

RESEARCH ON THE EXPLOITATION TECHNOLOGY APPLIED IN SHEEP BREEDING HOUSEHOLDS IN SIBIU COUNTY

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Abstract

The paper studied the dimension of sheep household from Rășinari and Agnita, Sibiu county based on a sociological survey using a sample of 34 sheep breeders. The results pointed out that 76% of farmers own areas under 10 ha, 9% between 11-50 ha, 4.5% between 51-100 ha respectively 101-200 ha and 6% have more than 200 ha. Regarding sheep livestock owned, 12% of sheep breeders surveyed have between 0-100 heads, 24% have between 101-200 head, 9% have between 201-300 heads, 24% have between 301- 400 heads, 18 have between 401-500 heads, 12% have between 500-1000 and 1% have in property more than 2,000 head of sheep. As a final conclusion, the changes in the land ownership had a deep influence on sheep breeding both from a technological and economical point of view in the studied area.

Key words: animal breeding, extensive system, sheep, sustainable development

INTRODUCTION

Sibiu County has an agricultural area of 307,974 ha, of which 116,276 ha are arable land (38%), natural meadows totals 107,126 ha (35%) and 75,724 ha of natural hayfields (25%). This structure of the agricultural area shows that meadows and hayfields are approx. 60% of the agricultural land, hence the giant plant resources can be harnessed effectively by ruminants, especially sheep.

Of the total farms in the county, there are 1,732 holdings that are considered sheep breeders as they hold more than 50 counts./exploitaton. [10].

Sheep breeding in Sibiu County, is a traditional activity, many centuries old, being the basic activity for the Marginimea Sibiului area, which along with animal breeding traditional activities relating to the processing products with a strong local character are being practiced (cheese, clothing, crafts, tools processing, products, inventory items of tin, weaving workshops, traditional hat, workshops fabrics, etc.). [6,9]

National statistics presented on the Ministry of Agriculture and Rural Development

website show that in 2013 Romania was raising approx. 12,710 thousand sheep, and in 2015, 13,096 thousand heads. [12]

Sibiu County ranks second in the country in terms of the number of sheep. In Sibiu there are currently approx. 459,000 sheep and there are several associations sheep farmers. They face problems related to: the sales market, subventions and lack of productive races, etc. If they want to stay on the European market in this sector, the farmers will have to find quick solutions. With all the raised problems, there are still in the county breeders who obtained great performance, both by increasing the purebred herd Țurcană bred or Țigaie bred, but also by crossing sheep from the bred Țurcană and Țigaie with rams from the German meat with black head bred, to improve the carcass quality.

The extensive transhumant system of cattle is considered economic because it does not rely on costly investments in shelters or for the establishment and maintenance of cultivated pastures. The sheep livestock exploited in this system expresses biogenetic potential of adaptability, breeding and production.[3,11]

The peculiarities of transhumance confer

functions: environmental, economic, zootechnic and social biologically based concept: fresh air; autofurajare; accumulation beneficial; self-fertilize; autoeficientizare; autoconfort. [8]

Some authors tried to understand modernization of agriculture like a continuing process and it is the essence of progress in agriculture and in rural areas. [5,7]

MATERIALS AND METHODS

To know the current "status" of the holding of sheep breeders in Sibiu in the course of 2015 was conducted a sociological survey using a questionnaire with 39 items, which was managed by a single interviewer and applied to a number of 34 sheep breeders from Rășinari and Agnita, Sibiu county.

RESULTS AND DISCUSSIONS

In their papers some authors showed that a new strategy of sustainable and competitive development of animal production in Romania, with principles, methods and efficient techniques, clearly formulated it is needed. [4]

Sustainable development can be harmonious combined with tourism development, especially the rural one. [1, 2]

Of the total sheep farmers surveyed, 18 are part of an associative structure (53%), most of Sheep Breeders Association "Mărginimea" Rășinari or A.J.C.O.C. "Mărginimea" Sura Mare, the remaining 47% being independent.

When asked in which village they operate 58% of the farmers stated that the the locality of residence. Farmers owning large herds, leased areas for grazing in localities in Sibiu (sheep breeders from Rășinari in: Poplaca, Sorostin, Chirpăr, Rosia, Motis and those from Agnita in: Veseud, Chirpăr, Retis, Ighișu Vechi, Merghindeal, Ruja, Veseud). Only two breeders move with their flocks outside the Sibiu county into Mures County or in Satu Mare county. In Rășinari I met one farmer who practices transhumance. The percentage of 42% which represents the breeders who maintain their sheep across other localities than home, show insufficient pasture areas in

respect of the herds exploited.

As regards the surfaces of land owned, 76% of farmers said they own areas under 10 ha, 9% between 11-50 ha, by 4.5% between 51-100 ha respectively 101-200 ha and 6% have more than 200 ha. When asked if there are other sources to supply the animal feed, 68% of producers responded that they supply with corn from the open market, with concentrates from different companies or older associations, while 32% of breeders do not use other sources of procuring food.

About sheep livestock owned, 12% of sheep breeders surveyed have between 0-100 heads, 24% have between 101-200 head, 9% have between 201-300 heads, 24% have between 301- 400 heads, 18 have between 401-500 heads, 12% have between 500-1,000 and 1% have in property more than 2,000 head of sheep. (Chart 1)

Within the structure of the sheep population by age and physiological status, which form the core breeding sheep is 65% -90% of the total herd of sheep.

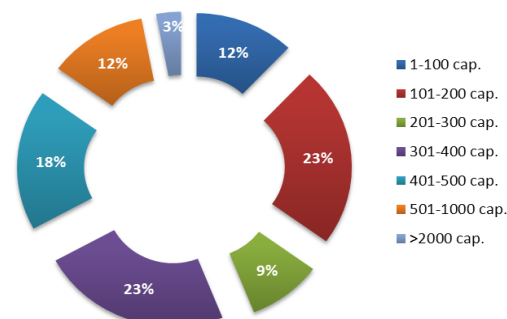


Chart 1. The share of flocks exploitations according to the number of sheep owned

The prevalent breed is Țurcana (encountered in 85% of the holdings where the survey was conducted), but there are breeders (15%) which operate other breeds such as Țigaia and German with black head meat sheep (36% of all farmers in the growth center Agnita, which shows an opening towards the farmers in the hilly region to obtain hybrids with improved breeds for meat production).

Most sheep farmers (68%) use for feeding sheep during the indoors period hay and corn, 12% of them administrate hay, corn and succulents 20% (the area Agnita) hay, corn, succulents and leguminous vine. The

assortments of feed given to the animals depend by the zone in which the holding is situated. The ration administered is generally made up of approx. hay 3 kg / head / day, plus corn averaged 600 g / head / day.

88% of the respondents don't feed animals differentiated by age or physiological state, while 12% of breeders administrate feed differently. So the barren sheep receive straw and stalks and other categories, hay and succulent (maize during births).

All manufacturers responded that mating season is in autumn (august-september) applying natural mount. When asked whether pregnant sheep are kept separate from other animals, we observe that 92% of breeders maintain pregnant sheep separately, as far away from the rest in special places (in pens in the winter stables), where females with access to water and feed. Only 8% of pregnant sheep breeders did not separate from the other sheep.

During births, most farmers (62%) arrange a separate compartment where these take place (generally in the form of rectangular boxes to ensure access to food and water, taking into account 1.5 m² / ewe-lamb couple), while the remaining 38% do not have places for calving.

The weaning of lambs is differentiated: so, 26% of breeders wean the lambs _ from 2 months, 6% from 3 months, 58% at ages exceeding four months (generally when lambs have around 20 kg). All respondents give special attention during lactation.

Sheep shearing is manual and takes place in May-June, depending on weather conditions.

The wool production declared for 74% of breeders is up to 2 kg wool / head, while for 26% are between 2 to 3 kg wool / head. Almost all breeders are unhappy with the way they currently exploit wool in our country.

With regard to the average productions of milk / sheep head / day, 47% of the breeders say that they obtain 500 ml milk / sheep head / day, 12% between 600-800 ml milk / ewe / day and 41% obtain approx. 1000 ml milk / ewe / day in peak lactation curve.

Sheep's milk is used to make dairy products from the shepherd camp. They are used exclusively to ensure the consumption needs

of the family in case of 6% of the farmers, while a proportion of 94% capitalize them by selling from the henhouse or markets.

The program of a working day in the holdings where the survey was conducted starts at 4 am and ends at 22.

The pasture is used rationally for 5-6 days and then it has a recovery of 15 to 20 days until reaches 8-10 cm tall grass.

The pastures with a higher load than their productive potential causes grazing „shaving“, leading to their degradation by the disappearance of valuable plant species and the growth of the ones more resistant which means insufficient food for animals and low nutritional value, which influences negative on the yields of milk and meat. The pastures which are inefficiently used with a too small animal load, allow the development of lush plants, typically the ones with a low nutritional and productive value, resulting in a poor use of biomass, aging herbs, decrease of the nutritional value which results in the appearance of reeds, hrubswhich and molehills which ultimately leads to the deterioration of the grasslands.

The grassland capitalization is not made after a scheduled basis (avoiding mixed grazing sheep-cattle establishing the load per ha in compliance with the production of green mass and its quality, etc.) There are areas where pastures are overloaded, leading to their degradation and insufficient food for animals, which will record low production of milk and meat

Sheep best use pastures and meadows in the mountain area. In the climatic conditions from our country the sheep may graze in the mountains with altitude between 700 - 1,300 m, between 90 and 120 days. Grazing usually ends between August 31 to September 10, depending on weather developments by grazing, sheep contribute to raising the soil fertility and increase production of green mass. In general the rations consist of green mass during the grazing period hay in the stabulation period with coarse during calving. Mostly they are not well balanced and do not provide physiological nutritional requirements at the various stages. In private households, in winter the sheep are kept generally arranged

in shelters near the house.

There are also breeders who practice transhumance, a very old tradition. In Sibiu from over 1,700 sheep breeders, only 5 still practice transhumance.

Sheep farming in the county in the past included a compulsory period of transhumance which took various forms from one place to another, depending on the number of animals owned by breeders and human and economic opportunities. In general the system of raising animals in the mountain area is the short swing with wintering based on natural hay in the stabulation period and using during summer highest mountain pastures, through herdsmen, sheepfold or mixed farms. This system of farming causes a very good quality of meat, milk and cheese, though yields obtained are low.

CONCLUSIONS

The data shows that most farmers have done training in animal husbandry. Also, most manufacturers inherit this tradition of ancestors. Sale of products is as follows: cheese, Cibin market, Campina, Ploiesti, Bucharest; Wool: Bucharest, Campina; - Meat: markets in stands; - Skins: they sell with 2 lei / pc via intermediaries centers in Sevis, which is then used both domestic and foreign markets.

The price of the products domestic markets is: lamb meat sold for 8 lei / kg alive and 20 lei / kg carcass, milk 3-3.5 lei / liter, the cheese has price range of 12 to 30 lei / kg. A good sheep gives 1 liter of milk per day in peak lactation curve and an average of 120 to 15l/year total production plus variants lactation values between 120-150 l / year. From such a sheep may be obtained about 13 to 15 kg cheese / year; sheep belonging to the Sibiu growth area achieve an average body weight of 40-45 kg, give 2-3 kg wool / head, a production of 80-90 liters of milk, cheese 13-15kg/head/ year manufacturers who sell products in markets have displayed specific product name, date of manufacture, date of expiry.

There are producers who pasture their personal property, but there are producers

who rented pastures. They pay Lei 160 / ha / year.

Many producers are unhappy with the legislation that forces them to modernize the area where yields are obtained.

Between the ruminants growth and crop production is a strong connectin. Animals contribution in an important measure to improve crop production and increase its profitability.

Exploitation and valorification of the meadows in the mountain and piedmont area is done in most cases by extensive grazing (moving cattle freely on the pasture), modern use of made (lots, Mixed operation: grazing, mowing, respect the load per per hectare depending on quantity and quality of biomass, etc.) is very rare.

Sibiu border shepherds complain that they can not comply with the millenary tradition because they do not have where to "remain" sheep transhumance risking only to be a reason to stay ballad. Neither the small breeders do not see a business of raising sheep. Some of them, even those who raised sheep from father to son, trying to sell their flocks. Wool, which was an important product obtained their sheep, for several years has no market, which requires farmers to another product orientation, as required by European or even global market. Generally sheep are raised for milk, meat wool less.

When exploited for meat, animals are kept on pasture, with traditional technologies, and recovered at the end grazing in September.

In general livestock and especially in Sibiu. Sibiu Borders is a family activity, inherited from ancestors specific principles held by each family. Changes in land ownership prompted changes in sheep, both technologically and economically. They require a new approach to technical and economic based and in line with market requirements, veterinary European competition.

In the context of sustainable development, the production and consumption of rural product process needs: upgrading access roads in rural areas, intensified conservation of natural resources, integration of some tourism based on traditional and organic farming.

REFERENCES

- [1]Andrei, D. R., Sandu, M., Gogonea, R. M., Chirișescu, V., Kruszlicika, M. 2012, Modeling of rural tourism towards sustainable development from the perspective of specifically organic food”. Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 12(3):5-10.
- [2]Cărătuș Stanciu Mirela, 2015, Aspects of sustainable rural tourism – farmerșt markets and farm visits, Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 15(4):15-20.
- [3]Dărăban Stelian, Georgescu Bogdan, Pădeanu Ioan, Vuia Sorin, Pascal Constantin, Călin Ioan, 2011, Morpho-Productive Characterization of Some Tzurcana Breed Populations, White Variety, Bred in Some Zones of Transylvania, Scientific Papers: Animal Science and Biotechnologies, 44 (2): 370-374.
- [4]Drăgănescu, C. 2013, Romanian agricultural policy and sustainable development of animal production”, Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 13(4):77-82.
- [5]Draganescu, C., 2013, Sustainable development and the problem of a national strategy for sustainable development of animal production, Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 13(4):97-108.
- [6]Irimie Cornel, Dunăre Nicolae, Petrescu Paul, 1985, Mărginenii Sibiului. Civilizație și cultură populară românească. Editura Științifică și Enciclopedică, București.
- [7]Kusz, D. 2014, Modernization of agriculture vs sustainable agriculture, Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 14(1):171-178.
- [8]Simtion Daniela, 2015, Profitability in the context of the needs and requirements of sustainable farms development, Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 15(1):470-475.
- [9]Stanciu Mirela (coordonator), Sand Camelia, Săvoiu Gh., Vlad Iulian, Antofie Mihaela, Antonie Iuliana, Bahaciu Grațielă, Băcilă Vasile, Bănuță Mariana, Blaj Robert, Caragea Nela, Ciorțea Gligor, Crăciuneanu Viorel, Deleanu Valer, Diniță Georgeta, Firescu Victoria, Iagăru Pompilica, Pavelescu Amalia, Pomohaci Marcel, Purima Georgeta, Vidu Livia, Ureche Marius, Studiu privind stâna, produsele și subprodusele tradiționale de stână din arealul rural montan, Ed. Ed. Univ. "L. Blaga" din Sibiu, p. 84-95.
- [10]Stanciu Mirela, Todericiu Ramona, 2012, Bioeconomic and ecoeconomic aspects reflected in the sheep exploiting from Sibiu county, The 19th edition of the International Economic Conference "The persistence of the global economic crisis "Causes, implications, solutions", 15th of June 2012, Faculty of Economic Sciences, Sibiu, Revista Economică, supliment nr. 6/2012, p. 39-44, 2012.
- [11]Tafă Vasile, 2008, Creșterea și exploatarea ovinelor, Editura Ceres, București.
- [12]<http://www.madr.ro/cresterea-animalelor/ovine-si-caprine.html>

