## HEALTH & MANAGEMENT



## WHAT LEVEL OF PERFORMANCE SHOULD YOU EXPECT FROM YOUR MEAT GOATS?

by Dr. Ken Andries, Kentucky State University College of Agriculture, Communities, and the Environment

Every livestock producer needs to be selecting for performance in their herds, but what is a realistic performance goals for meat goats? There is a long history of performance data collection and use in other livestock species. The data is generally collected and controlled by breed associations and national industry groups, but are lacking in the meat goats.

In meat goat production, there has not been a national performance testing program and the breed associations have not adapted performance data collection as seen in beef cattle. As a result, there is little information on average meat goat performance available to producers.

Kentucky State University has offered an on-farm performance testing program for 15 years now. In this program, producers collect birth to weaning performance data in their herd. Producers submit these data for calculations of adjusted weights and performance summaries. Through this process, we developed a large, birth to weaning, performance dataset for meat goats for birth to weaning performance. The data include information on average litter size at birth and weaning; and dam weight at weaning. The dataset now contains over 15,000 kidding records from over 100 herds in 10 states and Canada. The data also has both purebred and commercial herds including Boer, Kiko, Savana, Spanish breeds, and their crosses.

Average performance data for 5 years, 2014 to 2019, and the total combined dataset averages are presented in the tables below. **Table** 1 shows the average birth to weaning performances for kids. **Table 2** shows dam performance data including average body weight at weaning, and litter size at birth and weaning.

These averages are good starting points when thinking about goal setting and expectations. Your goal should be to have above average performance from your kids. Therefore, when setting

|  | Table 1. Kid Performance From Birth to Weaning <sup>a</sup> |   |                                      |                                |                     |                     |                |                     |                                  |                             |                            |
|--|---|---|--------------------------------------|--------------------------------|---------------------|---------------------|----------------|---------------------|----------------------------------|-----------------------------|----------------------------|
|  | Year  |   | Number                               | Number BWT                     |                     | WNWT                |                | ADG                 | 90 d wt.                         | ADJ<br>WNWT                 |                            |
|  | 2014  |   | 961                                  | 7.4                            |                     | 37.05               |                | 0.34                | 37.46                            | 42.29                       |                            |
| 2015   |   | 015                                     | 2,215                                | 7.5                            | 7.5                 |                     | 42.17          |                     | 38.28                            | 42.78                       |                            |
| 2016   |   | 016                                     | 601                                  | 7.1                            | 7.1                 |                     | 40.39          |                     | 39.93                            | 45.58                       |                            |
| 2017   |   | 017                                     | 473                                  | 7.63                           | 7.63                |                     | 45.29          |                     | 44.66                            | 50.35                       |                            |
| 2018   |   | 018                                     | 900                                  | 0 7.76                         |                     | 43.49               |                | 0.39                | 42.73                            | 48.77                       |                            |
| 2019   |   | 019                                     | 938                                  | 7.74                           | 7.74                |                     | 0.41           |                     | 44.48                            | 50.65                       |                            |
| Cor  |   | ombined                                 | 15,055                               | 7.54                           | 7.54                |                     | 0.35           |                     | 39.18                            | 44.41                       |                            |
| <sup>a</sup> All weights are in pounds, BWT= Birth weight, WNWT – Weaning Weight, ADG –<br>Average daily Gain, ADJ WNWT = Adjusted weaning weight. |   |   |                                      |                                |                     |                     |                |                     |                                  |                             |                            |
| Table 2.   | . Dam 1   | Performa                                | nce Dataª                            |                                |                     |                     |                |                     |                                  |                             |                            |
| Year   | Numbe   | er <b># Bor</b>                         | n BWT                                | # Wean                         | <sup>t</sup> Wean W |                     | 90 d wt.       |                     | ADJ WNWT                         | Dam wt.                     | Efficiency<br>Ratio        |
| 2014   | 751   | 1.93                                    | 13.9                                 | 1.66                           | .66 63              |                     | 65.6           |                     | 73.88                            | 104.34                      | 61.47                      |
| 2015   | 1,202   | 1.81                                    | 13.0                                 | 1.69                           | .69 70              |                     | 63.88          |                     | 71.40                            | 106.97                      | 71.61                      |
| 2016   | 252   | 1.87                                    | 13.6                                 | 1.66                           | 1.66 70             |                     | 70.71          |                     | 80.7                             | 106.44                      | 68.73                      |
| 2017   | 208   | 1.78                                    | 13.2                                 | 1.64                           | 1.64 71             |                     | 71.68          |                     | 79.85                            | 112.16                      | 65.00                      |
| 2018   | 445   | 1.98                                    | 14.95                                | 1.81                           | .81 77              |                     | 75.45          |                     | 86.06                            | 112.33                      | 68.36                      |
| 2019   | 490   | 1.94                                    | 14.5                                 | 1.76                           | .76 76              |                     | 77.82          |                     | 88.33                            | 108.33                      | 67.43                      |
| Comb.  | 8,285   | 1.87                                    | 13.8                                 | 1.61                           | 1 66                |                     | 66.05          |                     | 74.78                            | 104.35                      | 63.84                      |
| <sup>a</sup> All weig<br>weight. B<br>weaned (   | ghts are i<br>Birth thro<br>WNWT                            | in pounds,<br>ough weani<br>7/Dam wt. * | BWT = Birtl<br>ng weights a<br>100). | h weight, W<br>are total litte | /NW<br>er we        | T = We<br>eights. 1 | anin<br>Effici | g Weigh<br>ency rat | it, ADJ WNW'<br>io is the % of c | T = Adjusted<br>loe body we | l weaning<br>ight that was |

goals, we recommend using the overall combined data as a starting point. For instance, litter size is important for profitability in meat goats, but milking and mothering ability have to match the litter size as well. Measurements on these milking ability and others, such as structural correctness and temperament, are not captured in the dataset. Be aware of these limitations when making culling and selection decisions in your herd.

Sire data and proper sire selection critical to advancing progeny is performance in your herd. You need to look for sires that have performance that will move your herd in the direction you desire. By using good data to make selection and culling decisions on your herd, you can improve performance within your management. Knowing the performance of your herd, obtain data on sires you are considering and compare them to insure they will move your herd in the right direction. But be aware that individual performance is not easy to directly compare between herds. This is due to management differences between the herds. However, any data is better than no data.

I believe a commercial meat goat herd in Kentucky and surrounding states can reach a reasonable production level. A litter size at birth of between 1.9 and 2.0 are possible and we can wean 1.7 to 1.9 kids per doe. We should also be able to have actual weaning weights between 40 and 60 pounds at 90 days without excessive feeding cost, if the management is correct. While this is at the upper end or slightly above the averages, they are well within reason for our environment without excessive feeding. This is where we believe producers need to be profitable based on budgets we have worked with.

I hope everyone's kidding and weaning went well and I hope you collected data that can help you make decisions in the coming breeding season. We can make progress through the use of the tools we have, and performance data is one that is critical to long term success in meat goat production.

## Dr. Kenneth M. Andries, Ph.D.

Animal Science Specialist and Assistant Professor Kentucky State University College of Agriculture, Food Science, and Sustainable Systems - Dr. Andries was raised on a livestock and crop farm in Louisiana. He did his graduate work at Louisiana and Kansas State Universities majoring in Animal genetics. Dr. Andries has worked in extension sense graduation from Kansas State University in 1996. He is currently the Animal Science Specialist and Assistant Professor at Kentucky State University where he is responsible small ruminant extension programming, goat production research, and teaching undergraduate classes.