Use Flock Records to Set Goals and Make Selection Decisions

by Melanie Barkley, Extension Educator
Penn State University

Where are you going? In the sheep business, many of us might be headed to the barn, headed to a sale, or heading out to the pastures to check on sheep. Yes, that tells where we are going at that point in time, but where are you headed in the future? Do you have any production goals for your flock?

Developing goals starts with a good set of records so that you can determine where you are at right now. You have to know where you are at in terms of production levels in order to set your goals. Production records can be used to look at a variety of traits including lambing and weaning percentages, weaning weights, post weaning weights and even carcass data. Progressive producers may even have records on the average ewe age or even the average weaning weight across the flock. So, where do you start?

The National Sheep Improvement Program, NSIP, produced a Ram Buying Guide in 2015 that has some excellent examples of performance traits. Again, the key is knowing where you are at and then forming goals for where you want to go. Let's consider an example of Dee Dee's Dorsets.

Dee Dee bred 50 ewes last fall. She did a fair job of flushing the ewes, but was running short of time and cash so she just borrowed her neighbor's ram so that she would have lambs born in March. She knew very little about this ram's pedigree or performance background. But, she's learning about how to improve her flock and so took the time to analyze some of her records. Here is what she has so far:

Production Trait	Current Production	Goal	Priority	Percentile/EBV
Lambing rate (number lambs born per ewe)	158%	200%		
Weaning rate (number lambs weaned per ewe)	145%	190%		
Average Weaning weight	64 lbs.	75 lbs.		
Average loin eye area	No clue, but they look pretty small			
Average back fat thickness				
Average ewe fleece weight				
Average fiber diameter				
Parasite resistance				

Flock Improvement Worksheet from NSIP Ram Buying Guide

Dee Dee took the Penn State Extension Sheep Home Study Course a couple years ago and was encouraged to strive for twins that weigh at least 45 to 60 lbs. or more by 60 days of age. Dee Dee notes that not only is she behind in the lambing percentage, but she feels she is losing too many lambs between birth and weaning. She is happy that her lambs weigh more than 60 lbs., but she feels she could do better. She sets goals for both of these traits and then needs to consider how to reach those goals. Her first chore will be to select a higher quality ram to breed to her ewes this fall. How will she identify the superior traits in a ram so that she is more confident that these traits will carry over to her replacement ewe lambs?

Dee Dee decides to look for a ram with performance data. So, she locates a producer within a few hours drive who keeps performance records, and also has EBV data from NSIP. She knows that her buyers prefer heavily muscled lambs and that her income depends greatly on both the number of lambs she has to sell as well as their weight. (In other words, Dee Dee is very interested in both terminal and maternal characteristics.) Here is some of the data that the ram owner has on the rams he has for sale:

Ram ID	Birth/Weaning Type	Weaning Weight	Loin Eye Area	Back fat thickness
1	Tw/Tw	75	2.5	.1
2	Tw/S	77	2.4	.2
3	Tr/Tr	68	2.2	.1
4	S/S	75	2.3	.2

Hmm, Dee Dee thinks all the rams look good, but then she isn't quite sure how to evaluate the data. She would prefer a ram born as a twin, but when she questions the seller he tells her that ram 4 was produced by a yearling ewe. To make this data more clear, Dee Dee needs to either adjust the weaning weights or she needs EBV data. (For information on how to adjust weaning weights, check out the Sheep Production Handbook produced by the American Sheep Industry Association.) Luckily, Dee Dee has some EBV data to look at:

Ram ID	Birth Weight EBV	Weaning Weight EBV	Eye Muscle Depth	Fat Thickness	Number Lambs Born
1	.12	2.70	.9	-2.9	-.8
2	-.20	.97	1.73	-3.17	.15
3	-.02	4.1	1.1	-2/29	1.4
4	.18	3.95	2.3	.2	4.6

Now, Dee Dee is better able to make her selection. She chooses ram 4 for several reasons. She would expect his lambs to have higher weaning weights and have more muscle. The fat thickness may be a little higher than she would prefer, but she likes to run her ewes on grass so she feels this could help maintain good body condition for this ram's daughters. And, the higher number lambs born could help increase lambing percentages from his daughters. Dee Dee also realizes that she could be wrong in her assumptions because she doesn't currently have data on her ewes. But, she has more confidence in selecting a ram with performance data as compared to choosing a ram with no data at all. And, this gives her a good start to developing EBV data for her flock.

For more information about NSIP, check out their website at http://nsip.org/. Even if you don't enroll your flock, remember that you can still utilize performance data by purchasing rams and replacements ewes that have EBV data. Another bonus is that NSIP waives the enrollment fee for first time participants. So, take the guesswork out of your selection decisions and choose sheep with data!