Betty Sampsel says she began using National Sheep Improvement Program data to cull the bottom end of her flock. Coming from several generations of sheep producers, Sampsel has grown the family flock in Stanford, Montana, into one of the top registered Targhee bands in the country. NSIP uses Estimated Breeding Values (EBVs) to predict genetic performance, and Sampsel uses the data to select for loin eye depth, as well as wool and maternal traits.

“It’s important to breed for balanced traits,” says Sampsel, “but to do that you have to know what is there. And the NSIP data helps identify the superior genetics.” NSIP’s EBVs are statistically created based on generations of progeny performance for various traits, and provide one of the most accurate tools available for making genetic selection based on traits of commercial importance.

Carolyn Green, of Green Ranch near Melville, Montana, says the data “Helps you to see what you can’t see.” Green grew up in Pasadena, California, and fell in love with farm life on a childhood visit to Iowa. When a Montana job resulted in marriage and settling down on a local ranch, she looked for a way to be useful to the operation, yet “stay out of the guys’ and cattle’s way.” The family sheep herd provided just what she needed.

“I guess you could say I was uninhibited by experience,” says Green. “I kept records from the very beginning. And bit-by-bit, I could see improvement. Then when NSIP came along, I was hooked.”

Green says her use of data was viewed as suspect in those early days. “Even my husband thought I was nuts at first. Then one day I caught him looking through the card catalogue for ewe information. It was just new and different.”

As purebred breeders, Green and Sampsel set an industry standard. At the Montana Ram Sale, their premier outlet, animals won’t hit the ring without performance data, including NSIP Expected Breeding Values and the Western Range Index—a formula that weighs and compiles the most economically relevant traits for range sheep operations.

To the novice the rows upon rows of numbers listed in the sale catalogue can be mind-boggling. Green says that’s where the commercial producer has to trust the purebred breeder—and look at their approach. “If you want to make improvement, whether it be in one or multiple traits, buy breeding stock from someone who is focused on making improvements. NSIP makes it easier to see and identify those animals that should produce quality offspring. It’s a great tool.”

“The purebred producer has the opportunity to add emphasis to certain characteristics in their breeding program,” says Lisa Surber, Research Scientist at Montana State University, “and that helps the commercial producer.”

Rodney Kott adds this is especially true of traits that are not the most heritable, or are more abstract. For nearly 30 years prior to his retirement, Kott was the driver of an aggressive

“NSIP data takes sheep production beyond utilizing pastures full of grass—to producing seedstock that result in a marketable product.”

—Carolyn Green, Green Ranch

Betty Sampsel, Hughes Newford Co.

Moving Forward in Montana
producer education program at Montana State, introducing commercial producers, as well as purebred breeders, to the benefits of performance data.

Many producers are now growing used to seeing data in sale catalogues, or have a footing in the beef industry where such data has become common. For them, performance trait measurements are essential to choosing the best animals to complement their operation. “Many younger producers are educated in an agriculture that depends on records and data,” says Green. “They rely on this sort of information.”

And that’s a good thing, according to Kott. “Anytime you measure, you get better. Take reproductive performance, a trait that is very important in the commercial sector where they’re selling pounds of lamb. If you look at the history, it took many, many years to make even marginal progress. Since producers started using NSIP data six or seven years ago, progress has been very good.”

Montana State’s program helps commercial producers improve on a variety of traits, including those measured at the Montana Wool Lab, headed by Surber.

“We’re a research-based wool testing lab,” explains Surber, who says NSIP complements and extends her efforts. “There’s a real need by commercial producers wanting to meet the needs of the garment industry. American industries, especially the knitwear industry, want to use American wool. Producers have to be able to provide the fiber size, length and quality they require. NSIP measures and provides EBVs for those traits, so culling decisions can be made accordingly.”

Targhee sheep are raised for meat as well as wool, and Sampsel, now in her second term on the American Lamb Board, says the progressive approach is needed if American lamb wants to stay competitive in a global market. “The industry should have good years ahead as protein needs increase around the world,” says Sampsel. “More people are trying, eating, buying lamb. But we have our work cut out for us competing with red meat. We have to produce better lamb.”

In addition, on the domestic front, as ethnic markets make their desires known, producers will find themselves targeting specific weights and traits to meet the requirements of direct marketing initiatives.

“You have to know what you’re selecting for,” says Kott. “NSIP allows producers to identify those traits and measure the progress. The data allows a higher level of accuracy in breeding selections.”

“And that’s what’s needed to make timely genetic flock improvement,” adds Surber. “Programs like NSIP will play a significant role in moving the American sheep industry forward on all fronts.”

by Terri Queck-Matzie for NSIP