

# Poultry Health Update

## A free range future

Free range production is back and here to stay



Around eight million birds now enjoy the outdoor lifestyle due to the steady growth in sales of free range eggs

Since its re-emergence as a commercial form of egg production in the late 1980s, the free range sector has experienced steady growth to a point where it now represents nearly 30% of shell egg sales. Increasing awareness by consumers about how their food is produced has been the main driver behind this growth, aided by the supermarkets which have been keen to enhance their own welfare and ethical stance. In addition to retail sales, an increasing number of free range eggs are now finding their way into food products and the food service sector.

Not only has this trend brought about changes in the way hens are kept – there are now around eight million birds enjoying an outdoor lifestyle – but it has also led to a restructuring of the supply chain. Traditionally, the major egg marketing companies, or packers, as they are known, have tended to produce their own eggs as well as grade, pack and distribute them to their customers. This is a system that served them well whilst the eggs they produced all came from

cages, which lend themselves to large, highly automated production units with a low labour requirement.

But producing free range eggs is a different proposition. Flock sizes are smaller, the demand for highly skilled labour is high and there is a requirement for land area. This does not fit well with the packers' industrialised approach to egg production and consequently they have been happy to contract the task out to primary producers. This has brought about opportunities for many farmers who, struggling to remain profitable in mainstream agriculture, have welcomed the chance to diversify. With unsocial hours – such as closing popholes late at night in the summer months – and a need for skilled stockmanship, producing free range eggs is an enterprise that can fit well on family-run live-stock farms.

While a free range operation may not match the hi-tech environment employed in a cage house, it nevertheless involves modern, well-equipped buildings

requiring a massive expansion of the UK's free range flock.

As for the rewards, producing free range eggs is, mostly, a profitable business. But egg production is one of the few sectors of agriculture that historically has received no support under the Common Agricultural Policy and as such the price received by producers has been subject to the vagaries of a free market. In simple terms, when eggs are in over supply the price nosedives – along with profitability. However, the industry is getting more adept at balancing supply with demand.

While there are those around who will recall that free range systems were largely abandoned in the 1950s because of poor production and high costs, this is unlikely to happen again. Whilst it does cost more to produce the eggs in extensive systems, this is reflected in the premium consumers pay and as for production problems, great strides have been made over the past decade to a point where performance on range can now be every bit as good as that achieved in cages. In the hands of hard working, dedicated producers, present day free range has a bright future.

• This article has been written by the British Free Range Egg Producers Association. For further information about free range visit [www.bfrepa.co.uk](http://www.bfrepa.co.uk)

### Contents

- The Campylobacter threat: page 2
- A walk in the woods: page 3
- A growing taste for poultry: page 4

### Contacts

Intervet UK, Walton Manor,  
Walton, Milton Keynes, MK7 7AJ  
Tel: 01908 685249 Email: [Poultry.uk@intervet.com](mailto:Poultry.uk@intervet.com)  
Web site: [www.intervet.co.uk](http://www.intervet.co.uk)

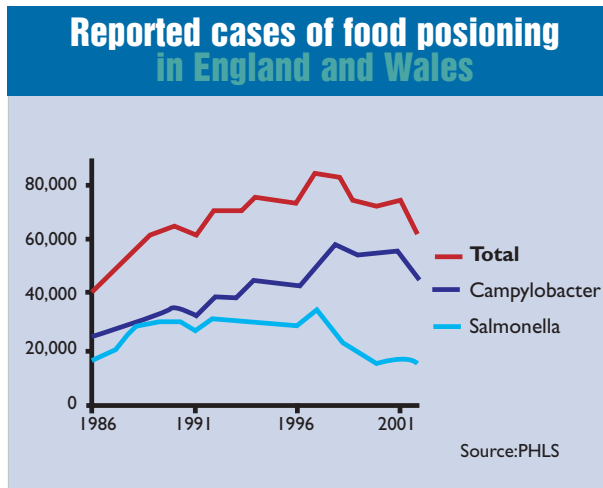
# Campylobacter – the new salmonella?

## Salmonella grabs the headlines, but it is not the main problem

Salmonellosis has had its fair share of press in the past and we are all very much aware of the sources of infection and how to avoid them. However, comparatively little is known about a much more widespread source of food poisoning known as campylobacteriosis. Whereas the incidence of food poisoning caused by salmonella has fallen steadily over the past five years, partly as a result of Lion Quality eggs, those caused by campylobacter rose to a high of 58,000 cases in 1998.

Campylobacteriosis, although totally dissimilar to salmonellosis in the way it infects humans, is currently the most common cause of food-borne illness in the UK, infecting approximately 1% of the population every year.

Laboratory surveillance of campylobacter began in 1978 with just over 6,000 cases reported. By 1993, this had risen to 38,000 cases and in 1998 there were over 58,000 cases. Since then the number of cases has fallen, with just over 46,600 recorded in 2002. The economic burden of campylobacter is large



– a conservative estimate put the cost of food-borne infection in 2000 at £113 million.

### A VIRULENT BACTERIA

The condition is contracted by ingesting infected food or water containing the campylobacter bacterium, or from domestic pets. Raw meat, particularly poultry, is a common source of infec-

tion and only very small numbers of bacteria can result in an infection. Symptoms of an infection include diarrhoea, nausea and abdominal pain, and these tend to last for five to seven days. Up to 3,000 people are admitted to hospital each year with campylobacteriosis. Fortunately, complications are uncommon but, when they do occur, they can be seri-

ous. Guillain-Barre Syndrome can be fatal.

Raw poultry meat is a significant cause of campylobacteriosis, with estimates suggesting that as many as half of the chicken carcasses introduced into the UK food chain may be contaminated with campylobacter. Measures to prevent chicken flocks becoming infected would lead to a significant reduction in the number of cases in humans. However, in poultry the infection is symptomless and doesn't appear to affect bird performance. Furthermore, although there are now a number of effective salmonella vaccines available to poultry producers, there isn't yet a vaccine available for campylobacter, despite considerable efforts by the pharmaceutical manufacturers to produce such a product.

Despite the falls in the number of cases of campylobacteriosis seen in the past three years, it remains by far the most common cause of food-borne illness. The effective control of campylobacter in poultry clearly presents a greater challenge than that associated with the control of salmonella.

# Additional protection from Salenvac T

Trial data from Intervet UK indicates that vaccination of laying hens with Nobilis Salenvac T, the company's inactivated *Salmonella enteritidis* and *Salmonella typhimurium* vaccine, is depositing anti-Salmonella antibodies in eggs.

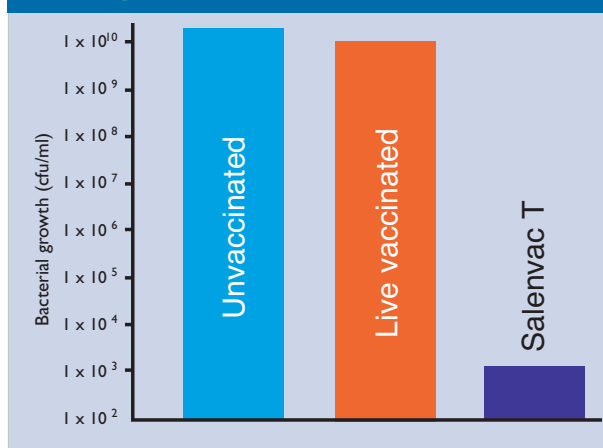
These antibodies reduce the growth of contaminating *Salmonella enteritidis* bacteria\*.

The graph, right, depicts the growth of *Salmonella Enteritidis* after the inoculation of pooled samples of age-matched eggs.

The growth of bacteria in eggs from Salenvac T-treated birds was significantly less than that in eggs from unvaccinated birds, or those vaccinated with a commercially available live vaccine. The significance of this for public health is yet to be published.

\* Data on file, Intervet UK Limited.

## The effect of the deposition of anti-salmonella antibodies in eggs from vaccinated layers compared with an unvaccinated control



The vaccination of layers with Salenvac T is depositing anti-Salmonella antibodies in eggs

# If you go down to the woods today...

## A new study points to the benefits of forest-based chickens

The Food Animal Initiative (FAI) is an independent organisation set up to identify emerging opportunities for producers and tackle fundamental issues facing the industry. FAI is based at the Oxford University farm and works in partnership with the University and members of the food supply chain. The project has attracted core funding from Tesco and McDonald's.

An example of the work being undertaken is the DEFRA funded Poultry in Natural Environments (PINE) project, now in its final stages.

PINE set out to identify opportunities for the integration of free range poultry production and forestry. Free range chickens are often reluctant to range extensively if the environment provided is without natural cover. This is possibly because the cover provides protection from aerial predators. At the same time, livestock farmers are reluctant to plant

new woodland as forestry enterprises are relatively slow in generating a financial return.

The PINE project was set up to test whether these two types of enterprise can be integrated.

A typical commercial woodland, designed by The Northmoor Trust, has been planted into existing pasture. It includes a mixture of broad-leaved and conifer tree species.

Colonies of 650 birds are accommodated in small mobile houses which are moved around 16 trial plots – eight plots providing new woodland and eight pasture. There are also eight woodland and eight pasture plots that are 'chicken free' to allow the impact of the birds on the vegetation to be assessed.

### FULL ASSESSMENT

Measurements are taken to monitor ranging behaviour, health, welfare and commercial performance of the chickens, and to



The PINE project is testing possible benefits of combining poultry and forestry

assess the growth rate of the trees and diversity of plant species in the plots. The environmental impact of the poultry operation on the environment is also being studied.

The production system has undergone significant development over the first year of the project in order that the input of labour is controlled, so allowing a farmer to add a small poultry unit into existing operations.

Set against the great benefit of encouraging farmers to plant trees, the only negative environmental impact seen to date has been a level of compaction and soil poaching on the range areas in the winter months. Simple practical measures are being taken to address this issue, such as modifying the feeding system so that there is less destructive 'traffic' through the woodland, adjusting the overall layout of the unit, and ensuring that plots are rested from

production at regular intervals.

The initial phase of the study will be completed in September 2004, although it is envisaged that monitoring will continue. Preliminary research results have indicated that the impact of the very young trees on bird behaviour has been limited. However, it is anticipated that their effect will become more significant over the next couple of years, as the woodland canopy closes, and the true benefits of this integration of activities will be realised.

The operation has also been successful in providing the farmer with the expected financial return on his new enterprise, whilst also allowing him to watch his longer term investment, in commercial woodland, growing for the future.

For more information on The Food Animal Initiative see [www.faifarms.co.uk](http://www.faifarms.co.uk)

# Website flies in the face of Salmonellosis

As food safety issues continue to concern consumers worldwide, a new website addresses production of safe egg and poultry meat products. [www.safe-poultry.com](http://www.safe-poultry.com) provides information regarding issues at the forefront of poultry food safety. The site focusses mainly on Salmonellosis, but it is expected to expand to include other poultry diseases that impact food safety.

Currently, the site includes an introduction to Salmonellosis, a disease that infects poultry and

can be passed to humans who consume contaminated egg and meat products. Areas of the site describe vaccines and treatments that can reduce the risks of infection and transmission. Other preventive measures, such as biosecurity, are also covered. And the site views this public health issue from a global perspective with links to studies, statistics and other information from public health sources around the globe.

[www.safe-poultry.com](http://www.safe-poultry.com) is sponsored by Intervet International



Information on poultry food safety can be found at [www.safe-poultry.com](http://www.safe-poultry.com)

by, the manufacturers of the Nobilis brand of poultry vaccines. Nobilis includes a family of three salmonella targeted vaccine products, Salenvac, Salenvac T and

SG 9R. Its newest vaccine, Salenvac T, is the first vaccine to protect birds and offspring against *Salmonella typhimurium* and *Salmonella enteritidis*.

# Who's eating your eggs?

## The average egg buyer is older and poorer than the norm

The challenge for egg producers is to get more younger and healthier people eating their eggs.

That is the conclusion to draw from latest Government research on eating habits and food spend.

The figures from DEFRA's Family Food report show that families in the lowest income bracket eat 2.2 eggs a person a week, spending 20.8p a person a week. Meanwhile, the richest homes eat just 1.5 eggs a week. However, because they are prepared to pay for more expensive free range and organic eggs, they still spend 18.2p a person a week. The lowest spend is by consumers in the second income bracket, they buy eat 1.5 eggs a week, but spend just 15.2p a person a week.

Having children seems to affect the appetite for eggs.

Families with two children or more eat just 1.1 eggs a person a week. Households with no kids in sight tuck into double that amount.

The old adage was to "go to work on an egg," but it is those who don't go to work at all who



Statistics suggest egg marketing needs to target the young and the wealthy

are more likely to start the day with an egg. Those between 65 and 75 eat 2.3 eggs a week, while the under 40s tuck into just 1.3.

The report tracked purchases

during 2002 and 2003, comparing them with the previous year and 1975 as a base year. Consumption in those 27 years fell by 50%.

Average consumption is 1.66

eggs a week, up marginally on the year before. Average spend is 17p a person a week.

The biggest opportunities for producers appear to be away from home. Expenditure in the cheese, egg dishes and pizza category increased by 3.9%, outstripping the overall increase in eating out by 2.1%.

Looking at the regions, the Welsh and English spend the most on eggs – 17.4p a person a week. The Welsh spend 16p a person a week and the Northern Irish 15.5p. South-Easterners are the biggest English consumers of eggs eating 1.8 a person a week. Those in the North-East and North-West eat just 1.5 a person a week.

Despite being a food packed with energy, the average Brit gets just 0.8% of their daily energy intake from eggs, delivering 1.3 grammes of fat a day, 7.0mg of calcium and 0.2mg of iron.

Some of the findings for other foods included a 1.6% drop in milk consumption between 2001/02 and 2002/03 and 4.4% fall in potato consumption, perhaps an impact of the Atkins diet, which includes eggs in its regime.

Fruit and vegetable purchases (which includes fruit juice and baked beans) were up 2.5% – only 4.1 portions a week, far short of the Government's aim of five portions a day.

# Are Sunday roasts under threat?

Is the traditional Sunday roast under threat? New data on sales of chicken and chicken products over the past 12 months indicates that we are more likely to opt for fresh or frozen processed poultry rather than whole fresh birds

Year-on-year sales to the end of June 2004 showed a 6.1% reduction in the value of whole fresh chicken sold in the UK. This is contrasted by significant increases in the sales of chicken portions, and fresh and frozen added value and processed products.

The total fresh chicken market, which comprises whole and portioned birds, is currently worth £1,066 million, 1.4% down on the June 2003 value. The raw added value, frozen processed and fresh processed markets have all grown in value by at least 7.0% over the same period (see graph right).

## Year on year UK poultry sales at the end of June 2004 (£)

