

Public Abstract

First Name:Rodney

Middle Name:Buddy

Last Name:Hinson

Adviser's First Name:Gary

Adviser's Last Name:Allee

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:FS 2009

Department:Animal Sciences

Degree:PhD

Title:Net Energy Content of Soybean Meal and Glycerol for Growing and Finishing Pigs

Net energy systems are widely accepted and utilized throughout Europe. The main net energy systems used are the French INRA, the Dutch CVB and the Danish PPE. These energy systems are not widely accepted in the U.S. due to potential over estimation of the energy content of fat and fiber components of feedstuffs and differences in feeding practices, pig environment, and genetics. Therefore, our objective was to determine the operational net energy for maintenance requirement and the net energy content of soybean meal and glycerol in conditions that as closely as possible mimicked U.S. production systems. The average operational net energy for maintenance for three separate locations and two stages of growth was determined to be 156 kcal/kg BW<sup>0.60</sup>. The net energy content of commercial and low-oligosaccharide soybean meal was determined to be 1,634 and 1,990 kcal/kg, respectively, for growing pigs and 2,150 and 2,554 kcal/kg, respectively, for finishing pigs. The net energy for glycerol was determined to be 2,740 kcal/kg for growing pigs and 3,461 kcal/kg for finishing pigs.