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Application of Soon Soon High Efficiency Dehulled Full Fat Soybean Meal In Poultry and Swine Feeds

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Introduction

Soon Soon High Efficiency Dehulled Full Fat Soybean Meal (SSHE DFFSBM) is a new revolutionary product produced from a new processing method. This product has a higher nutritional availability but lower anti nutritional factors. It can be used to improve the performance of poultry and swine feeds. The available ME is higher when compared to dehulled soybean meal plus soybean oil. Similarly its available amino acids are also higher when compared to dehulled soybean meal. A recent AME (poultry) test carried out at University of Sydney showed that using 10 % of HE Dehulled Full Fat Soybean Meal together with HE Dehulled Soybean Meal can increase the AME of the feed by 5.3 %. This is equivalent to about 730 kcal/kg more AME in the HE dehulled soybean meal. (Report in details is available upon request). This product is an ideal ingredient to be used in heat stress situation because less metabolizable heat (heat of increment) is produced.

How to use SSHE Dehulled Full Fat Soybean Meal?

1) Maximum performance is observed when SSHE DFFSBM is used together with SSHE dehulled soybean meal as the main protein source in the feed ration.

2) Other processed protein meals such as meat and bone meal, fish meal, canola meal, cottonseed meal, other soybean meal etc should be kept to the minimum level preferably not exceeding 5%.

   These processed meals contain certain anti-nutritional factors as a result of excessive heat treatment and also have low amino acids availability especially cystine, lysine and threonine. These anti-nutritional factors will suppress the performance of the feed ration and reduce improvements resulting from the use of SSHE dehulled soybean meal and full fat soybean meal. In a AME trial conducted at the University of Sydney using SSHE DFFSBM with US dehulled soybean meal resulted virtually no increment in AME of the feed. However using SSHE DFFSBM with SSHE dehulled soybean meal the AME of the feed increased by 5.3%

3) Due to the high oil content of SSHE dehulled full fat soybean meal, the particle size is not reduced excessively in order to minimize oxidation. Therefore the particle size should be further reduced before using it in feed rations especially for young animals.

Recommended Usage Levels in Poultry Feeds

1. Recommended usage levels in Broiler and Pullet Development Feeds

- 10% max in starter diet
- 15% max in grower/finisher diet.

Please refer Table 1 to determine the amount of dehulled soybean meal and palm oil/tallow that can be replaced with SSHE DFFSBM in the feed rations.

Advantages of using SSHE Dehulled Full Fat Soybean Meal in Broiler Feed

a. Trials have proven that incorporating 10% of SSHE DFFSBM can increase body weights by 5-10% and FCRs by more than 10% without increasing protein and ME levels.
b. The cost of feed can be reduced especially in starter feed as the ME of soybean oil is 20% higher than palm oil/tallow for young chickens.
c. By using the nutrient specifications given in Table 2, cost reduction can be achieved without sacrificing feed performance. Finished feed can be formulated with 20 to 50 kcal/kg lower ME and 0.2 - 0.5% lower protein level and yet good body weights and FCRs can be achieved.

2. Recommended usage levels in Layer/Breeder Feeds

- 6-10%.

Please refer Table 1 to determine the amount of dehulled soybean meal and palm oil/tallow that can be replaced with SSHE DFFSBM in the poultry feed rations.

Advantages of using SSHE dehulled full fat soybean meal in Layer/Breeder Feed

Trials have proven that using SSHE dehulled full fat soybean meal in layer/breeder feed can significantly increase egg production, the size of eggs and the weight of day old chicks produced.

Recommended Usage Levels in Swine Feeds

- 10-20 % in Prestarter, Starter and Grower feeds
- 10 % max in Finisher and Gestating feeds
- 20-30 % in Lactating feed

Advantages of using SSHE dehulled full fat soybean meal in Swine Feed

a. 10-15% improvement in weight gain
b. 10% reduced in FCR
c. Increase litter size and improve survival rate of piglets.

Storage and Handling of SSHE Dehulled Full Fat Soybean Meal

1. This product must be kept cool and be used as soon as possible to avoid oxidation and caking.
2. It is advisable to use this product within 30days after receiving goods from our factory.
3. During this storage period, lumps may be formed but they are usually soft and can be broken easily.
4. Bulk storage should be in a flat warehouse.
5. If stored in a bin or small silo, make sure the slope of the hopper is more than 70° and the product is moved daily.

Table 1

Amount of soybean meal and palm oil/tallow that can be replaced with SSHE Dehulled Full Fat Soybean Meal

Level of SSHE Dehulled Full Fat SBM	For Starter Feed		For Grower / Finisher Feed	
	Amount of Dehulled SBM replaced	Amount of Palm oil / tallow replaced	Amount of Dehulled SBM replaced	Amount of Palm oil / tallow replaced
5	4.0	1.20	4.0	1.13
6	4.8	1.44	4.8	1.35
7	5.6	1.68	5.6	1.58
8	6.4	1.92	6.4	1.80
9	7.2	2.16	7.2	2.03
10	8.0	2.40	8.0	2.25
11	8.8	2.64	8.8	2.48
12	9.6	2.88	9.6	2.70
13	10.4	3.12	10.4	2.93
14	11.2	3.36	11.2	3.15
15	12.0	3.60	12.0	3.38

Basis of calculation for the amount of dehulled soybean meal and palm oil/tallow to be replaced by dehulled full fat soybean meal :

1. Dehulled Full Fat Soybean Meal = 80% dehulled soybean meal & 20% soybean oil.

2. ME for soybean oil in starter feed = 8400kcal/kg.
   ME for palm oil/tallow in starter feed = 7000 kcal/kg.

3. ME for soybean oil in grower/finished feed = 9000kcal/kg
   ME for palm oil/tallow in grower/finished feed = 8000kcal/kg

Table 2

Nutrient Specifications :
SSHE Dehulled Full Fat Soybean Meal

C.Protein, %	37
ME Poultry, Kcal/kg	3760
DE Swine, Kcal/kg	4744
ME Swine, Kcal/kg	4480
NE Swine, Kcal/kg	3861
Lysine, %	2.384
Methionine, %	0.536
M+C, %	1.104
Tryptophan, %	0.528
Threonine, %	1.496
Arginine, %	2.848
Isoleucine, %	1.76
Valine, %	1.928
Crude Fat, %	21
Crude Fiber, %	3.5
Calcium, %	0.24
Available Phosphorus, %	0.192
Total Phosphorus, %	0.528
Sodium, %	0.016
Choline, mg/kg	2208
Chloride, mg/kg	0.016
Digestible Lysine,Poultry %	2.170
Digestible Methionine, Poultry %	0.496
Digestible M+C, Poultry %	1.013
Digestible Tryptophan, Poultry %	0.492
Digestible Threonine, Poultry %	1.302
Digestible Arginine, Poultry %	2.530
Digestible Isoleucine, Poultry %	1.619
Digestible Valine, Poultry %	1.633
Digestible Lysine pigs, %	2.192
Digestible Methionine pigs, %	0.496
Digestible M+C pigs,%	0.994
Digestible Tryptophan pigs, %	0.486
Digestible Threonine pigs, %	1.316
Digestible Isoleucine pigs, %	1.600
Digestible Valine pigs, %	1.680
Dry Matter, %	88.0
Linoleic Acid, %	11.5