



# Ducks International

Cherry Valley Farms Newsletter

# 2017

A Year of Optimism and Expectation

The World Duck Industry has had a few turbulent years, but 2017 may see the return of optimism across major regions of duck production.



In China, duck production is a major part of the poultry industry and produces the cheapest animal protein and one third of the poultry meat consumed. The huge demand for cost effective duck meat by the institutional consumers

and in the food processing industries has led to the very rapid expansion of duck production in China. The slowdown of the economy has forced the industry to face not only the challenge of its own overcapacity, but also readjustment of other industries over last few years. 2016 has witnessed the 1<sup>st</sup> year of improved profitability in most stages of supply chains since China changed the course of its development model. In addition, the development of new market sectors based on minority duck breeds has opened opportunities for growth and added value. The full recovery may still take a little more time, but the industry has detected a sense of new optimism.

The duck industry, along with other poultry sectors, faces a significant challenge from the AI outbreaks that began in late 2016 and continue in 2017. These outbreaks have resulted in disruption of the supply of breeding stock to other parts of the World, but they may have the effect of stabilis-

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ing European production and strengthening profitability. A period of restructuring to improve production and operational efficiency may lie ahead, but there is light at the end of the tunnel, especially as the industry moves eastwards. Companies that take up the challenge can be expected to become more locally competitive with the support of stable prices and improved management standards.

In Asia and Pacific region, the main challenge in 2017 will still be the security of supply in the wake of new and existing AI outbreaks in Europe and at the same time, the duck industry is embracing a period of very dynamic development in many emerging economies. Cherry Valley has worked together with our partners in the region through advocating for regionalisation and establishing local supply bases to mitigate its impact and made some significant progress.

The World Duck Industry anticipates a challenging but more optimistic year in 2017.



## Karlsdorf Hatchery Refurbishment

Cherry Valley Farms has recently completed the refurbishment of its German Hatchery at Karlsdorf. Norbert Winkler, Operations Manager, has planned and overseen the work, which has involved remodelling parts of the original buildings and increased the setter capacity to 284,256 eggs.



Herr Winkler joined Cherry Valley in 2007, shortly after it established the production facility in Germany, which is intended to serve European customers in Germany, Netherlands, Hungary, Czech and Poland and to supply export markets in Russia and beyond. Norbert is also responsible for the farms and hatchery in Germany and looks after customers in Germany and Eastern Europe.

The hatchery was built as a pedigree duck breeding centre by the former East Germany and has remained in continuous use since it was built in the early 1970's. It has developed over the years and the hatchery team is now responsible for producing more than 2.5 million ducklings per year.

The picture below shows Norbert Winkler and Malcolm Stimpson in the remodelled setter hall.



## Eurotier 2016



Cherry Valley's European team including Pam Cousins (pictured above), Svetlana McCue, Norbert Winkler and Nick Lynn had a busy week at the Eurotier Exhibition in Hanover during November 2016. The Exhibition was well attended and we were very pleased to welcome many of our customers from Europe and further afield. There was a great deal of interest in Pekin duck production, especially from businesses based in the East of Europe, including; Poland, Hungary and Russia.



## Upcoming Exhibitions

**VIV ASIA**—BITEC Bangkok, Thailand

15th—17th March 2017

*Stand Number: H100.2066*

**VIV RUSSIA**—Crocus Expo, Moscow, Russia

23rd—25th May 2017

*Stand Number: 08.13A1*

**VIV EUROPE**—Jaarbeurs, Utrecht

20th—22nd June 2018

*Stand Number: 11.A007*





# The use of DNA Molecular markers in Genetic Breeding

Molecular markers are small changes in the DNA code, which often do not have a direct effect on the biological processes in an organism, but can be identified using molecular biology techniques such as PCR (polymerase chain reaction: multiplying up a section of DNA defined by the primers used) and hybridisation. Usually there are just two forms of a molecular marker (a single letter difference = Single Nucleotide Polymorphism, SNP), but each individual will have many molecular markers throughout their whole DNA sequence. This means that a number of different molecular markers dispersed across the DNA can be used to identify an individual. This is often called DNA finger printing, as groups of markers can be selected to ensure that the forms of markers are unique to an individual.



## Identification and Pedigree tracking

Molecular markers can be used to identify individual birds, strains, or the parentage of birds so that the pedigree can be tracked. Using DNA to track the pedigree in open mated pens greatly facilitates the process, in that it can improve fertility, increase the number of possible crosses, allows more natural mating behaviour, more efficient space usage, extended data collection, improved perceived welfare and reduction in the risk of errors, all of which improve selection potential.

## Genetic diversity

It is a pre-requisite of any breeding programme that there is genetic diversity within each elite line to be able to select the best individuals for the next

generation to gain the continual improvement from the breeding programme; the more genetic variation within a line the more improvement can be made. Molecular markers can be used to monitor inbreeding within the selection programme to avoid inbreeding depression which can lead to loss of reproductive performance and health.

## Genomic selection

Molecular markers may be linked to a gene that controls a trait that is being selected for, so can be used to select individuals with the advantageous version of the gene early in their life, without having to measure the trait. Genomic selection is particularly advantageous for 'difficult to measure' traits (e.g. behavior such as aggression), traits that may not be displayed in all individuals (e.g. sex specific traits, such as egg production in males) or traits that would prevent an individual reproducing or being used as breeding stock for the next generation i.e. traits that are destructive such as carcass quality, disease tolerance, etc. It is essential that the link between the trait and the marker is true. This requires carrying out analysis on a 'training' population to quantify the relationship between the traits of interest and the molecular markers every few generations to ensure that the link is still strong.

Efficient genomic selection requires tens of thousands of markers to be assessed in each individual. The costs of sequencing and analysing molecular markers are constantly reducing as improved techniques are utilised, and much work is being done to improve the statistical methods to identify useful molecular markers, allowing more efficient analysis. Genomic selection is a rapidly developing influential selection tool, and Cherry Valley are continually assessing its uses in the CVF breeding programme.



1—Nobuhiro Koyama and Yoshikazu Sakagami from Yamashiro Nousan Company in Japan with Cherry Valley colleagues at Cherry Valley House.

2—Dr Yan with Dr Tariq (centre) and Mr Abed (right), the owner of El-Abed Meat and Poultry Company of Egypt.

3—Visitors from Bangkok Ranch who recently joined us in the UK for a training course, pictured at Cherry Valley House with some of the UK team.

4—Members of the Duck Tec team pictured alongside colleagues from Cherry Valley Farms at a recent technical seminar in Berlin.

5—Natthakit and Watcharasak from CP Thailand pictured with the Cherry Valley team at Cherry Valley House.

6—The breeding stock management team from Big Duck Farm in Thailand with Nick Lynn, during a technical seminar.

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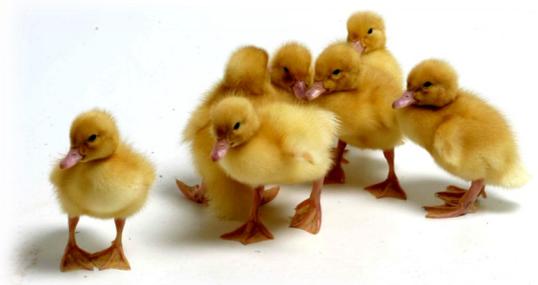
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