LEFT:
Dr. Kees de Lange

In the future, using models will become even more important as producers continue to strive for greater efficiency and have to consider more alternative management options.

PHOTO BY MARTIN SCHWALBE

Growth models become more accurate and easy to use

Feed costs can be lowered by several dollars per pig using growth models – just one example of the way these tools can help producers improve efficiencies

BY
KATE PROCTER

There is a renewed interest in using computerized pig growth models to optimize feeding strategies for individual pig units. More data have become available and models have become more accurate at predicting performance. Moreover, the newer models are easier to use on the farm and help producers develop more effective management strategies.

Dr. Kees de Lange, with the animal and poultry science department of the University of Guelph, has been working in co-operation with Massey University in New Zealand and Wageningen University in the Netherlands for more than 15 years to further develop pig growth models. De Lange predicts that, in the future, using models will become even more important as producers continue to strive for greater efficiency and have to consider more alternative management options. One example would be use of entire male pigs for pork production and shipping pigs under different carcass grading and payment schemes.

Growth models integrate information on how pigs grow and use feed in order to predict how different feeding strategies will affect growth rates and feed efficiency. Research on models is ongoing, both on the computer and in the field. Gathering data on actual animals shows the researchers where information is weak or where more information is needed to make more accurate predictions.

Using growth models is just one tool for improving management on the farm. De Lange says they have conducted on-farm studies which demonstrate that feed costs can be lowered by several dollars per pig by using growth models properly. "One example is that we can make more accurate recommendations on amino acids, phosphorus and optimum energy levels in the diet," says de Lange.

De Lange also warns that only well-tested models should be used and that model users should be well-trained. "In the past, we have become frustrated with using models in practice, largely because the expectations were too high," he adds.

Currently, proper feed utilization is the biggest area of interest for using growth modelling, but de Lange explains that it can also be used when determining which traits are most important in a breeding program. "Models have already had a big impact on pork production," says de Lange. They can be used for determining everything from the optimum shipping weights of pigs to effective nutrient management programs.

Interest in pig growth modelling continues to increase. The National Research Council in the United States has approached de Lange to lead the development of models to predict nutrient requirements of different types of pigs at the various stages of production. ⫿