

DORPERS, THE MEAT SHEEP OF THE FUTURE

A. Kovács^{*}, S. Kukovics^{**}, A. Jávör^{*}

^{*}University of Debrecen, Centre for Agriculture and Engineering, Debrecen

^{**}Research Institute for Animal Breeding and Nutrition, Herceghalom

Abstract

Between 1923-45 experiments have been carried out in South-Africa by crossing the ewes of different ancient African breeds with different British meat type rams in order to improve the carcass size and quality. One of these crosses turned out to be outstanding at the beginning of the 40es. Small (~ 30 kg), blackheaded, hairy, polled, fat rumped Somali ewes (called mistakenly „Persian” in South-Africa) were mated by large (~ 140 kg) Dorset Horn rams. Backcrossing to Dorset resulted in further rapid improvement among the experimental conditions of the Research Institute, but were not continued as they could not perform in the natural harsh semi-desert areas. The half Dorset/half „Persian” proportion was therefore maintained and the new breed called „Dorper” from the abbreviation of the ancestors names was created by consistent selection work carried out on a growing population, lead by the Research Institute of Bloemfontein.

Key words: doorpers, sheep, meat production

INTRODUCTION

The Dorper is therefore bred for 70, and registered for 50 years. It is a meat sheep of medium size, rams 90 – 105, ewes 70 – 95 kg, stocky with short legs, height of 60 - 60 cm, larger size is not desired. Its colour is inherited from the Persian, the head and the upper part of the neck is black, the body and the legs are white. The hooves are pigmented and pigmentation on the teats, anus and reproductive organs is desired. This colour distribution is characteristic only to the Somali (Persian) and Dorper Sheep, therefore – except crossings between these two - means a warranty of their purebredness. The side of the rump and the back is covered by short seasonally shedding wool of no economical value, the head, the belly and the legs are hairy. Shedding wool is required by the standard, permanent wool on the back and Persian-like hairyness are equally punished by the show judges. The breed has excellent performance among extensive semi-desert conditions of Africa, Texas, Arizona and Australia, being a good, non-selective grazer, as well as in the colder climates of Canada, Switzerland and the southern part of New-Zealand.

Similarly to both of its ancestors, the Dorper is an aseasonal breeder, so it is possible to have lambings continuously per eight months, or timed to the special lamb markets of the western and Orthodox Eastern, Christmas and

the Italian Feragosto (August 15th), without hormonal manipulations. Twins are common (1.2 – 1.8 lambs), an average of 200% lambs/year may be achieved by continuous breeding. The lambs have a birth weight of ~3.5 kg, the weaning rate exceeds 90%, and they reach the 36 kg at 3-4 months of age. The dressing percentage is around 50%, and the meat is very tasty, The leather of special value is used for manufacturing military and sport dresses, seats and drums. Selection is still going on for reducing the subcutaneous fat layer inherited from the Somali ancestor.

Further advantage of the breed that it is tame and docile, easy to handle. The permanently growing number of Dorpers already exceeds 10 million heads in the Republic of South-Africa, being the second after Merinos at present.

MATERIALS AND METHODS

Conquering the World started 13 years ago, when the first embryos and semen became exported to Australia and the U.S.A., later to China, New-Zealand, Canada, Brazil, Mexico and different European countries, especially Switzerland. Dorper, Wiltshire Horn and Barbados Blackbelly rams are used in the German dewooling „Nolana Program”.

Due to the great genetic distance from the European breeds, there are expressed positive heterosis effects in the hybrids, like the unbelievable lamb viability. Where it is permitted by the population size of Dorper Sheep, like already also in France, utility crossings are carried out, where the aseasional Dorper ewes of a good twinning rate provide the maternal, and larger meat-type rams make the paternal line. In China ewes of the prolific Han Sheep are inseminated with Dorper semen. Until the number of our Dorpers is limited, we can use them as paternal line for utility crossing inseminating ewes of prolific breeds, like Babolna Tetra, Booroola, British Milksheep, Debrecen Prolific and Prolific Merino Sheep as maternal lines. The crossing will reduce the wool quantity and length, the hybrid lambs will have shorter legs and better conformation. The dressing percentage and carcass quality might be greatly improved. The F₁ lambs will be totally black, or black with minor white markings, as the black of the Somali and Dorper is dominant, while the inhibitory gene restricting it to the head and the neck is recessive, therefore ineffective in heterozygous form.

Utility crossing experiments were carried out two years ago at the Awassi Rt., Bakonszeg with Transsylvanian Racka ewes and different meat type rams, also a Dorper among them. The Racka x Dorper F₁ lambs performed well in the comparative quantitative and qualitative tests, profitability of ancient breeds may be greatly improved this way.

The White Dorper Sheep used to be a colour variety, but since 1968 is recorded separately and acknowledged as a separate breed. Its size and body conformation are identical to those of the Dorper Sheep, only its colour is different: its covering is white, but the skin and the eyelids must be, and the hooves, a part of the ears, the teats, the anus and the outer genitalia are preferably pigmented. The advantage of White Dorper is that it produces only white lambs from crossings with white breeds, easier to sell, and the further (F_2 , R_1 etc.) generations will also remain all uniformly white. The White Dorper Sheep is more rare at present, but because of the above mentioned advantage, the growth of its number might be expected.

A common problem of the ancient African and American hairsheep breeds is the non-wanted, typically ARQ/ARQ less scrapie resistant prion genotype. The Dorper got better genes from its British ancestor, and the frequency of these became increased as a result of selection and today even ARR/ARR rams are not so rare.

The shedding wool is favored by the South-African standard, maybe for stressing the difference from the real hairsheep Somali ancestor. Due to the heterozygous polygenic background of this transitional phenotype, there are individual differences in all of the flocks, some too woolly and some too hairy sheep may be observed among the preferred shedding wool bearing ones. As a result of genotype/environment interaction, more wool may grow in winter on colder climates. The shedding in spring may be helped by fixed brushes, but in Switzerland the Dorpers are regularly shorn. The tail of the lambs is docked after the second tail vertebra.

Breeding of hair- and shedding wool sheep is continued at the Experimental Farm of the Department of Animal Breeding Sciences of the Debrecen University since the spring of 2005. At present Somali, Barbados Blackbelly, Dorper and different hybrid sheep are involved in our breeding programme. Forming a consortium of six, we got a State support for three years to improve our stock, both quantitatively and qualitatively by importing further breeding materials in the form of sheep, frozen semen and embryos. Visitors are welcome at our Experimental Farm, and our sheep are shown yearly on the Debrecen Farmer-Expo Show. We would like to call the breeders attention to this less known group of sheep and later to serve the interest of the breeding and production.

RESULTS AND DISSCUCIONS

We will introduce the Dorper, White Dorper and Barbados Blackbelly Sheep to Hungary and keep our small Somali flock for experimental purposes. Our first Dorpers were imported last year from

France, they had lambs this spring, and we will buy some more this summer from Switzerland. Our White Dorper stock will be established this autumn by lambs from Switzerland, embryos and semen from Canada. Our dewooling – aseasonalizing – tail shortening – dehorning programmes will be extended this autumn and continued by using imported White Dorper semen at the white (British Milkshoop, Lacaune and Merino) breeds and with Dorper rams in the case of Tsigaja ewes.

Selection of rams to the hairy and perfect shedder types will be continued in pedigree breeding, and such ones will be applied in the dewooling programmes, too. We would like to omit the docking of the short tail of the Dorper and White Dorper lambs. The Dorper and the White Dorper Sheep performed well in Switzerland and Canada maintaining their aseasonal reproduction.

These new breeds and their crossings provide valuable and interesting materials also for the basic and applied research and development. We got the permission of the Hungarian Ministry of Agriculture and Rural Development for breeding hair- and shedding wool sheep within the consortium, and others are also encouraged to join the programme. Following the change of market demands, a growing population of Dorper and White Dorper Sheep may be expected also in Hungary, among other positive effects, helping to improve the present catastrophic body conformation and carcass quality.

Our goal is breeding easy care polled sheep of good hooves, needing no docking shearing and dipping, having aseasonal estrus, high proportion of twins, easy lambing, high weaning rate, providing marketable products as lambs, mutton and hides, and able to adapt to the climate changes already started.

The Dorper and White Dorper breeds will have a leading role in our purebred and crossbreeding programmes.

REFERENCES

1. Nábrádi- A. -Jávor A. – Kukovics S. (2006): A juhtartás gazdasági kérdései In: Juhtenyésztés A-tól Z-ig Szerk: Jávor A – Kukovics S – Molnár Gy Mezőgazda Kiadó, Budapest 312 - 358 p.
2. Nábrádi A (1998): Az európai szintű juhtartás gazdasági feltételei és lehetőségei Magyarországon, AGRO-21 Füzetek 21. szám 76-86. p. Akaprint Kft. Budapest
3. Madai H.: A magyar juhágazat versenyképessége az EU-ban, valamint Románia és Bulgária viszonylatában, International Conference on Agricultural Economics, Rural Development and Informatics, AVA 3 Debrecen, 20-21st March, 2007. október 24.