

## WEANING RATES OF HAIRY, WOOLLY AND CROSSBRED LAMBS

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### Abstract

*Besides the woolly Prolific Merino and Tsigai breeds, we have hairy Barbados Blackbelly, Somali and shedding wool South-African Dorper sheep at the Experimental Farm of the University of Debrecen.*

*We evaluated the numbers of live-born and weaned lambs/ewes getting data from the year of 2008 and the first four months of 2009. Our comparison had been made between the two woolly and the group of hairy breeds as well as the woolly x hairy crossbreds. During the last one and a half year 280 Prolific Merino, 229 Tsigai, and 75 hairy and shedding wool lambs were born, from which 145 (51.78%) Prolific Merino, 185 Tsigai (80.08%) and 70 (93.33%) hair lambs were weaned. In 2009 we got 72 Prolific Merino x hairsheep and 49 Tsigai x hairsheep lambs with 81.94 and 91.84% weaning rates. The weaned lamb/ewe index was 1.03 at the Prolific Merino, 1.02 at the Tsigai, 1.64 at the Prolific Merino x hairsheep, 1.15 at the Tsigai x hairsheep and 1.21 at the hairsheep. We were not able to get breed-separated details within our hairsheep population, because of their low numbers. According to the literature data, and our own investigations more than 50% of Dorper and Barbados Blackbelly lambs are twins, while the Somali ewes have regularly single lambs. The purebred and hairy x hairy crossbred lambs have both outstanding viability.*

*The weaning rates of Prolific Merino and Tsigai lambs were lower as compared to the woolly x hairy crossbreds and those of the hairy genotypes. Woolly x hair, or shedding wool crossbred lambs showed better viability and weaning rate as a result of positive heterosis effects.*

*The weaned lamb/ewe index was the lowest at the fullbred Prolific Merinos, and their lambs are small, the weaning loss is huge, the great last of the ewes has probably negative effects on their comfort and animal welfare, lifetime and lifetime performance.*

**Keywords:** weaning rates, hair lambs

### INTRODUCTION

The weaning rate indicates the rate of live-born lambs are surviving to weaning (Kukovics 1996). The yearly number of weaned lambs/ewe is another practical index.

Besides the woolly Prolific Merino and Tsigai breeds, we have hairy Barbados Blackbelly, Somali and shedding wool South-African Dorper sheep at the Experimental Farm of the University of Debrecen (Kovács és mtsai 2006, 2008).

We evaluated the born and weaning rates of lambs pro ewes getting data from the year of 2008 and the first four months of 2009. Our comparison had been made between the two woolly and the group of hairy breeds (Kovács és mtsai 2008), as well as the woolly x hairy crossbreds. According to literature data hair sheep breeds have better resistance against various

types of illness (Mason 1980, Wildeus 1997, Schoenian 2008). More than fifty percentage of the lambs of Dorper (Lategan 2004) and Barbados Blackbelly ewes are twins, however the Somali ewes generally lamb singles (Mason 1980).

Based on an article of Wildeus (1997) the crossing of hair and wool sheep genotypes can decrease the loss of lambs and improve the weaning rate as a result of positive heterosis effects. We evaluated the weaned lamb/ewe index which is one of the main index of the reproductive performance.

#### **MATERIAL AND METHODS**

We had been doing our observations at the Experimental Farm, Faculty of Agriculture, Centre of Agricultural and Technical Sciences, University of Debrecen from the beginning of 2008 until the end of April, 2009. We examined the number of offsprings in Prolific Merino, Tsigai, Prolific Merino x hairsheep, Tsigai x hairsheep and the hairsheep genotypes. All the sheep were kept, fed and treated similarly by the same personell.

#### **RESULTS:**

280 Prolific Merino, 229 Tsigai, and 75 hairy and sheeding wool lambs were born, from which 145 (51.78%) Prolific Merino, 185 Tsigai (80.08%) and 70 (93.33%) hair lambs were weaned (*Table 1.*). The Prolific Merino x hairsheep and Tsigai x hairsheep lambs reached 81.94 and 91.84% weaning rates (*Table 1.*). The weaned lamb/ewe index was 1.03 at the Prolific Merino, 1.02 at the Tsigai, 1.64 at the Prolific Merino x hairsheep (*Pic. 1.*), 1.15 at the Tsigai x hairsheep (*Pic. 2.*) and 1.21 at the hairsheep (*Pic. 3-5.*), (*Fig. 1.*). These differences were significant with the exception of Tsigai x hairsheep genotype among the examined five groups. (*Table 2.*)

*Table 1.*

Weaning rates and the weaned lamb/ewe index of the various genotypes

Numbers and rates of the live-born and weaned lambs					
Genotypes	Prolific Merino	Tsigai	Prolific Merino x hairsheep	Tsigai x hairsheep	hairsheep
Born	280	229	72	49	75
Weaned	145	185	59	45	70
Weaning rates	51,78%	80,08%	81,94%	91,84%	93,33%
Rates of live-born and weaned lambs/ewe					
Genotypes	Prolific Merino	Tsigai	Prolific Merino x hairsheep	Tsigai x hairsheep	hairsheep
Born	1,96	1,22	2,00	1,25	1,29
Weaned lamb / ewe index	1,03	1,02	1,64	1,15	1,21

Table 2.

Statistical significance and standard error of weaning rates

Genotypes	P	SE
Prolific Merino	0.000	0.07
Tsigai	0.000	0.03
Prolific Merino x hairsheep	0.007	0.13
Tsigai x hairsheep	0.103	0.06
hairsheep	0.024	0.04

Weaned lamb/ewe index

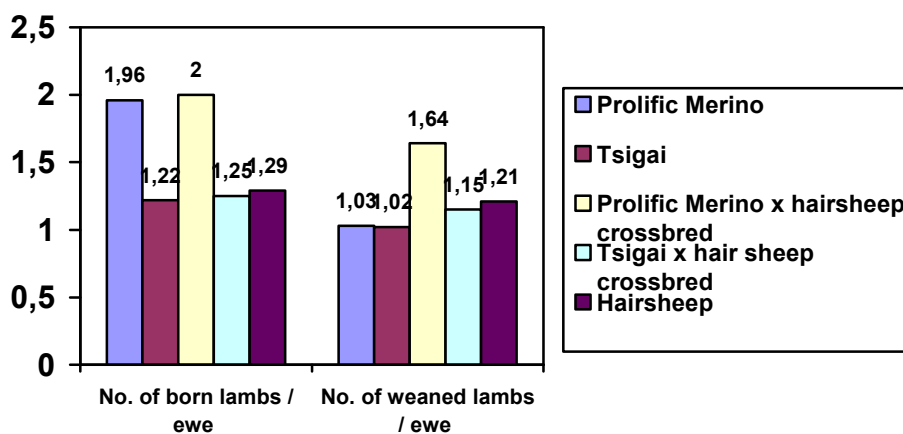


Fig. 1.: Born and weaned lamb/ewe indices



I. Egerszegi

Picture 1.: Prolific Merino ewe with her Barbados Blackbelly crossbred lambs



I. Egerszegi

Picture 2.: Tsigai ewe and her Barbados Blackbelly crossbred lambs



Picture 3.: Barbados Blackbelly ewes

J. Olah



Picture 4.: Somali sheep

I. Egerszegi



Picture 5.: Dorper and White Dorper sheep

I. Eriksson

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