The market is a bit hesitant, a bit of lack of demand possibly linked to bacon and sausages bad publicity of late, Colony is still the weakest with Free Range still tight, the smaller shops have been a lot busier this last week probably because of the diabolical weather we have been hit with, customers not wanting to travel far and possibly doing a bit more baking and cooking (that hibernation urge + home cooking is best)

There never used to be a weakening of the market pricing till at least post-Christmas, but in recent years we have seen increasing reductions in price earlier, we blame this on increasing computerisation and integration, now it is possible to predict exactly what a flock will be producing numbers and size wise for its entire laying life, giving packers and marketeers the ability to know and plan many months in advance for their supply requirements and their ability to predict any surplus to be moved pre-Christmas.
New naming of storms

Storm Clodagh came in with a bang and certainly made her presents felt before floating off, very similar effect of my Granddaughter with the same name.

Wolf, two weeks ago we mentioned the proposal to reintroduce wolfs in Scotland, well as a result of the gales it has happened by accident, as things do, a tree at the Kirkeudbright wildlife sanctuary blew down demolishing a fence in the wolfs enclosure who decided to go walkabout.

More cases of AI in France

After the discovery of Avian Influenza H5N1 at a hobby farm in the Dordogne, further checks on poultry farms in this part of France have brought to light 2 more cases.

A producer of geese in Domme, some 90 kilometres south of the first case, and a duck farm in Saint-Paul-la-Roche, 50 kilometres north, have both been infected with the virus.

The discoveries were made after the animals on both farms showed a higher level of antibodies, suggesting that they had been in contact with the disease, the department of agriculture in Paris says.

AI in France: Restrictions tighten as bans increase

Following the discovery of 2 more cases of Avian Influenza in the Dordogne, France and tightened restrictions for the export and transport of poultry and poultry products. At the same time, at least 8 countries including China, Japan and Egypt, have announced a temporary import ban on poultry and poultry products from France.

The animal health service Anses has so far confirmed 3 cases of AI:

1. 1 of H5N1 at a hobby farm in Biras,
2. 1 infection with H5N2 at a farm with 14,000 ducks in Domme and
3. 1 case at a goose farm with 1,000 animals in Saint-Paul-la-Roche where the serotype has not yet been established.

Anses is examining 2 other poultry farms where AI is suspected, a spokesman for the department of agriculture has said. The Dordogne is the main area for geese and ducks for the production of foie gras, a delicatessen that the French themselves eat mainly at Christmas.
The department has now forbidden the export of live poultry and eggs from the whole of the Dordogne region. For the transport of such products to other parts of France, a licence is needed from the regional authorities who have to consult the animal health service.

France does however still allow the export from the whole of the country although an increasing number of countries have announced their own import ban. "Unfortunately, some countries take such steps first before they start talking to us," the spokesman of the department said. He underlined that Saudi-Arabia, one of the largest foreign customers of the French poultry industry, has so far not introduced a ban on French products.

Ruud Peys

-----------------------------------------------------------------------------------------------------------------------------

USDA seeks more HPAI vaccine proposals

The US agricultural agency is continuing to prepare for the potential return of highly pathogenic avian influenza (HPAI) by issuing its second request for proposals (RFP) for vaccine manufacturers.

The United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) is seeking manufacturers which have the interest and capability to supply a variety of EA H5 vaccines in sufficient numbers to add to the emergency stockpile.

Ensuring HPAI vaccines are available

APHIS has not approved the use of vaccine to respond to HPAI to date; however, the Agency is preparing to ensure that vaccine is available should the decision be made to use it. Any decision to use vaccination in a future HPAI outbreak would require careful consideration of the efficacy of the vaccine, any impacts of using HPAI vaccine in the field, and the potential trade impacts.
In response to the first RFP issued in August, APHIS awarded contracts for doses of two vaccines for the Eurasian H5 (EA H5) virus strain, which became part of the National Veterinary Stockpile. These contracts were awarded to Ceva and Harrisvaccines.

Efficacy of vaccines

Vaccines will be carefully evaluated on a number of factors including their efficacy against EA H5 viruses, and products must meet all of APHIS' safety, potency, and purity standards. All eligible products to be considered must be either conditionally or fully licensed or permitted at the time of submission. Vaccine manufacturers will be evaluated on their ability to produce such vaccines in a timely manner in adequate numbers to meet the needs of the response.
Although no decision has been made to use vaccine in the event of a future HPAI outbreak, APHIS will continue to issue RFPs for vaccine manufacturers on a quarterly basis through September 2016, to allow additional products to be developed and considered for the stockpile should an HPAI outbreak occur.
Dosage per bird

Nationally, the placement rate of laying hens and meat turkeys is approximately 20 million birds per month. With each bird requiring two doses of vaccine prior to placement, 80 million doses per month will be needed just for these two sectors alone. Therefore, vaccine companies should minimally have a production capacity \( \geq 100 \) million doses per month to address these two sectors.

Rosie Burgin

Link between eggshell colour and disease resistance

Selection for a recently discovered immune characteristic is a potential strategy to improve general disease resistance in laying hens and thus to breed for a more robust chicken, conclude researchers of Wageningen University in PLOS ONE and Poultry Science.

In addition, selection for this immune characteristic has minimal negative consequences on production, but surprisingly might have an effect on eggshell colour.

The current housing systems in the poultry industry increase the spread of diseases by housing large flocks of chickens on sand. These circumstances require a robust laying hen. In 2012, housing of chicken in individual cages was banned in the EU, because of welfare issues. Nowadays, chickens are group housed on sand with space to move around freely.

New challenges to keeping poultry

However, this new system also brings new challenges to keeping poultry: in this new system chickens get more easily infected through sick flock mates, or through the dirtier environment. Preventing or treating these infections is becoming more difficult, due to stringent legislations and limitations set on the use of antibiotics.

There is an increased need for a robust laying hen: a chicken that maintains egg production and health, under varying and challenging environments. Breeding for improved general disease resistance could be that strategy to get this robust chicken.

Natural antibodies

Antibodies are proteins present in sick animals that attack the disease causing the sickness. These antibodies are only produced after the animal becomes diseased. However, natural antibodies (NAb) are antibodies in healthy animals without presence of a disease. NAb were only discovered relatively recently in livestock animals. These antibodies prevent and combat diseases upon entry by sticking to them. In this
way NAb prevent further spread in the body, but also flag the diseases to activate other parts of the immune system. NAb are thus an essential component of the immune system.

Previous studies showed promising results: high levels of NAb were associated with survival in laying hens. Breeding for natural antibodies could be the strategy to improve general disease resistance. However, selection on NAb should not lead to reduced production.

**Breeding for disease resistance**

To investigate the potential of selection for increased general disease resistance, the researchers measured NAb levels of almost 3,700 purebred ISA laying chickens. They measured total NAb levels, and NAb levels for different forms of antibodies. Heritabilities were estimated to be 0.12 for total NAb levels, and between 0.07 and 0.14 for the different NAb forms.

In addition, relations between the different forms of antibodies were very high. Tom Berghof, involved in the studies, explains: "This show that there is genetic potential for selection on NAb levels. Also, it is possible to select for different forms of NAb simultaneously, because they seem to be mainly regulated by the same genes."

**Effect on production**

Relations between immune characteristics and production characteristics have been described before in several species, and are often negative. This is in line with the resource allocation theory, which states that energy spend on immunity cannot be spend on, for example, growth. Relations between NAb and production characteristics of almost 2,400 hens were studied.

Most production characteristics were found not to be regulated by the same genes as NAb. However, a small negative relation was found between egg production efficiency and one NAb form. Berghof and colleagues conclude that selection for NAb might have some negative effects on production, but these negative effects seem to be small.

**Eggshell colour**

Remarkably, one form of NAb was found to be associated to the mother's eggshell colour and egg breaking strength. Additional analyses were done in order to get more insight in the origin of these maternal effects. Berghof states: "If eggs had a whiter eggshell, than NAb levels in the offspring were higher. If eggs had a stronger eggshell, than NAb levels in the offspring were lower. So it seems that there is some kind of relation between the eggshell and the immune system, especially for the eggshell colour." At this moment the researchers are investigating this relation, since this was never described in chickens before.

**Applications and future plans**

Free-range housing systems in poultry production increase the risks of spreading infectious diseases. There is an increased need for a robust laying hen. Breeding for natural antibodies could be a strategy to get this robust laying hen. "But before this strategy can be used in commercial breeding programs, more knowledge is needed about the genes underlying NAb levels." says Berghof.

"However, we did already start selecting chickens for high or low total NAb levels on a small scale, resulting in a high and a low line. Eventually, we will test these lines under real life conditions, to evaluate whether NAb indeed lead to a higher general disease resistance with minimal negative consequences on production."
Marketing this next piece caught our eye, I well remember my mother storing eggs in a solution of sill glass and salt in an enormous fire clay vessel in an out building to preserve the surplus eggs from the summer for us in the winter time when eggs were short, this is not necessary in this day and age, but we wonder if there is potentially a new market for our eggs boiled and salted, for the picnic in the park plus the rushing about customers, especially with the predictions for climate change for long hot summers and milder wetter more violent winters.

Preserved duck eggs market segmentation analysis

Salted duck eggs and preserved duck eggs, also known as ‘century eggs’, were originally developed in China centuries ago to extend the shelf life of duck eggs in the absence of refrigeration. These egg products are still widely consumed today, especially in Asia, and are key ingredients in a variety of East and South-East Asian dishes.

Worldwide production of shell eggs from ducks and geese have seen a 32% increase since 2002, exceeding 87 billion in 2012, with 94% of production concentrated in Asia. The growing Asian population in North America may be a market opportunity for local producers and processors to substitute local for imported ethnic foods. In previous studies on the potential in regional consumer markets for locally produced ethnic Asian foods, it was found that immigrants are open to buying locally produced food and will even pay a premium for it. In the salted and preserved duck egg categories, imports dominate the North American market. Yet there have been several food safety and quality assurance issues associated with these imported goods, including lead contamination in preserved duck eggs, and prohibited Sudan red dye in salted duck eggs.

Duck egg consumer market consists of 5 market segments

This study examined the importance of selected salted and preserved duck egg product attributes to consumers when buying and these buyers’ attitudes and beliefs regarding duck egg products. Based on the findings, the consumer market was segmented and the marketing opportunities reviewed. Results from a principal component analysis among Chinese households suggest the existence of five market segments, described as Enthusiasts, preserved egg Potentialists, Pragmatists, Health Sceptics (salted duck eggs), and Neutralists (preserved duck eggs). Significant differences were found between segments in terms of attitudes and the importance placed on product characteristics. Health Sceptics, preserved egg Potentialists, and Pragmatists of both egg products were significantly biased against Chinese imports compared with the others. Except for Enthusiasts, segments disagreed on whether eggs are ‘Healthy Products’. Preserved egg Enthusiasts had a significantly lower acculturation score compared with all others, while salted egg
Enthusiasts had a lower score than Health Sceptics. All segments rated “produced in British Columbia, not mainland China” products in the “neutral to very likely” range for increasing their satisfaction with the eggs. Results also indicate that buyers of each egg type are willing to pay an average premium of at least 10% more for BC produced products versus imports, all other characteristics being equal. Overall results indicate that opportunities exist for local producers and processors.