

## **Optima Pig Growth Model**

The Optima pig growth model is a computer based system that can predict the performance of pigs produced on different feeding programmes and calculate the financial output based on selected slaughter contracts. ABN and Dr William Close of Close Consultancy have jointly developed the model.

The system is operated as a service by ABN staff using on-farm data to establish the key characteristics of the pig to predict performance on alternative feeding regimes. The following information is required to initially characterise the animal: -

- Age and weight at weaning.
- Two intermediate ages and weights.
- Final age and weight.
- Fat depth at slaughter (mm).
- Feeding programme.
- Feed conversion ratio.

From this information the model will predict the feed intake and protein deposition curve of the pig which is stored as the characteristics of the animal for future investigation.

The model can be used to assist decision making in many areas including: -

1. Performance
2. Nutrient requirements
3. Pollution
4. Financial

### **1. Performance**

Once the animal has been characterised the financial and performance benefits of different feeding programmes, feed specifications and grading contracts can be rapidly assessed.

### **2. Nutrient requirements**

The requirement of the pig for amino acids and energy at a given level of performance can also be demonstrated throughout the growth stage selected. Deficiencies or oversupply of nutrients can be identified through graphical representation and corrected by altering the feeding programme or the dietary specification. Comparing each set of performance and financial data can immediately assess the effects of any changes.

### **3. Pollution**

The growth model calculates the quantity of nitrogen excreted to assist with the calculation and reduction of nitrogen emissions.

### **4. Financial**

The ultimate aim of the Optima pig Growth Model is to predict the financial performance of the unit under chosen feeding regimes. The financial data presented includes feed cost per kilo liveweight gain, total cost per kilo liveweight gain and net profit. The optimum feeding programme which will maximise net profit can also be determined using the inbuilt optimisation facility.

All of the information can be printed or stored electronically for future reference.

For further information please contact your local ABN specialist on 01778 422 124.