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Body Weight Sampling Procedures

Monitoring of growth performance is an important element in the proper management of Hybrid breeding stock. Sample body weights can be compared to Hybrid standards to evaluate flock progress. Appropriate changes in management and feeding programs can then be made to maintain proper growth patterns. Frequent body weight sampling and quick reaction with appropriate management decisions are critical to the success of this practice. However, the key to success is using the proper method of body weight sampling in order to obtain a representative average weight for the entire flock. The following method is recommended to ensure that body weight samples are representative of actual flock values:

- Walk through the barn to encourage mixing of the flock prior to sampling. Pay special attention to move birds away from the walls and corners of the building.
- Use a weigh scale that is accurate to at least one-half pound (0.2 kg). More accurate measures will be obtained with a more sensitive scale.
- Sample birds at random from several locations in the barn.
- When possible, use a small catch pen to corral birds and record weights of all birds in the pen to ensure random sampling.
- Weigh at least 1% of the flock or a minimum of 50 birds.

A histogram can then be plotted and the sample average can be computed from these data. The sample average should then be compared to Hybrid body weight feeding schedules to keep the flock on target. For example, if the flock is above standard

weight, the feeding schedule could be accelerated to maintain standard body weight. Likewise, if the flock is below standard, feed changes can be delayed to allow for some weight gain to be made up. Growth can be modified in this manner to maintain a desirable growth pattern and to produce a fit breeder with proper reproductive potential.

Many producers use this information to calculate the coefficient of uniformity.

A good rule of thumb is that more than 90% of the birds should have weights within approximately 15% of the average weight of the flock.

The coefficient of variation can also be calculated by dividing the standard deviation for the sample (easily computed by most scientific calculators) by the average flock body weight. This measure provides a convenient method for the evaluation of uniformity within a flock and for the comparison of the uniformity of flocks reared under different conditions. The coefficient of variation for an average flock should be approximately 8%. Higher values indicate greater flock variation.

The information accumulated can also become a valuable part of the recorded flock history which can be used to evaluate the effect of early growth on reproduction, evaluate management practices, and to make more accurate projections for future flocks under individual environmental conditions and production systems. All these factors can lead to more effective management of Hybrid breeding stock.