УДК 636.085:633.311.37(477.41)

PRORORTION CRUDE PROTEIN IN ALFALFA-GRASS MIXTURES DEPENDING ON THEIR SPECIES COMPOSITION AND MINERAL NUTRITION LEVEL UNDER STEPPE RIGHT BANK UKRAINE.

G.I. Demydas, S.S. Prorochenko

The content of crude protein in alfalfa-grass travosumishkah depending on the species composition and level of mineral nutrition. Optimum performance of crude protein was observed after application of mineral fertilizers in normal $N_{60}P_{60}K_{90}$ and growth promoters in fumar travosumishtsi from the Rump beardless and meadow fescue.

Grass mixture, protein, quality feed, fertilizer, hay crop.

Nowadays, the question arises of protein nutrition of farm animals that requires urgent solution as increasing the production of protein feed and the rational and economical use. Protein content is one of the main indicators characterizing the feeding value and lack of it in the diet of animals reduces productive effect of other nutrients. For optimal bovine protein is 14-16% of the dry weight [1, 2].

Proteins - a complex compound. In animal nutrition under protein understand how proteins and amides, nonprotein compound unfinished synthesis. Since protein associated protein whole course of life processes in organisms like plants and animals. Proteins make up the structure of the nucleus and cytoplasm of cells and are part of biocatalysts, enzymes.

They are involved in converting chemical energy into mechanical energy and muscle work in other important bodily functions [3]

*Науковий керівник – доктор сільськогосподарських наук, професор Г.І. Демидась,

Great interest in protein supply because all countries with developed livestock fodder protein shortage. The lack of it in the diets of farm animals severely limits their productivity, inhibits the growth and development of young animals, affects reproduction of the herd, violates the metabolism, reduces immunity, leading to various disease [4].

The purpose of research. Studies on the productivity of alfalfa grass mixtures based on cereal growing technology in the north of Right-Bank Forest-Steppe Ukraine were held in the scientific laboratory of forage production and crop rotation stationary production unit of the National Agricultural University of Ukraine "Agronomic Research Station" (s.Pshenychne, Kyiv region). The area research station located in Right-bank forest-steppe, which is part of Bilotserkivskyi ahrorruntovoho area.

According to the methodology and program thesis bezpokryvnym spring sowing in 2014 was laid factorial experiment after three annual cereal, such as corn for green fodder. Repetition of experiments - fourfold. All travosumishky fertilized according to the scheme of the experiment following types of fertilizer: nitrogen - in the form of ammonium nitrate (34% e. G.), Kaliyni- magnesium (26% ai), phosphorus - superphosphate (18.7% ai) and made growth stimulator fumar normal 2l / ha when grasses were in the phase of tillering, and the alfalfa crop - branching.

Scheme experiment

Factor A - travosumishky:

1-lyutserna crop 50% meadow fescue + 50% + 30% reed chaff;

2-lyutserna crop 70% + 30% awnless beardless pazhytnytsya grazing + 30%;

3-lyutserna crop 40% + 50% chaff reed cane fescue + 40%;

4-lyutserna crop 50% + 50% Dactylis glomerata reed chaff + 30%;

5-lyutserna crop 40% + 40% awnless beardless cane fescue + 50%;

Factor B - fertilization:

1-bez fertilizer control.

*Науковий керівник – доктор сільськогосподарських наук, професор Г.І. Демидась,

2-R60 K90.

3-N60P60K90.

4-N60P60K90 + fumar growth stimulator.

Factor C - Calibration:

1-lyutserna sowing 12 kg / ha of meadow fescue + 8 kg / ha reed chaff + 10 kg / ha; 2-lyutserna sowing 10 kg / ha + awnless beardless 14 kg / ha of pasture pazhytnytsya + 10 kg / ha; 3-lyutserna sowing 12 kg / ha reed chaff + 14 kg / ha of cane fescue + 14 kg / ha; 4-lyutserna sowing 10 kg / ha + Dactylis glomerata 8 kg / ha + reed chaff 8 kg / ha; 5-lyutserna sown 8 kg / ha + awnless beardless 17 kg / ha of cane fescue + 8 kg / ha;

During the research we found the best travosumishky and rules of different forms of fertilizer and growth stimulator and different seeding for high performance alfalfa-cereal grass mixtures.

Results and discussion. The results of our experiments on the effects of mineral fertilizers and growth stimulants and species composition of vegetation on the content of crude protein in forages grown in the table. The data indicate that this figure varied and depended on the rules of chemical fertilizers, the species composition of vegetation and slope. The content of crude protein in all investigated travosumishkah directly dependent on the level of mineral nutrition of grass. So, while making fosforno- potash normal P60 K90 on average two years of research its content depending on the composition of grass mixtures varied from 16.5 to 19.1%.

The use of mineral nitrogen in normal N60 to phosphorus-potassium background (P60 K90) has contributed to its content of 1,0-1,6%. The most high crude protein content (20.1%) was observed in one species of alfalfa grass planting and lowest (18.1%) contained in its travosumishtsi, consisting of alfalfa seed, meadow fescue and Kostrytsya cane. The lowest crude protein content in all studied mixtures (16,3-18,1) was a variant without fertilization.

*Науковий керівник – доктор сільськогосподарських наук, професор Г.І. Демидась,

Thus, the most intense nahromadzhuvavsya crude protein in herbage for making a complete fertilizer normally N60 P60 K90. The use of phosphorus potash - travosumishky studied in comparison with variants without fertilizers resulted in a slight increase in the percentage of crude protein in the feed. The reason is that they helped increase the number of legumes in grass. A bean grasses are known by their biological characteristics richer in protein. This explains the fact that most of the crude protein nahromadzhuvalas in single-species alfalfa grass planting.

The highest crude protein (17,1-18,8%) in all variants of fertilization nahromadzhuvala travosumishka, which necessarily alfalfa crop and awnless beardless (see. Table). Slightly below the figure was travosumishkah, comprised of chaff reed and meadow fescue. Simple calculations show that even in travosumishtsi, which includes alfalfa crop and chaff reed. It differs from other the smallest percentage of protein, total yield from 1 ha it was the largest. This is the highest yield of dry matter in these embodiments at all backgrounds mineral fertilizers. In addition, the resulting Balanced feed in enerhoproteyinovomu ratio. This clearly indicates nitrofilnist intensive tonkonohovyh perennial grasses, especially Kostrytsya cane, Rump inermis, Dactylis glomerata. They simultaneously with the formation of high yields can accumulate large amounts of nitrogen compounds. This conclusion makes some practical interest because there is an urgent need for fertilizer to be used efficiently, especially in intensive culture.

Findings

1. Adding complete fertilizer at normal N60P60K90 alfalfa-grass herbage in typical black earth soils Right-Bank Forest-Steppe Ukraine is an effective technique to increase the protein content of the feed.

2. Adding fumar growth promoters in cereals alfalfa herbage is an effective technique.

*Науковий керівник – доктор сільськогосподарських наук, професор Г.І. Демидась,

3. Adding phosphorus-potassium fertilizers herbage causes a slight increase in the percentage of protein.

4. In all investigated grass backgrounds on all mineral fertilizers decreased accumulation of crude protein from first to third cycles of use.

List of references

1. Бабич А. О. Методика проведення дослідів по кормовиробництву / А. О. Бабич. – Вінниця: ТОВ «Нілан-ЛТД», – 1994. – 88с.

2. Кочегаров Н. М. Орошение, удобрение и качество многолетних трав на пастбищах. Орошение с.-х. культур в Сибири / Н. М. Кочегаров – Красноярськ; 1980. – С. 18-25.

3. Мащак Я. І. Луківництво в теорії і практиці. / Я. І. Мащак – Львів: Сполом. – 2005. – 295с.

4. Плешков Б. П. Биохимия сельскохозяйственных растений / Б. П. Плешков. – М.: Колос. – 1980. – 495с.

5. Попов С. И. Протеиновое питание животных / С. И. Попов, А. П. Дмитроченко, В. М. Крилов. – М.: Колос, 1996. – 570 с.

6. Сарнацкий П. Л. Продуктивность многолетних трав в зависимости от норм высева покровной культуры и уровня азотного питання. Земледелие / П. Л. Сарнацкий. – К.: Урожай, 1981. – Вып. 54. – С. 14-17.

7. Черкасова В. А. Удобрения на лугах и полях, в пойме. Кормопроизводство / В. А. Черкасова, А. И. Заец. – Москва. – 1980. – С. 27-29.

*Науковий керівник – доктор сільськогосподарських наук, професор Г.І. Демидась,