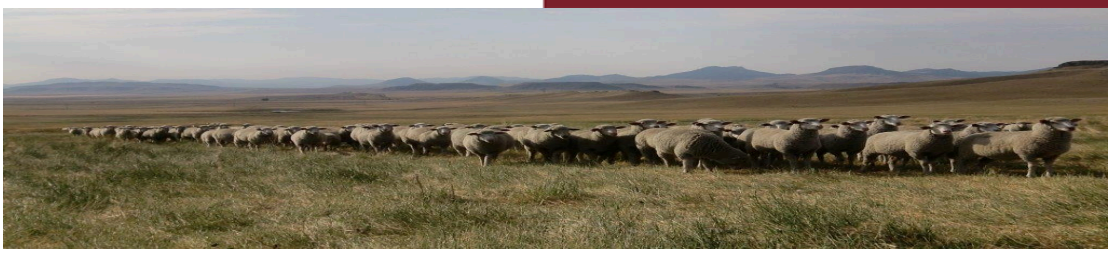
NSIP News- Spring 2015

NSIP
National Sheep Improvement PROGRAM

America's GENETIC FOUNDATION FOR A PROFITABLE Sheep INDUSTRY



What is an EBV Worth?

How Quantitative Genetic Selection Can Improve Your Bottom Line

When selecting a breeding ram, the focus of any shepherd should be how that ram will increase profitability to the operation. Typically, for commercial sheep producers, profitability is driven by pounds of lamb weaned per ewe exposed. Logically, the more pounds of lamb sold per ewe increases revenue and return per ewe. Therefore, rams should be selected that will increase this figure.

Several factors contribute to the pounds of lamb weaned per ewe calculation and it begins with the ewe flock. A profitable ewe flock is built on a foundation of sound maternal genetics. The two traits to start with for maternal genetics are the number of lambs born and number of lambs weaned per ewe. Obviously, the more lambs a ewe has the greater potential to wean more pounds of lamb. A ewe that weans two lambs weighing 70 pounds at brings in more revenue than a ewe that weans one, 85 pound lamb. With the current feeder lamb price of $200.00/cwt, that equates to an increase of $110 by having twins over a single. Nutrition and environment play a role in the ability of a ewe to raise her lambs but there is also a genetic component. Some ewes are genetically predisposed to have better maternal characteristics including greater ovulation rates, mothering ability and milk production.

To improve these characteristics, producers can use the number of lambs born (NLB) and number of lambs weaned (NLW) estimated breeding values (EBV) through the National Sheep Improvement Program (NSIP). The EBVs for NLB and NLW are expressed as a percentage.

For example, if a ram has an EBV for NLW of +5.0, he is expected to produce daughters that will have an increase of 5 more lambs per 100 ewes lambing.

Continued on page 3.

In This Issue:

NSIP News- Spring 2015

Tips for constructing sound contemporary groups:

Planning your fall breeding groups now can assure accurate genetic comparisons during lambing season

Spring is a busy time of year on the farm or ranch. Finishing lambing season, preparing hay equipment for first cutting, planting and spraying can make for long, busy days. But it is never too early to be thinking about next years lambing season. Most producers on NSIP know that contemporary groups are the backbone for genetic comparison but a little spring refreshing may help. Having lambs in the correct management group is imperative for accurate genetic analysis because it eliminates environmental differences between lambs, allowing differences in genetic make up to be teased out.

Follow these quick and easy steps when planning your breeding groups to get the best possible results returned from your data runs.

1. **Multiple sires per group**- lambs from different sires must compete head-to-head at the same time for genetic comparison
2. **Breed enough ewes to each ram**- each ram should sire at least 15 lambs per group. Anticipate conception and lambing rates to assure adequate number lambs.
3. **Keep ages similar**- in a contemporary group, there can be no more than 42 days difference in age between the youngest and oldest. Ideally, the age spread will be 35 days or less. More than one contemporary group can be used in each lambing period.
4. **Have each ram represented in multiple groups**- ideally, each ram will have lambs in multiple contemporary groups to maximize accuracy

Following these steps when planning breeding groups will help to assure the most accurate data is returned after lambing time and maintain the integrity of NSIP and its producers.

NSIP Contacts

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Upcoming Data Runs

May 14
May 31
June 14
June 30
July 14
July 30
August 13
August 31

NSIP News- Spring 2015

EBV (*cont'd from page 1)*

This may not sound like much of an increase but if a ram sires 100 daughters who each have .05 more lambs per lambing, that equates to 5 extra lambs available to sell. If each lamb brings in $140 (70 pound lamb at $200/cwt), then the producer makes an additional $700 off those 100 ewe lambs just because of the ram that was chosen to be their sire.

Another set of genetic traits that can increase profitability are the growth traits of weaning weight (WWT) and post weaning weight (PWWT). Some lambs have the genetic potential to grow faster than others from birth to weaning and from weaning to slaughter. This genetic potential can be measured and expressed as EBVs. The EBV for WWT and PWWT are expressed in kilograms of live weight at weaning and then after weaning between either 90-150 days or 150-305 days of age. For example, if a ram has a WWT EBV of +5.0, he is expected to be 5 kg (11 pounds) heavier than the average. If that ram then sires 100 lambs, each lamb contains roughly half of the genes of that sire. We would then expect each one of these lambs to be 2.5 kg (5.5 pounds) heavier than average at weaning. That equates to an additional 550 pounds or $1100 just based on the genetics of the ram used!
With this information, it is logical for a commercial producer to breed their top 30% of their ewe flock to maternal rams that are selected for positive NLB and NLW EBVs to produce prolific replacement females. The remaining 70% of the flock could be bred to terminal sires that are selected for positive WWT and PWWT EBVs to have faster growing lambs that will reach a saleable weight sooner. In subsequent years, by placing selection pressure on NLB and NLW, the producer has a flock of highly prolific ewes that produce ample milk to raise multiple lambs and those lambs she has will grow quickly and reach market weight at a faster rate. If selling on a value based contract system, EBVs for carcass characteristics can also be selected for, further enhancing the value of genetic selection.

The National Sheep Improvement Program is the genetic foundation for a profitable U.S. sheep industry. Without genetic data from NSIP, ram selection is a gamble. The ram you pick may or may not increase the genetic potential of your flock. Production data such as body weights and carcass scans are useful but are very limited in value; they only apply to that individual sheep in that particular production system and do not indicate the genetic potential of the animal. When selecting rams for the coming fall breeding season, you can take the guesswork out of ram selection by asking for the genetic analysis from NSIP to make to most informed decision possible.

Calendar of Events:

May 23-24 Great Lakes Fiber Show--Wooster, OH
May 23-24 Massachusetts Sheep and Woolcraft Fair--Cummington, MA
June 13-14 Iowa Sheep and Wool Festival—Colfax, IA
July 24-25 Small Ruminant Conference—Eufaula, AL
July 25—Center of the Nation Ram Sale—Spencer, IA

NSIP News- Spring 2015

Have a question about your specific breed? Feel free to contact the program director or a breed or breed group representative for more information

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Pedigree Master Tip:

Having troubles with your Pedigree Master data entry? There may be a new version of the software that needs to be downloaded. Visit http://kidplan.mla.com.au/pedigreemaster/ to download the most recent version before you enter your data . Don't forget about the Pedigree Master Manual available on the nsip.org website for more information and useful tips!