consumption of low-value feeds, and increase the efficiency of all diet components [1,4].

Along with the traditional use of succulent, coarse and concentrated fodder, recently preference has been given to the haylage-concentrated type of feeding, the preparation of vitamin flour, briquetting and granulation of fodder. The production of complete feeds deserves special atten-

tion, which ensures an increase in their payback and a reduction in the cost of livestock products.

As the level of intensification of animal husbandry increases, there is a tendency to move from multicomponent diets to mono-feeds with the inclusion of the necessary balancing additives. The essence of the technology for preparing monokorms is as follows: plants are mowed at the stage of maximum nutrient yield (for legumes, this is the period of budding and the beginning of flowering, for cereals, milky-wax ripeness of the grain); drying in a drying unit and grinding into flour or chaff; their enrichment with protein, mineral and biologically active substances; granulation or briquetting. The transition from multi-nutrient diets to compacted monofoods provides the following benefits:

- allows you to combine the production (collection) of feed with their preparation for feeding, carrying out the preparation of feed at pre-planned times and regardless of weather conditions;
- provides a significant increase in the yield of nutrients from a unit area of forage crops and a decrease in their loss during storage;
- simplifies the solution of issues of mechanization and automation of the processes of preparation, storage and distribution of feed: it allows mechanizing all operations all the way from the field to the feeder, that is, from harvesting to distribution;
- there is no need for different types of feed storages and the range of technical means is reduced.

The noted advantages are the prerequisites for an industrial approach to fodder production and animal feeding. However, none of the advanced feed preparation technologies is possible without the appropriate preparation of feed materials for feeding.

Thus, when preparing feed for feeding, two options are possible. The first is when fodder preparation is necessary to ensure the very possibility of using one or another raw material as fodder, that is, to turn potential fodder into actual one. The second is when one or another feed treatment is technologically and economically feasible, since it provides a more rational and efficient use of feed resources, increases animal productivity and increases the yield of livestock products with those feed reserves. If we take into account the prospective scale of the development of the industry and the fact that in modern livestock production the share of costs associated with feed in the overall balance of the cost of this product exceeds 40-45%, and in industrial complexes it reaches 70-80% (for exam-

ple, pig breeding) , poultry farming), then both of these approaches - the expansion of possible feed resources and the increase in the technological efficiency of feed - are very important, and the processes of feed processing in preparing them for feeding become problematic.

In the case of a positive decision on the advisability of preparing feed for feeding, the next issue will be the substantiation of the quality indicators of the processes and products of feed preparation. In each specific case, the level of technological efficiency of feed preparation according to one or another indicator (for example, product yield, feed payback) depending on the type and age of animals, type of feeding, etc. will be uneven. Therefore, it is more convenient to use a relative assessment of the influence of the feed preparation quality indicator on the technological efficiency of feed use.

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