

Annotation

Ulianych I.F., Kostetska K.V., Holubiev M.I.

Development of mixed fodders recipes

Urgency of the article is caused by revealing an essential problem which currently exists in Ukraine and the most countries of the Commonwealth of Independent States that is food safety, which is almost impossible to solve without improving the level of technologies in the production of fodders and increasing their quality which are interdependent by reasonable use of fodder raw materials, by volume of technological processes of processing and by usage volume for fattening of farm animals.

This article described the recipes of mixed fodders for farm animals with partial replacement of composition of grain raw materials to designed extruded fodder mixtures. Recipes development of mixed fodder was performed using superstructure Microsoft Excel for searching a decision. Analysis of available raw materials was conducted, components were selected, recipe project was developed to form the recipe of mixed fodder; minimum and maximum introduction of the components was limited according to the norms and standards, recipe with estimation of the content of metabolizable energy, crude protein, essential amino acids (lysine, methionine, cystine) and other necessary indexes was calculated; recipe project was compared with current rules and standards, balanced state of mixed fodder by all nutrients was determined and, in case of need, corrections were made.

The authors gave examples of recipes variations of mixed fodder for pigs aged 90–200 days using extruded forage mixtures. Recipes for appropriate age groups and purpose were selected for control: ПК(ПК) 55–4, complete mixed fodder for meat pigs feeding, for pigs aged from 90 to 200 days.

It was noted that offered mixed fodders were characterized by higher content of digestible protein – by 8-14 g/kg, slightly lower content of fiber – by 1–2 g/kg and better fodder value – by 0,03–0,12 f.u (fodder unit)/kg and mixed fodders-concentrates had higher content of protein, minerals and nutrients. Therefore, they needed to be fed in a diet with introduction of 25–30 % of sappy fodders.

The authors mentioned that increase in body weight over the research period was 57,9 kg in a control group and 65,4 kg in an experimental group, which is 7,5 kg more. Also consumption of fodders was increased by 7 kg due to better digestion of mixed fodder using extruded mixtures of grain with fruit and vegetable supplements. Due to this, fodder conversion reduced from 4,5 to 4,1.

The article was concluded that better economic indexes of growing pigs of large white breed for meat fattening were received by adding developed extruded mixtures with fruit and vegetable supplements to the mixed fodders and better average daily increase at the level of 439 g compared to the control variant with 406 g was obtained. Growth in profit from selling of pigs' body weight in comparison with the control variant by 980 UAH/t was observed on the basis of reduce in cost price of products in the experimental group.

Keywords: mixed fodder, mixed fodder-concentrate, farm animals, recipe, economic efficiency.