

## THE INFLUENCE OF FODDER WITH BARM AND THE WAY OF FEEDING ON THE LAMBS BREEDING PRODUCTION RESULTS

Jovan Stojković<sup>1</sup>, Zoran Ilić<sup>1</sup>, Boban Jašović<sup>1</sup>, Goce Cilev<sup>2</sup>

<sup>1</sup>Faculty of Agriculture, Zubin Potok, Serbia

<sup>2</sup>“Ss. Cyril and Methodius“ University in Skopje, Institute of Animal Science,  
Bul. Ilinden 92a, MK-1000 Skopje, Republic of Macedonia

[jovan.s@jotel.co.rs](mailto:jovan.s@jotel.co.rs)

The results representing the influence of fodder and the way of feeding on the lambs breeding are represented in this abstract. The experiment was performed on two groups (Control group – C, and Experimental group – E) containing 20 lambs and it lasted 60 days. The lambs of C group were fed with 400 grams of fodder and the lambs of E group ate as much fodder as they wanted. Also both groups were fed with hay as much as they wanted. Due to the sequence of treatment (C : E), the average weight of the lambs at the end of the experiment was 23.60:27.50 kg ( $P < 0.001$ ) for C group, the lambs daily increase was 188:253 g and in E group the daily increase was bigger for 65 grams or 34% ( $P < 0.001$ ). Food conversion in analog treatment was 3.60 : 3.12 kg.

**Key words:** lambs; weight; daily increase; food conversion; barm

## ВЛИЈАНИЕ НА ХРАНАТА СО ПИВСКИ КВАСЕЦ И НА НАЧИНОТ НА ИСХРАНА ВРЗ ПРОИЗВОДНИТЕ РЕЗУЛТАТИ КАЈ ЈАГНИЊАТА

Резултатите го презентираат влијанието на храната и на начинот на исхрана врз одгледувањето на јагнињата. Опитот беше изведен на две групи (контролна група – С, и експериментална – Е) со по 15 јагниња и траеше 60 дена. Јагнињата од групата С беа хранети со 400 грама сточна храна, а јагнињата од групата Е јадеа сточна храна по желба. Исто така, и двете групи беа хранети со сено по желба. Според соодносот на третманот (С : Е), просечната маса на јагнињата на крајот од експериментот беше 23,60 : 27,50 kg ( $P < 0,001$ ) за контролната група, кај јагнињата дневниот прираст беше 188 : 253 грама, така што во групата Е дневниот прираст беше поголем за 65 грама односно за 34% ( $P < 0,001$ ). Конверзијата на храна во аналогниот третман беше 3,00 : 3,12 kg.

**Клучни зборови:** јагниња; маса; дневен прираст, конверзија на храна; пивски квасец

### 1. INTRODUCTION

Proteins are the one of the critical feeding ingredients in the domestic animal diet, and especially at young animals that are gaining weight fast and at older animals with high production. That is why the food with proteins has to be used rationally, because they are usually much more expensive than the energetic one which brings us to increase food expenses.

In the last few years the sources of protein in the meals are drawing more and more attention,

first of all the aspects of the degradation in burag, that is, the amount of the aminoacid which is supplied on the duodenum level. Active population of microorganisms in rumen end reticulum disintegrates proteins in meals to peptide, aminoacid and ammoniac, after which they use these materials for synthesis of their own proteins. In the process of disintegration and synthesis certain losses appear which means that modified quantity of aminoacid comes to the place of digestion and adoption.

Proceedings from these assumptions certain explorations are done, aiming at establishing the

influence of the fodder with yeast and the way of feeding the intensive lambs fattening at their production results.

## 2. MATERIALS AND WORKING METHODS

The explorations are done at the sheep farm in Štrpce during the period from February 1<sup>st</sup> to April 3<sup>rd</sup> 2008. For this exploration are 40 lambs F<sub>2</sub> generation are used. These lambs are produced embellishing sheep from the Šar Mountain with rams from Wittenberg.

The lambs are separated from their mother after finishing breast-feeding after 30 days. The average lambs weight at the beginning of fattening was 12.30 kg and at the end of the fattening was 25.55 kg.

The body weight is measured at the beginning of the experiment (after 30 days) and at the end of the experiment after 90 days. Every day the food usage was followed. Calculation of the food conversion is based on the established growth and the food usage between the two meals. Fodder and hay are chemically analyzed at the beginning of the experiment (Table 1).

Statistical data processing is done with Statistica program, version 6, Starasoft. Inc (2003).

Table 1

### *Chemical composition of fodder and hay, %*

Indicator	Fodder	Hay
Dry matter	88.35	89.10
Protein	15.60	11.20
Ash	5.64	7.15
Fat	2.73	2.04
Cellulose	9.90	27.36
NEM	54.93	41.75
ME, MJ/kg	7.10	4.56
Ca (g)	0.74	0.79
P (g)	0.55	0.50

## 3. RESULTS OF INVESTIGATION AND DISCUSSION

Data of average production indicator with the Control and Experimental lambs group are shown

in the Table 2. The results indicate that the lambs that were eating as much as they wanted they gained much more weight. At the end of the experiment, lambs body weight, Control group: Experimental group is 23.60 : 27.50 kg, and distinguished differences were statistically very important ( $P < 0.001$ ). The average daily growth at the end of the fattening C : E was 188 : 253 g.

Established differences in favor of experimental group were bigger for 65 grams or 34% and they were statistically very important ( $p < 0.001$ ). Less food usage is established with lambs of Experimental group which in comparison to Control group spent 13.34 % less food.

Table 2

### *Production results of the fattening lambs*

Indicator	Group		Index
	C	E	
Duration of experiment	60	60	–
Number of the lambs in experiment	20	20	–
Starting body weight, kg	12.30	12.30	–
Ending body weight, kg	23.60	27.50	116.52**
Daily growth, kg	0.188	0.253	134.57**
Consumption of food, kg	0.680	0.790	116.17**
Conversion of food, kg	3.60	3.12	86.66**

\*\* ( $P < 0,001$ )

Comparing our results of the starting and ending results of the body weights with the results of the other researchers it is obvious that the many authors fattened lambs with different starting and ending body weight (Morrical, 1998; Rako et al., 1982; Ninkov, 1987; Lalić, 1990; Stojković, 2004; Dragana Ružić-Muslić, 2006). Comparing this we would emphasize that the quoted authors experimented with other spices and half-breed lambs and they fed them with different kind of food, kept them in places that are different from ours.

We and other authors came to conclusion that the beer yeast has a positive influence but a little less growth. Kozarovski et al. (1991) also investigated the effects of protein different sources soybean meal, brewers grains, Prodain-100 in fodder for fattening lambs. The body weight at the end of the experiment was between 26.53 and 28.51 kg, and daily growth was from 169 to 227 grams. In the previous experiments Stojković (2007) with

the soya meals (5–10% ) in fodder used for fattening lambs, the average daily growth was from 260 to 280 grams.

Results of consumption of food are similar to the results got in the previous experiments. For example, in the Ružić et al. (2006) experiment half-breed pramenka-wunterberg, consumed 8.90% more food than pramenka of Sjenica. The average daily consumption was similar in our and Marković et al. (2004) experiments.

Data of consumption of food and nutritive ingredients from these experiments are in accordance with the results of Kozarovski (1988), Grubić et al. (1991), Damjanović et al. (2008), who established that, depending on the protein source meals that is, with the increasing indeconstructible part in the complete protein meals, the consumption of food and nutritive ingredients decreased.

#### 4. CONCLUSION

Based on experiment results in fattening lambs it is established that the lambs from the experimental group have better production results than the lambs from the control group. The lambs from the experimental group had: average body weight of 27.50 kg, daily growth 253 g, in the control group average body weight 23.60 kg and daily growth 188 g. In comparison to the control group, the experimental group had bigger consumption of food for 11.61 % and smaller conversion for 13.34 %

#### REFERENCES

- Ružić-Muslić Dragana, Grubić G., Petrović M., Žujović M., Muslić H., Nešić Z., Marinkov G., Stojanović Lj., Efekat izvora proteina u obroku na proizvodne performanse jagnjadi u tovu. *Biotehnologija u stočarstvu*, Beograd. **23** (1–2), 41–46 (2007).
- Damjanović M., Đorđević N., Grubić G., Marković B., Proizvodni rezultati jagnjadi u tovu hranjenih obrocima sa različitim izvorima i nivoima proteina. *Biotehnologija u stočarstvu*, Beograd, **24**, 129–135 (2008).
- Grubić G., Adamović M., Negošanović D., Razgradivost proteina kao kriterijum za sastavljanje obroka u ishrani preživarara. *Inovacije u stočarstvu*, Beograd. **X**, 125–131 (1992).
- Kozarovski N., Jovanović R., Krajinović M., Uticaj razgradivosti različitih izvora proteina na proizvodne rezultate toвне jagnjadi. *Savremena poljoprivreda*, Novi Sad, **39**, 3, 1–86 (1991).
- Memiši N., Frida Bauman, Grubić G., Koljajić V., Pavlov Biserka, Uticaj različitih izvora nerazgradivog proteina u obroku na proizvodna svojstva rano odlučene jagnjadi u tovu. *Biotehnologija u stočarstvu*. Beograd, **18**, 5–6, 213–218 (2002).
- Rako A., Mikulec K., Arambašić A., O tovnim sposobnostima i klaničnoj kvaliteti jagnjadi pramenke i njezinih križanaca sa virtemberškom ovcom. *Stočarstvo*, Zagreb **7–8**, 36, 279–287 (1989).
- Robert J. C., Dumont G., Martin T., Evaluation of the protein requirement in growing young lambs. *Commission on Animal Nutrition* (2000).
- Stojković J., Uticaj načina hranjenja na proizvodne rezultate jagnjadi u tovu. *Savjetovanje agronoma R. Srpske, Zb. radova*. Teslić. 176–180 (2007).
- STATISTICA, Version 6, StatSoft. Inc. [www.statsoft.com](http://www.statsoft.com). (2003).
- Čaušević Z., Vuković S., Uticaj izvora i nivoa proteina u suhom obroku na odgoj jagnjadi od 14. dana. *Radovi Poljoprivrednog fakulteta u Sarajevu*. Sarajevo, **XXIV**, 27, 435–446 (1986).