Weight gain in lambs, supplemented with a commercial food al 12% protein**Ganancia de peso en corderos, suplementados con un alimento comercial al 12% de proteína**LUCIO, Rodolfo¹, SESENTO, Leticia², BEDOLLA, José Luis Carlos¹ and CRUZ, Ángel Raul¹¹Facultad de Medicina Veterinaria y Zootecnia de la Universidad Michoacana de San Nicolás de Hidalgo²Colegio Primitivo y Nacional de San Nicolás de HidalgoID 1st Autor: Rodolfo, Lucio / ORC ID: 0000-0002-0535-3652, Researcher ID Thomson: X-2391-2018ID 1st Coauthor: Leticia, Sento / ORC ID: 0000-0002-6456058X, Researcher ID Thomson: S-6997-2018, CVU CONACYT ID: 449302ID 2nd Coautor: Jose Luis Carlos, Bedolla / ORC ID: 0000-0002-2485-5615ID 3rd Coautor: Angel Raul, Cruz / ORC ID: 0000-0001-9809-1323, Researcher ID Thomson: S-4975-2918

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Abstract

The objective of this work was to determine the weight gain in sheep meat, under an intensive feeding system in lambs of the Dorper breed. Thirteen lambs with an initial average live weight of 11.25 ± 5 kg were used. The food was offered *ad libitum* throughout the day. Systematic measurements of the weight gain of the sheep were carried out. The results obtained for the corresponding variable of the voluntary consumption of dry matter, shows that at the beginning of the experiment the animals had a dry matter consumption of 206.25 g / ovine; However, as they were growing their dry matter consumption was 292 g / ovine, with a linear increase until the sixth week. The highest weight gain per day was obtained between month 1 and month 2, with the best feed conversion rates observed here. With the obtained results it is concluded that the voluntary consumption of dry matter was 206.5 g / ovine-1, with an average daily weight gain of 470 g. and with acceptable conversion rates and food efficiency.

Weight gain, Dry matter, Food efficiency**Resumen**

El presente trabajo tuvo como objetivo determinar la ganancia de peso en ovinos de carne, bajo un sistema de alimentación intensiva en corderos de la raza Dorper. Se utilizaron 13 corderos con un peso vivo promedio inicial de 11.25 ± 5 kg. El alimento fue ofrecido *ad libitum* durante todo el día. Se llevaron a cabo mediciones sistemáticas de la ganancia de peso de los ovinos. Los resultados obtenidos para la variable correspondiente del consumo voluntario de materia seca, demuestra que al inicio del experimento los animales tuvieron un consumo de materia seca de 206.25 g/ovino; sin embargo, a medida que fueron creciendo su consumo de materia seca fue de 292 g/ ovino, observándose un incremento lineal hasta la sexta semana. La mayor ganancia de peso por día se obtuvo entre el mes 1 y mes 2, observándose aquí los mejores índices de conversión alimenticia. Con los resultados obtenidos se concluye que el consumo voluntario de materia seca fue de 206.5 g/ovino-1, con una ganancia de peso diaria promedio de 470 g. y con aceptables índices de conversión y eficiencia alimenticia.

Ganancia de peso, Materia seca, Eficiencia alimentaria

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Introduction

In much of Mexico, sheep farming is very dispersed and in general its exploitation is done in a traditional way. The sheep are usually raised in grazing, a system that has been used for years universally, with the fundamental objective of reducing operating costs (LARA, 2012). In the dry season, it is insufficient to sustain the annual average of the increase GDP / animal / day.

The quality of the fodder not only influences the weight increases, but also modifies the consumption of dry matter and the behavior of the animals. With the above, it is necessary to establish strategies in sheep feeding, considering that food ingredients or agro-industrial by-products, both energy and protein, with high nutritional value and a good amount of amino acids, act as protein energy correctors in diets of low nutritional quality, achieving increase, weight gain, quality and conformation of the canal (FERNANDEZ, 2018).

It has been observed that the lambs growing under grazing and without supplementation, will hardly have daily gains above 80g / day. On the other hand, the lambs that receive 200 g / day of energy-protein supplement, manage to increase four times more than the lambs without supplementation (20 g vs. 80 g / animal / day) (PEREZ, 2011).

A fattening diet should have 15% to 17% of Crude Protein and 70% of Total Digestible Nutrients (TND), to meet and meet the daily requirements in sheep (MONTOSI, 2006).

It is evident that an adequate feeding system influences the performance and composition of the canal in a decisive way, showing an increase in muscle fat (PARMA, 2010).

Materials and methods

The work was carried out at the ranch "Los Leones" located on the Uruetaro-Tejaro road km 18.1, GPS coordinates, latitude: 19.9917, longitude: 101.4438.1860 meters above sea level, zip code 58891, belonging to the District of Tarimbaro 16088, state of Michoacán, Mexico.

13 sheep (male and female) of Dorper breed weighing 16kg and 3 months old were used, which were assigned to a feeding plan based on ground stubble, purple corn and supplemented with commercial brand ESCOTO food at 12 % protein inclusion.

The work will last approximately 90 days and the GDP will be evaluated from its beginning until its release to the market.

At the beginning of this work the animals were weighed and taken to the feedlot where they will remain during this period. Keeping weight records per animal every 15 days.

Results and discussion

The fattening of sheep began with a total of 13 newly weaned sheep, about 2 months old. Assessed average animal consumption. The animals had an initial consumption of 206.25 grams on average for the 13 sheep. The initial weight was 11.25 kg on average.

Weighing values were concentrated in general, then dividing by average each weighing.

Showing the evaluations between each weighing in graphic 1.

At the beginning of the fattening the sheep had an average consumption of 206.25 grams. Its initial weight was 11.25 kg average, at the second weighing said average was 24.42 kg.

The daily weight gain between month one and month two, ranged from .33g, .48g, .56g, .73g, .42g, .55g, .53g, .53g, .35g, .32, .33g, .67g, .34g; it should be noted that the daily weight gain of said months was .47 grams, showing the evaluations in graphic 2.

Subsequently, between month two and month three, the average weight in the third weighing was 34.64 kg. Daily weight gain between those months ranged from 0.3g, 0.36g, 0.25g, 0.32g, 0.4g, 0.39g, 0.33g, 0.31g, .35g, .32g, .31g, .32g, .33g; mentioning that the daily weight gain in these months was 330 grams. Graphic 2. Daily weight gain between the month 1-2 and 2-3.

Conclusions

With the study that was carried out with Dorper breed lambs, in an intensive fattening system, based on commercial food of the ESCOTO brand at 12% protein, an average daily weight gain of 470 grams could be observed, between the month 1-2.

On the other hand, the weight gain that was reflected between the month 2-3, was 330 grams.

A deficit of 140 grams is observed between the two averages valued.

This weight loss is attributed to the fact that they were given a bad handling due to a change of pen, which caused stress states and therefore a decline in weight gain.

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