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Benefits of Soon Soon High Efficiency Dehulled Full Fat Soybean Meal In Lactating Sow

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Introduction

The benefits of dehulled full fat soybean meal in egg layers and commercial broilers are well documented (Neoh & Rhagavan, 2003; Neoh & Raghavan, 2004; Neoh & Ng, 2006). However, very little work is done on full fat soybean meal in pigs. The few that are cited are works done using undehulled full fat soybean meal, as such, the real value of dehulled full fat soybean meal is still waiting to be thoroughly investigated.

Consumers in Malaysia prefer lean pork and because of this, producers tend to avoid feed ingredients with high fat or oil content. It is generally perceived that incorporation of these ingredients will result in to fatty carcasses. Because of this, full fat soybean meal is not widely used in pig diets, particularly during the growing and finishing phases.

As performance of pig breeders improves, demand for good quality diets also increases in order to sustain the level of milk production required to meet the demand of bigger litter size. In the hot and humid tropics, it is very difficulty to alleviate the problem of low feed intake of lactating sows without resorting to offering diets with high available dietary energy. At present, vegetable oils like crude palm oil and animal fat like lard and recycled oil from kitchen of fast food are the only source of feed energy. Beside these oil or fat, which quality is variable depending on the level of free fatty acids or trans fatty acids present, there are very few alternative feed ingredients that contain high available energy. One exception is full fat soybean meal, in particular, Soon Soon High Efficiency Dehulled Full Fat Soybean Meal.

Methods

The study was conducted in a commercial pig farm in Tasik Gelugor . Penang. Because this is a study involving farm records, the entire sow population, which numbered more than six hundred, were used. The sows were typical crossbreeds of Landrace and Large White or Landrace and Duroc crosses used by Malaysian pig farmers.

This is a typical Malaysian pig farm where lactating sows are placed in farrowing crates on concrete floor slated at the hind quarter. The barns are open-sided houses.

The study was divided into 3 phases. First phase was when the farm did not use High Efficiency Dehulled Full Fat Soybean Meal (HEDFFSBM); second phase when HEDFFSBM was used at 5% in lactation diets and the third phase 8%. Each phase lasted for 3 months.

All data pertaining to production performance were record and analyzed using PigChamp.

Results and Discussion

BREEDING PERFORMANCE	MAR 06 to MAY 06 0% HEDFFSBM	JUN 06 to AUG 06 5% HEDFFSBM	SEP 06 to NOV 06 8% HEDFFSBM
Percent repeat service	18.9	17.6	11.1
Ave non-productive sow days	47.1	48.5	29.9
Average weaning weight	6	6.4	6.5
Adjusted 21-day litter weight	53.3	55.3	57.3
Pig weaned per female per year	19.9	21.5	20.6
Litters per female per year	2.3	2.1	2.5

Incorporation of HEDFFSBM improved successful mating result. Percent of repeat service went down from 18.9% to 17.6% and 11.1% for 5%HEDFFSBM and 8%, respectively. This resulted in average non-productive days being shortened to 29.9days for 8% HEDFFSBM from 47.1days when HEDFFSBM was not used, suggesting that the general health condition of breeding sows was better when fed diets using HEDFFSBM.

Shorter non-productive sow days was translated to more litters per sow per year; 2.3, 2.1 and 2.5 litters for 0%, 5% and 8% inclusion rates, respectively; an increase of 0.2 litters per sow per year for sows fed diets with 8% HEDFFSBM. In the present farm, there were at least 600 sows at any one time. At an average of 9.2 piglets weaned per sow per year for 8% HEDFFSBM inclusion, additional 1,104 (600 x 9.2 x 0.2) piglets can be weaned per year without additional cost of feeding and breeding animals.

The practice in this farm was to wean piglets at the age of 24 to 28 days or as soon as piglets attained body weight of 6kg or more. Average weaning weight recorded was 6, 6.4 and 6.5kg for HEDFFSBM inclusion rate of 0, 5 and 8%, respectively. This, when adjusted to 21-day litter weight, meant an improvement of 3.75% for 5% HEDFFSBM inclusion and 7.5% improvement at 8% inclusion. Improvement in litter weaned weight meant that piglets were getting more nourishment. In this case, more milk which came from sows suckling them.

Conclusions

There is benefit to be gained when lactating sows are fed diets containing HEDFFSBM. Sows can maintain better milking ability at similar level of feed intake of diets compared to when HEDFFSBM was not used. The record showed that higher milk yield was possible without negatively affect the sow body conditions, meaning there is no needs for the sows to use up body reserves. The improvement can be realized by improving the quality of lactating diets using HEDFFSBM. By doing so, sow body conditions can be maintained even though more piglets are weaned and at higher weaning weight with no increase in feed intake. Higher weaning weight is very important for the survival and growth performance of post weaning piglets and maintenance of sow body conditions is key to success of re-breeding and productivity of the entire farm.

References

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