

# Targhee

## NSIP Notebook

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### The 2006 Targhee National Genetic Evaluation

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#### Introduction

Genetic analysis of the 2005 Targhee lamb crop is now complete, and results are available for distribution to participating NSIP Targhee breeders.

#### The Data

Data for the 2005 lamb crop included records on 2,000 breeding ewes from 18 flocks: 14 from Montana and one each from Michigan, Minnesota, Oregon, and Wisconsin. Records were received for 2,951 live lambs produced by 69 Targhee rams. Following editing, valid records were received for 1,030 60-day weaning and/or preweaning weights, 1,982 120-d weaning weights, 524 yearling gains, 603 fleece weights, 530 fiber diameter (fleece grade) measurements, 528 staple lengths, and 1,497 litter sizes.

The entire NSIP Targhee across-flock database now contains records from 41 flocks with 15,390 60-day weaning and preweaning weights, 29,434 120-day weaning weights, 8,439 yearling gain records, 15,292 fleece weights, 11,535 fiber diameter measurements, 9,375 staple lengths, and 27,080 litter sizes. EPDs were calculated for a total of 47,665 animals, including 12,095 breeding ewes and 983 sires.

Means for reported traits are shown below. Weaning and preweaning weights (both 60- and 120-day) were adjusted to a single birth and rearing, adult dam, and ewe lamb basis. Yearling gains were not adjusted, but male and female lambs were placed in separate contemporary groups. Yearling fleece weights and staple lengths were adjusted to an age of 365 days. Fleece weights and staple lengths for older animals were adjusted to an adult animal and 365-day shearing interval basis. Fleece grades for yearlings did not receive any adjustments. Fleece grades for older animals were adjusted to an adult animal basis. For fleece traits, yearling and older animals, and males and females were placed in separate contemporary groups. Litter sizes were adjusted to an adult ewe basis.

<u>Trait</u>	<u>Mean</u>
60-day adjusted weaning/preweaning weight	55.2 lb
120-day adjusted weaning weight	88.4 lb
yearling gain (120 to 365 days)	.27 lb/day
fleece weight	8.6 lb
fiber diameter	22.0 microns
staple length	3.4 in
<u>litter size</u>	<u>1.74 lambs</u>

Final data on the 2005 Targhee lambs were received at the genetic evaluation center on May 9, 2006. EPDs were returned on June 23, for a turnaround time of 45 days.

## **EPD Reports**

This year's EPD report has essentially the same format as last year's report. Animals in the spreadsheet are listed in the following order: breeding ewes, yearling ewes, breeding rams, and yearling rams. The listing should contain all breeding animals listed on the preprinted data entry spreadsheet, any breeding animals that were added to inventory, and all surviving lambs from the current lamb crop. Animals that were culled or died will be identified; EPDs will be provided for these animals, but they will not appear on next year's spreadsheet.

## **The 2006 Targhee Sire Summary**

The 2006 NSIP Targhee Sire Summary is also now available for distribution to breeders and other interested parties. In order to be eligible for the Sire Summary, a ram must have prediction errors that do not exceed 1.6 for weaning weight, 1.1 for maternal milk, 3.1 for yearling weight, 0.2 for fleece weight, 0.3 for fiber diameter, or 0.085 for staple length. This year's sire summary contained EPDs for 312 rams. From these, 120 rams born after January 1, 1997 were listed in the main sire summary, representing a 7% increase over the number of rams listed in 2005.

## **Submitting Data for Next Year**

There will be no major changes in submitting data for next year. Each NSIP Targhee breeder will again receive a preprinted data entry spreadsheet for reporting data. All active animals from the flock, including breeding ewes, ewe lambs, breeding rams, and ram lambs should appear on that spreadsheet. Use of the preprinted spreadsheet to report data is again mandatory. Errors in animal identification (birth dates, tags, registration numbers, parents) can be corrected as needed and newly registered animals can have their registration numbers added. Newly purchased animals can be added at the bottom of the spreadsheet with identification information and performance records.

## **Genetic Trends in the Targhee Breed**

Patterns of change in EPDs since establishment of NSIP in 1986 are shown in Figure 1. These results document the traits that have received emphasis in participating Targhee flocks. Each point represents the average EPD of all animals born in each year since 1986. Consistent and significant increases have been observed for weaning weight and yearling weight. Maternal milk and percent lamb crop increased in a relatively consistent manner throughout the 1990's but appear to have plateaued in recent years, probably as a result of concern about the optimal levels of milk production and prolificacy in the breed. Fleece weights have increased consistently since 1998. Fiber diameter EPDs have exhibited small, but consistent declines over the same period, demonstrating the potential of EPDs to allow simultaneous improvement in these antagonistically correlated traits. The observed patterns of change in EPDs are consistent with the primary role of the Targhee as a dual-purpose breed, attempting to make balanced improvement in a number of economically important traits and to maintain optimal levels of milk production and reproduction under range conditions.

**Figure 1. Genetic Trends in Targhee EPDs**

