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## **Free Choice: Letting Deer Manage Their Own Diet**

**by Donald Kahl**

As summer fades to autumn, deer experience a change in nutritional state. Bucks have finished antler growth and are now left with the task of gaining weight in preparation for the upcoming rut. Being largely weaned from mother's milk and becoming fully functional ruminants, fawns must quickly adapt to their nutritional environment to continue to meet protein and energy demands for growth. Does must recover from the demands of gestation and lactation, while also adding weight to prepare for the upcoming breeding season and winter.

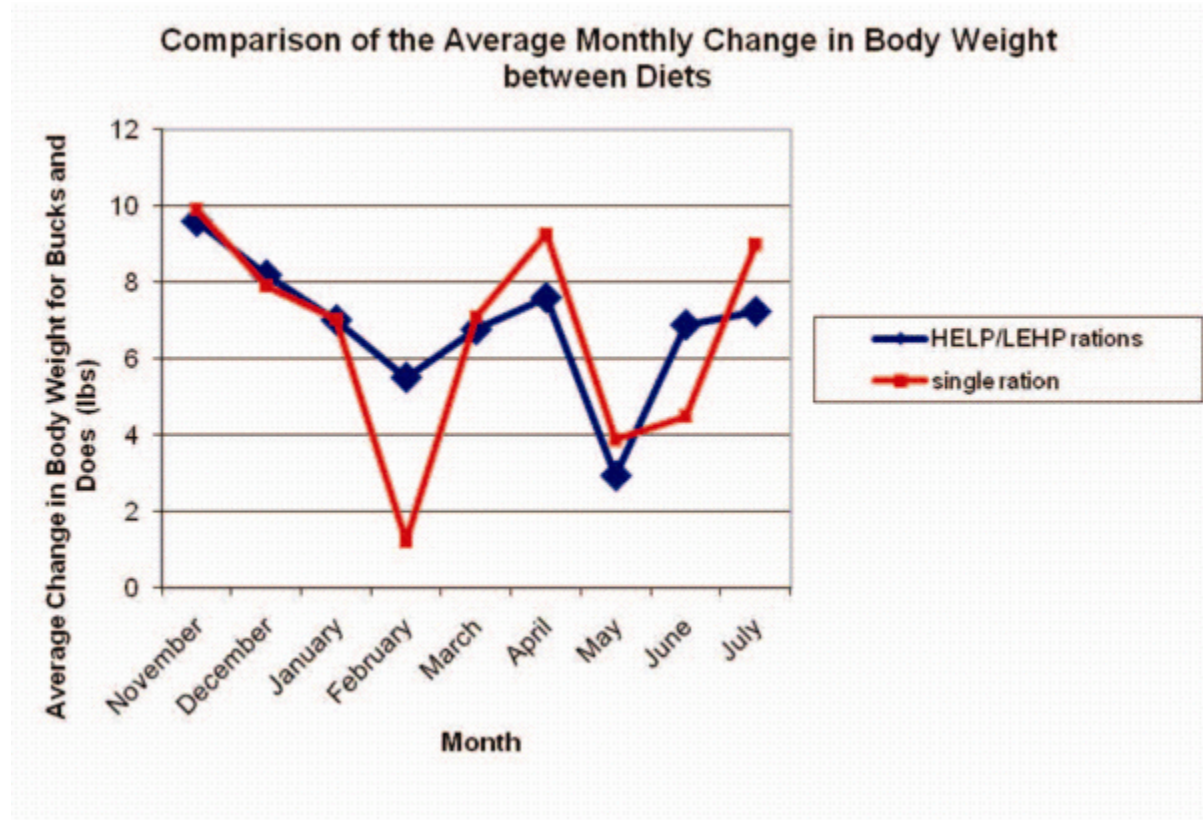
Forage composition, quality, and quantity also change with the changing season. These changes can be magnified with drought, which is a frequent concern across much of the southern United States. With these changes in nutritional demands and forage, three important facts are apparent: 1) nutrient requirements change seasonally; 2) at any given time, nutrient requirements differ between individuals in the herd; and 3) deer diets must change with the seasonal fluctuations of forage.

Supplemental feeding has become a popular tool to address environmental variability and poor range conditions. Supplemental feeds are formulated using nutrient recommendations based on the average deer, ignoring seasonal changes in requirements as well as the needs of individual deer. Thus, formulations that only consider an average requirement may not adequately supplement all individuals, preventing some deer from obtaining a proper diet and expressing their full potential.

An alternative supplemental feeding approach is to allow each deer to select from supplements varying in protein and energy. Scientists at the CKWRI are conducting a diet selection study, investigating how white-tailed deer fawns manage their requirements when offered multiple feeds that differ in protein and energy content. A high energy/low protein (HELP) ration and a low energy/high protein (LEHP) ration are being offered to captive fawns, with consumption and growth rates being monitored throughout their first year of growth after weaning.

Preliminary results indicate deer that are allowed to mix their own diet exhibit similar growth as compared to deer fed a single, nutritionally balanced ration. Bucks and does select similar diets, with the HELP ration consistently making up the majority of their diet. On average, deer select a

diet of 12% protein, which is lower than the 15-20% protein in most pelleted feeds. A better understanding of deer diet selection patterns and nutrient requirements may lead to changes in nutrient recommendations, supplemental feeding programs, and habitat management practices.



**About the Author:** Donald Kahl is currently a graduate student working under Dr. David Hewitt at The Caesar Kleberg Wildlife Research Institute. For more information, follow the link below.

<http://ckwri.tamuk.edu/research-programs/deer-research-program/personnel/donald-c-kahl-jr/>