

## **Effect of Winter Gestation Energy Level on Sow Productivity**

[Doug Landblom](#), Animal Scientist, Dickinson Research Extension Center, Dickinson ND

William Slanger, Interim Dean, NDSU Graduate School, Fargo ND

[W.W. "Chip" Poland](#), Area Livestock Specialist, Dickinson Research Extension Center, Dickinson ND

[Kris Ringwall](#), Center Director, Dickinson Research Extension Center, Dickinson ND

### **General Objectives**

- To determine gestation energy levels that will optimize sow farrowing body condition, minimize lactation weight loss and improve sow rebreeding performance among sows gestated in outdoor facilities and managed in an All In/All Out management system.
- To document wintering economics for each tested energy level.

### **Brief Description**

High-producing, genetically lean sows farrow and nurse more pigs, produce more milk and, consequently, have higher nutritional requirements than less prolific sows. Assessing energy requirements for lactation is difficult due to the confounding effects of one reproductive cycle on another.

Energy consumption during gestation affects voluntary energy consumption during lactation and, ultimately, the rebreeding period following lactation. Maintaining a proper gestational energy balance that keeps sows in desirable body condition is essential. Overfeeding energy during gestation causes sows to have reduced appetites during lactation resulting in

weight loss. Insufficient energy during gestation does not prepare sows adequately for lactation.

Sows that enter the farrowing room thin are unable to nurse litters larger than seven pigs and gain weight simultaneously. Inability of thin sows to gain weight during lactation results in extended weaning to rebreeding intervals (non-productive sow days).

Encompassing four winters, Pig Improvement Company (PIC) Camborough 15 sows are being managed in an All In/All Out management

system. Each winter, two farrowing groups previously assigned to one of three gestation energy levels [Low (6681kcal/ME/day), Medium (7868 kcal/ME/Day), and High (8682 kcal/ME/Day)], are being gestated, farrowed and re-bred in lifetime herd assignments. When culled for management reasons, sows are being replaced with primiparous gilts of similar PIC genetic background.

## Status

At this writing, we are preparing to farrow our fourth wintering of sow groups. When data from this fourth wintering has been added to the database, farrowing and reproductive performance will be analyzed statistically to determine whether a fifth wintering will be required.

---

[Back to 1998 Research Reports Table of Contents](#)

[Back to Research Reports](#)

[Back to Dickinson Research Extension Center \(http://www.ag.ndsu.nodak.edu/dickinso/\)](http://www.ag.ndsu.nodak.edu/dickinso/)

[Email: drec@ndsuent.nodak.edu](mailto:drec@ndsuent.nodak.edu)

---