NEWSHAM® Choice Genetics

# Nutritional Recommendations for Feeding Newsham Choice Genetics® Maternal Barrows in Finishing


Newsham Choice Genetics® (NCG) maternal genotypes are continually being improved, with a higher lean gain potential and feed utilization efficiency than genetic lines of just a few years ago. As modern genotypes of pigs are developed to provide an increasing potential for lean growth, nutritional programs for these pigs must support the requirements to optimize growth rate, carcass lean, feed cost, and profitability. Newsham Choice Genetics delivers these genotypes with its maternal barrows.

Excellent growth rates combined with efficient feed utilization will result when NCG maternal barrows are provided a feeding program with appropriate amino acid levels. Final carcass fat depth can be minimized in these barrows by controlling the dietary energy intake, and more specifically, by reducing added fat levels in the feed later in finishing. Carcass fatness will also depend on slaughter weight and packer. However, feeding diets with increased fat and energy in later finishing may improve growth rate. Slaughter weight, carcass discounts, growth rate, and prices for fat and corn will dictate the most appropriate dietary energy strategy.

## INGREDIENT SELECTION:

Ingredient choices for maternal barrow diets will depend on price, quality, and availability. Ingredients such as distillers dried grains with solubles (DDGS), wheat midds, bakery meal, and meat and bone meal, may be considered if economically advantageous and of good quality. Care must be taken when using by-products in swine diets. There is a very real risk of mycotoxin contamination when incorporating DDGS and (or) wheat midds that may result in significant reductions in performance (i.e., intake, gain and feed conversion). When first introducing by-products such as DDGS into swine diets, there may be periods of feed intake reduction, depending on level. If DDGS is incorporated into swine diets, it is best to increase inclusion level over a period of time. Be aware, however, that feeding more than 10% DDGS can cause softer bellies in carcasses, as well as reduced carcass yield. The chemical composition and nutritional value of DDGS, particularly energy content, vary among sources. It is important that chemical composition be determined by source and then taken into consideration when DDGS is formulated into diets.

## PHYTASE DISCUSSION:

With recent increases in monocalcium phosphate (MCP) prices, it has become very expensive to supplement phosphorus (P) in swine diets. Phytase is an enzyme that breaks down the phytate bound P found in corn and soybean meal, making these endogenous sources of P available to pigs. Phytase allows diets to be formulated with less inorganic phosphate, thus the pig's P requirement is met at a lower cost. There are many phytase sources and concentrations available in the marketplace today. Newsham Choice Genetics customers should work with their nutritionist to establish the best use of phytase in their swine program.

## PAYLEAN® (RACTOPAMINE; ELANCO BRAND):

Paylean is an approved feed additive for swine that can increase growth rate, muscle deposition, efficiency of feed utilization, and carcass leanness. Feeding Paylean in the appropriate dietary formula and for an optimum length of time prior to marketing can provide an excellent, economical enhancement in both growth performance and carcass composition for maternal barrows. It is critical that Paylean be used in a specifically formulated diet with the necessary protein or amino acid concentrations.

## DIET SPECIFICATIONS:

Three tables of diet specifications are presented for NCG maternal barrows. Table 1 does not include Paylean. Table 2 includes a single Paylean diet as the last phase prior to market (4.5 grams per ton of feed). Table 3 outlines a step-up regimen in which the last two finishing diets include 4.5 and 9 grams/ton of Paylean, respectively. Dietary energy and added fat levels in these recommended programs can vary depending on fat price, desired slaughter weight, carcass discounts, and other factors.

## TABLE 1:

| NUTRIENT SPECIFICATION FOR NEWSHAM CHOICE GENETICS MATERNAL BARROWS | | | | | | |
|---|---|---|---|---|---|---|
| | BODY WEIGHT, lb | | | | | |
| **NUTRIENT** | 50-90 | 90-130 | 130-165 | 165-200 | 200-230 | 230-MKT |
| Protein, % | 18.93 | 16.80 | 15.40 | 14.24 | 12.88 | 12.17 |
| Lysine, % | 1.17 | 1.00 | 0.90 | 0.80 | 0.70 | 0.65 |
| Available Lysine, % | 1.05 | 0.90 | 0.81 | 0.71 | 0.62 | 0.58 |
| Metabolizable Energy (ME), kcal/lb | 1500 | 1500 | 1500 | 1500 | 1475 | 1475 |
| Available Lysine: ME ratio, g/Mcal | 3.18 | 2.72 | 2.45 | 2.15 | 1.91 | 1.79 |
| Calcium, % | 0.55 | 0.53 | 0.51 | 0.48 | 0.45 | 0.42 |
| Phosphorus, % | 0.44 | 0.42 | 0.40 | 0.38 | 0.36 | 0.35 |
| Available Phosphorus, % | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.19 |
| Sodium, % | 0.20 | 0.20 | 0.20 | 0.20 | 0.18 | 0.18 |
| Selenium, ppm | 0.30 | 0.30 | 0.30 | 0.30 | 0.24 | 0.24 |
| Phytase, FTU/lb | 227 | 227 | 227 | 227 | 227 | 227 |

## TABLE 2:

| NUTRIENT SPECIFICATIONS FOR NCG MATERNAL BARROWS WITH A SINGLE PHASE OF PALYEAN FROM 230-MKT | | | | | | |
|---|---|---|---|---|---|---|
| | BODY WEIGHT, lb | | | | | |
| **NUTRIENT** | 50-90 | 90-130 | 130-165 | 165-200 | 200-230 | 230-MKT* |
| Protein, % | 18.93 | 16.80 | 15.40 | 14.24 | 12.88 | 16.00 |
| Lysine, % | 1.17 | 1.00 | 0.90 | 0.80 | 0.70 | 0.93 |
| Available Lysine, % | 1.05 | 0.90 | 0.81 | 0.71 | 0.62 | 0.83 |
| Metabolizable Energy (ME), kcal/lb | 1500 | 1500 | 1500 | 1500 | 1475 | 1475 |
| Available Lysine: ME ratio, g/Mcal | 3.18 | 2.72 | 2.45 | 2.15 | 1.91 | 2.55 |
| Calcium, % | 0.55 | 0.53 | 0.51 | 0.48 | 0.45 | 0.49 |
| Phosphorus, % | 0.44 | 0.42 | 0.40 | 0.38 | 0.36 | 0.39 |
| Available Phosphorus, % | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.23 |
| Sodium, % | 0.20 | 0.20 | 0.20 | 0.20 | 0.18 | 0.18 |
| Selenium, ppm | 0.30 | 0.30 | 0.30 | 0.30 | 0.24 | 0.30 |
| Phytase, FTU/lb | 227 | 227 | 227 | 227 | 227 | 227 |
| Ractopamine, g/ton* | --- | --- | --- | --- | --- | 4.5 |

*Feed continuously as sole ration. Ractopamine Hydrochloride should be fed for finishing swine weighing not less than 150 lb in a complete ration containing at least 16% crude protein for the last 45 to 90 lb of gain prior to slaughter.

## TABLE 3:

| NUTRIENT SPECIFICATIONS FOR NCG MATERNAL BARROWS WITH A STEP-UP PALYEAN PROGRAM (2 PHASE) FROM 200-MKT | | | | | | |
|---|---|---|---|---|---|---|
| | BODY WEIGHT, lb | | | | | |
| **NUTRIENT** | 50-90 | 90-130 | 130-165 | 165-200 | 200-230* | 230-MKT* |
| Protein, % | 18.93 | 16.80 | 15.40 | 14.24 | 16.00 | 16.00 |
| Lysine, % | 1.17 | 1.00 | 0.90 | 0.80 | 0.93 | 0.93 |
| Available Lysine, % | 1.05 | 0.90 | 0.81 | 0.71 | 0.83 | 0.83 |
| Metabolizable Energy (ME), kcal/lb | 1500 | 1500 | 1500 | 1500 | 1475 | 1475 |
| Available Lysine: ME ratio, g/Mcal | 3.18 | 2.72 | 2.45 | 2.15 | 2.55 | 2.55 |
| Calcium, % | 0.55 | 0.53 | 0.51 | 0.48 | 0.49 | 0.49 |
| Phosphorus, % | 0.44 | 0.42 | 0.40 | 0.38 | 0.39 | 0.39 |
| Available Phosphorus, % | 0.28 | 0.26 | 0.24 | 0.22 | 0.23 | 0.23 |
| Sodium, % | 0.20 | 0.20 | 0.20 | 0.20 | 0.18 | 0.18 |
| Selenium, ppm | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| Phytase, FTU/lb | 227 | 227 | 227 | 227 | 227 | 227 |
| Ractopamine, g/ton | --- | --- | --- | --- | 4.5 | 9.0 |

*Feed continuously as sole ration. Ractopamine Hydrochloride should be fed for finishing swine weighing not less than 150 lb in a complete ration containing at least 16% crude protein for the last 45 to 90 lb of gain prior to slaughter.

## FOOTNOTE TO DIET SPECIFICATIONS:

Newsham Choice Genetics acknowledges Akey for their contributions to this publication. Please contact your Newsham Choice Genetics representatvie with any questions.

Metabolizable energy values used for ingredients were: corn, 1500 kcal/lb; soybean meal, 1430 kcal/lb; fat, 3800 kcal/lb.

Dietary calcium and phosphorus levels reflect the use of phytase enzyme at 227 FTU/lb of feed. Higher levels of phytase in diets are commonly used depending on dietary ingredients used and supplemental phosphorus needed. Specific levels or units of phytase and formulations will depend on the phytase source and nutrient value assigned. If feed is pelleted, a thermo-stable phytase source that is acceptable for pelleting must be used.







Newsham Choice Genetics | 5058 Grand Ridge Drive, Suite 200 | West Des Moines, IA 50265 | 1.800.622.2627 | 515.225.9420 | www.newsham.com