

Bird Welfare, Environment and Profit Improved by Computer System

Not everyone retires early from the Agricultural Feed Industry and sets up a family business – but that's just what David Filmer did! Brought up on a poultry farm, David decided to apply his nutritional and computer skills to develop and market a computer system for improving bird welfare and profit for chicken and turkey meat producers.

FLOCKMAN was first marketed to the broiler industry in 1989 and can pay back its capital costs in about 12 months. Now over 15 per cent of all UK poultry meat, including turkeys, is produced using **FLOCKMAN**.

Integrated Management

An integrated management system will automatically change the daily nutrient and/or energy intakes of a flock to bring bird weight back in line should deviations in production targets start to occur. A current three year LINK project, 'Integrated Management Systems for Poultry', addressing this possibility is being undertaken at the Silsoe Research Institute. Partners include Premier Poultry, David Filmer Ltd and Stonefield Systems. **FLOCKMAN** is at the heart of the proposed system.

Conventionally a broiler chicken is fed four feeds. A high protein Starter, a medium protein Grower, a low protein Finisher and an even lower protein Withdrawal feed. But the bird's nutrition needs actually change gradually and not in steps as seen in the accompanying graph. David's idea was to change the daily diet of the birds gradually by automatically blending between a high protein and a low protein feed each day.

FLOCKMAN now controls not only the daily composition of the feed, but also the daily pattern of feeding and the total quantity fed. It can be extended to monitor and control ALL house



David Filmer

activities such as lighting programmes, including dawn/dusk simulation and other environmental parameters like temperature, humidity and airflow, providing a complete Management System.

The result is that birds can be steered along a predetermined growth curve to arrive at the required market weight on exactly the date needed by the processing factory.

FLOCKMAN's latest recognition was for 'Automated Controlled Feeding' in the 'Poultry Innovation Award 2000' competition at the British Pig & Poultry Fair 2000.

Information Technology

The fundamental information required is:

- average bird weight via automatic bird weighers
- variation in bird weight
- daily and total feed intake via automatic feed weigher/mixer
- daily feed composition
- daily intake of critical nutrients such as digestible lysine

All this is automatically recorded and compared to targets. Deviations from targets are highlighted. All the data are automatically picked up via modems and the telephone network system, so that Senior Managers at Head Office are presented with daily summaries for each site and poultry house.

Welfare Benefits

The system improves the behavioural pattern of the birds with distinct times for sleeping, eating, resting and exercise. This is a huge difference from current ad-lib and other management practices. The results are:

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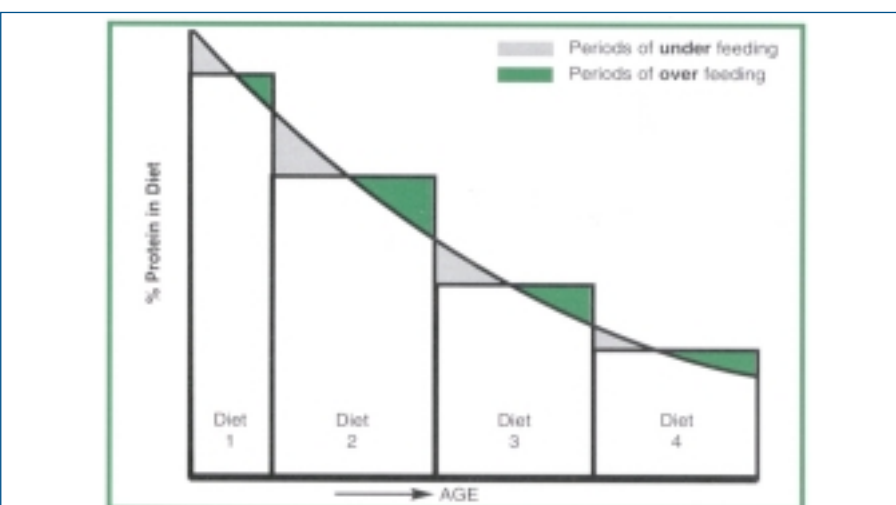
- lower mortality (30-50 per cent reduction)
- less variability in weight
- a better immune defence system, leading to better health
- less excreted nitrogen and water giving better litter conditions and air quality
- cleaner, better feathered birds with better leg strength.

The Future

The LINK project results will take poultry management into the 21st century, with **FLOCKMAN** giving the UK producer the tools needed to stay efficient and sustainable in an increasingly competitive world industry.



Automatic bird weigher



Typical 'step feeding' of protein

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