

## **Selection to Meet Production Goals**

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When selecting replacements you need to start by looking at your current situation and goals, both long and short term. Start by taking a long hard look at where you are today. This means looking at both production and economic information. Study this information and decide how to progress toward existing goals as well as setting new ones.

The first step is to have good records. You should be recording birth information including birth type, parentage, and weight. You also should take kid weights at 60d and 90 days to weaning and to measure progress to weaning. Collect yearling weights on all animals that are kept to a year of age and market weight on those kids sold between weaning and yearling weight.

You should also record weights and body condition on your breeding animals at least once a year. This information will give you the necessary tools to make informed selection decisions and meet performance goals for your flock.

When we start to select for specific traits, we need to consider its heritability, correlations with other traits, and economic value. Heritability is important because it represents the amount of what we see in a trait that is controlled by genetics rather than environment. Traits with high heritability, will see greater improvement through selection. Reproductive traits tend to have low heritability while growth traits tend to be moderate to high heritability. Carcass traits generally have moderate heritability.

Correlations tell us how selection for one trait may affect other traits. Unfortunately, not all correlations are beneficial. A correlation can be positive or negative, and both can be beneficial. Positive correlations indicate that as one measured trait increases or decreases, the other also increases or decreases. A negative correlation indicates that as one trait increases the other will decrease. Many of these correlations have not been studied in goats. However, we know that growth traits are positively correlated. Because of this, if we select the heavier kids at weaning, they will generally be heavier at a year of age. Heavier birth weights are positively correlated with kidding difficulty, so we need to make sure we don't go to extremes on growth. We need to place more emphasis on traits that have a higher economic value to our operation. The economic value of a specific trait will depend on your operation and your market.

In general we need to be selecting does that will produce and raise twins over those with singles. We need to look for unassisted births but faster and more efficient growth after weaning. Look at the dam and her past performance to help determine the kidding difficulty and milking potential of the young doe. In

billies/bucks we need to select those born as a twin and whose dam raised twins. They need to be thick and heavily muscled as well as having an above- average growth rate from birth through weaning and on to yearling age.

When selecting, we should also consider health traits. There are animals that have better feet and legs than others. This is not only structural correctness but, it seems some goats have less foot scold and have a reduced need for foot trimming. There are also some animals that may not need deworming as often in our program, so we need to look for these individuals and start selecting for these traits in our flocks.