Introduction

Swine nutrition and feeding management is a complex process. Feed is the largest single item among the costs of producing pork, historically accounting for about 60% of all costs in farrow-to-finish systems. Pork producers are encouraged to employ a comprehensive feeding program based on sound principles and tailored to the operation. The National Swine Nutrition Guide (NSNG) Diet Formulation & Evaluation Software was developed to allow direct application of the components of the NSNG to practical feeding situations.

The NSNG Diet Formulator & Evaluation Software will perform two distinct functions. You can use it to formulate swine diets on a least-cost basis or evaluate the nutritional adequacy of existing diets. These functions can be applied to diets for sows, breeding boars, nursery pigs, growing-finishing pigs and replacement gilts and boars.

The formulator uses the "Big M" linear programming method to balance diets. It uses specifications for standardized ileal digestible lysine, available phosphorus and calcium to balance diets.

Users have the option to use the nutrient recommendations established by the NSNG Steering Committee (presented as defaults), formulate entirely on the user's preferences, or use the program to "discover" nutrient requirements (sows and growing-finishing pigs only).

Evaluating the nutritional adequacy of existing diets involves entering diet formulas manually.

The nutrient recommendations and ingredient composition and use rate guidelines given by this software are derived from the NSNG. Those are published in a booklet titled "National Swine Nutrition Guide Tables on Nutrient Recommendations, Ingredient Composition, and Use Rates.

Four premixes are included in the feed library. They provide quantities of trace minerals and vitamins that meet or exceed amounts recommended in the NSNG when utilized as indicated. See PIH factsheet #07-02-06 (Trace Minerals and Vitamins for Swine Diets) for details.

Although there are some built-in signals to warn that a diet may not be nutritionally adequate, some degree of nutritional expertise is necessary to effectively utilize the software.

Refer to the "Tips" areas on each page of the program to learn more details of program operation. Also, consult the flagged captions to learn more regarding the meaning of given inputs and outputs.

This program requires MS Excel with Visual Basic and macro operation access to operate.