WRINKLE
A NEW UNDERSTANDING IN NUTRITION
DakotaGold
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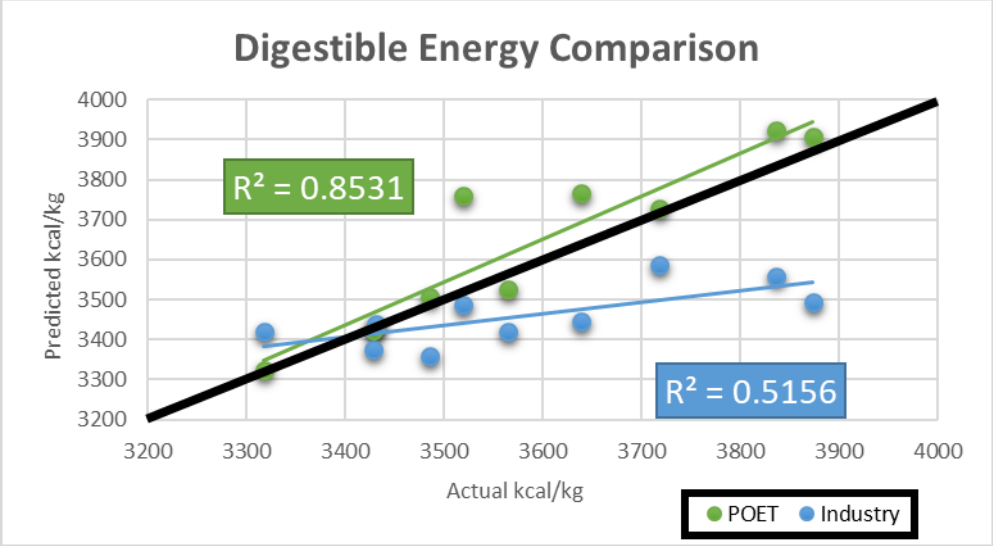
Swine Predictive Energy Equation for Dakota Gold - A New Approach

In order to formulate a diet which supports optimal animal performance, nutritionists need to have an accurate estimate of energy. Unfortunately, some ingredients like DDGS can have significant variability. As a result, it becomes very difficult to accurately predict the energy content. Researchers have developed predictive energy equations to help with this characterization, but these equations often fail to provide an accurate estimate.

NEW APPROACH

To address this deficiency, we need to use a different approach. Previous research has tried to develop equations for use in DDGS from multipe different ethanol producers. We know that the ethanol production process can significantly affect the nutritional of the DDGS. As a result, unique equations based on a specific production process may provide more value.

To demonstrate this approach, we collected data from research which measured energy values of Dakota Gold for pigs. This data came from multiple studies in peer-reviewed research papers from several different universities. We then used a regression approach to create a unique predictive energy equation for Dakota Gold. The following figure shows how this compares with an equation commonly used in the industry.



Black line denotes equal value between predicted and actual.

SUMMARY

- POET's predictive energy equation:
  Digestible Energy = 322.75 + (83.85 x Crude Protein) + (158.91 x fat) - (26.66 x ADF)
  Metabolizable Energy = 886.06 + (28.07 x Crude Protein) + (15.15 x fat) + (34.06 x Hemicellulose)
- This equation applies only to Dakota Gold DDGS. The equation captures the unique digestibility characteristics of Dakota Gold.

The POET equation looks at multiple nutrients such as protein, fiber, and fat. Many of the currently used industry predictive energy equations only use fat. This shows how multiple nutrients affect the energy value of DDGS and that only using fat does a very poor job of accurately predicting energy value for the pig.

*These results are not a guarantee of nutritional value, as laboratory results are influenced by factors beyond the control of POET Nutrition.