

FACTS » that « FIGURE

1 | 2017



*The key
to your profit!*



CONTENTS

| | | | |
|---|----|--|----|
| Editorial | 2 | H&N and Haavisto's Breeding Farm | 12 |
| Worldwide H&N Parent Stock Sales: Steady and Then Explosive Growth | 4 | H&N International's Launching Ceremony of H&N's "Crystal Nick" in Faisalabad Pakistan | 14 |
| Wellisa Farm of Bantayan, Cebu Philippines weathered the Super Typhoon | 6 | Successful Product Launch for "Brown Nick" in Brazil and Paraguay | 16 |
| Profile of Biyinzika Poultry International Limited - It is Possible! | 8 | H&N ACADEMY 2016 | 18 |
| New Western U. S. A. H&N Distributor | 10 | Laying Hen Housing in the U. S. A.: A Crisis is on the Horizon | 20 |

Dear valued customers and partners,



There is no doubt - the global success of H&N is a fact.

The daily increase of efficiency on egg production is supporting very much the sustainable growth of both, Brown and White H&N layers.

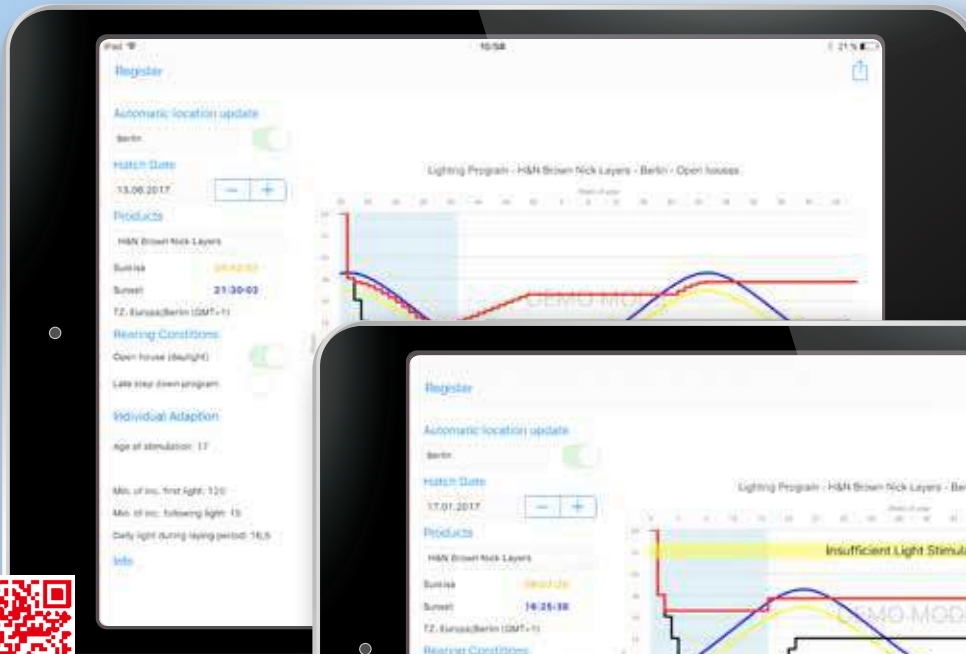
Based on the latest genetic progress, the focus is more than ever on maintaining production persistency longer during the life of the layers in production. Egg producers are consistently reporting their satisfaction with H&N layer flocks.

We intend to start sharing flock results and will soon start a complete marketing program to highlight this success even more, with additional support to the distribution activities worldwide.

In the meantime, thank you for making it possible!

*Javier Ramírez Villaescusa
Managing Director*

New Apps



NEW APPS AVAILABLE

NEW APPS AVAILABLE: Lighting Program and the Performance Specifications App

Why the Lighting App?

Sexual maturity and performance of layers are substantially affected by the length of daylight during rearing and production. In systems where pullets are kept in windowless houses without access to the outside, lighting programs can be designed in such a way that optimal rearing and preparation for the laying period are guaranteed. However, still in many countries worldwide light-

tighthouses are rare and environmental controlled houses which have been constructed during the last years are often not fully light-tight. For these kinds of housings a tailor-made lighting program has to be compiled. „H&N Lighting Program App“ offers you the opportunity to make this possible set to the season, geographical location and the date of the hatch.

WORLDWIDE H&N PARENT STOCK SALES:

Steady and Then Explosive Growth

General Growth

Over the most recent 10 year period worldwide H&N parent stock sales have achieved impressive growth. By assigning a value of 100 to the sales year 2005-06, we can see in Figure 1 that within four years sales nearly doubled. Then for a period of about five years sales remained steady at values between 195 and 205 of sales year 2005-06. However, it is within the last two years that we've seen explosive growth with sales increasing from a value of 205 in 2013-14 to 353 in 2015-16 (the most recent sales year that was completed on June 30, 2016).

Analysis for five regions

Stated differently we've seen average yearly growth rate of more than 25% over the 10 year period following 2005-06. This achievement in and of itself is already quite impressive. However what really stands out is the nearly 150% increase in sales since 2013-14. For this analysis, I've separated the world into five regions as follows:

East Asia – Japan, South Korea, Taiwan and members of the ASEAN 10 group of nations located in southeast Asia. It should be noted that since this is an analysis of parent stock sales China and Indonesia are not included as these are markets for grandparent stock sales.

SAAME (South and Central Asia, Africa and the Middle East) – This broad geographic region includes such south Asian nations as Bangladesh, Nepal and Pakistan and central Asian nations like Kyrgyzstan and Uzbekistan. It should also be noted that

Turkey is considered as part of the Middle East. India is not included because it is a grandparent stock market.

Europe – Included in this region are any member nations of the European Union, Russia, Switzerland and Ukraine.

Latin America – This region encompasses all nations in the Western Hemisphere south of the U. S. A./Mexico border. Brazil is not included as this is also a grandparent stock market.

North America – Only Canada and the U. S. A. are included in this region.

Figure 2 which follows indicates a value of 100 for 2005-06 followed by the average for the 10 year period from 2007 to 2016 and then the value for 2015-16.

With the exception of East Asia there was growth in each region but it was es-

pecially pronounced in North America followed by the SAAME region, Latin America and Europe respectively.

Results East Asia

Although East Asia saw a decline in sales of about 6% over the last 10 years it is interesting to note during 2015-16 sales in this region were the highest in the last four years. Also, sales in East Asia were 33% greater in 2015-16 compared to 2014-15. This region has potential for further growth in markets such as Malaysia, Myanmar, Philippines, Thailand and Vietnam.

Results SAAME

Results in the SAAME region are marked by strong and steady business in Turkey and also by large increases in business in



Figure 1

other markets in the region including Algeria, Uganda and Zimbabwe. European results have been bolstered first by the Netherlands but also recent market entries in France and the United Kingdom.

Analysis Latin America

In Latin America consistent results from Argentina and Colombia have been boosted by a significant increase of business in Ecuador and a robust market entry in Guatemala. Although Brazil is a grandparent market it should be noted that since its inception five years ago sales of NICK CHICK layers by H&N Avicultura have gone from zero to five million. In addition BROWN NICK has been launched in both Brazil and Paraguay a market which is supplied with chicks from Brazil.

The US Market

Returning to the reasons for such explosive growth in the past two years we need only point to developments in the U. S. market. In the period of less than a year from early 2015 to the beginning of 2016, H&N's presence in this market went from a marginal position on the West Coast with one small distributor to coverage of the entire market with four large and strong distributors. Each of our American distributors have earned strong loyalty from their respective customer bases. This customer loyalty to distributors can be considered the main factor for H&N's resurgence in the American market. A further boost was added by news of excellent performance of H&N flocks enjoyed by West Coast egg producers which filtered back to the rest of the country. This has fueled demand for H&N throughout the U. S. A.; so much so that nearly half the increase of worldwide parent stock sales in the past two years is from this one market.

Sales According to H&N Breeds

In Figure 3, Product Sales Analysis, which follows we can see that the main increase comes from NICK CHICK sales mainly to the U. S. A. Increases in BROWN NICK

sales have come from various world markets; notably Algeria, Colombia, Ecuador, France, Zimbabwe, United Kingdom, Uganda, U. S. A. and Vietnam.

Currently there are 37 nations having distribution of H&N breeding stock within their borders. In addition grandparent flocks are housed in company owned locations in Germany, Brazil, Canada, Spain and the United States.

Continued strong growth is expected.

Customer Needs

There will be continued emphasis on close attention to customer needs that will involve timely and meaningful technical support along with robust assistance in promotional efforts by distributors. It will

be absolutely essential to continue with uninterrupted supply of breeding stock to our customers. This will include maintaining several strategically located distribution centers around the globe. In addition, close cooperation with the government veterinary authorities of importing nations to promote regionalization under the guidelines of OIE (World Organization for Animal Health) is being pursued.

Last but not least credit for these remarkable sales achievements should be given to H&N's dedicated and hardworking staff and of course our loyal customers. These are two of the main pillars of our success.

Rich Wall



Figure 2

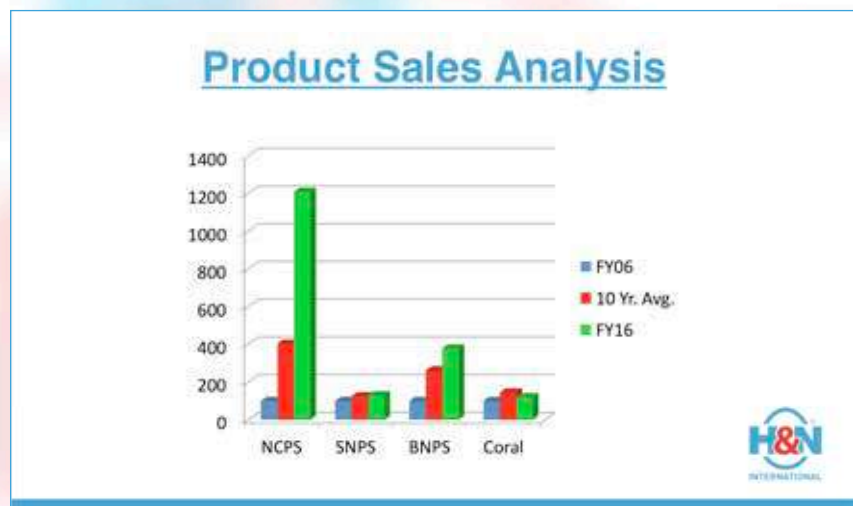


Figure 3



WELLISA FARM OF BANTAYAN,

CEBU PHILIPPINES WEATHERED THE SUPER TYPHOON

Bantayan Island is located in the Visayan Sea in the Philippines. It is part of the group of islands comprising the province of Cebu, Philippines. Beautiful beaches abound the island and as such, tourism is a major industry there. Fishing is also one of the major source of income on the island as well as the growth of agricultural crops. However, Bantayan is more popularly known as the “egg basket of the Visayas”.

Typhoon Haiyan

Aside from the local market on the island, eggs from Bantayan are exported to other parts of the Philippines. Before the devastation brought about by the Super Typhoon Haiyan (Class 5 – November 2013), Bantayan had an estimated layer population of 2.5 to 3 million layers. After Haiyan, according to the Poultry Site News desk, around 80% of the layer population was

wiped out. There were reports that the total loss of the poultry industry in Bantayan was 421 million Philippine pesos (8.78 Million US\$). This prompted the poultry farmers to rebuild what was lost. Most the layer houses in the island were in open houses with conventional cages. Many had nipa leaves as roofs for the houses.

Wellisa Farm – Yesterday and Today

Wellisa Farm, owned by the Chalim family, decided to take the lead and started to build closed, environmentally-controlled and typhoon-ready commercial layer houses. The farm started its operations in 1990 with traditional cages in open houses. Today, they still have open houses for their commercial layers but 50% of their layer operations are already in the closed



house system. They installed family cages in these closed houses. They imported cages from Europe. The state of the art building materials and other equipment including the ventilation systems were also imported. Aside from commercial layers, Wellisa Farm also has breeder farms for pigs with the genetic material coming from a company located in Europe. They sell the progenies from these breeder pigs nationwide. With the greater demand of electricity for these closed houses, they came up with an idea to produce their own electricity by using the manure coming from both poultry and pigs. They have set up biogas digesters and the gas produced is now being used to supply the whole farm with power. Wellisa farm also produces a large amount of commercial organic fertilizer.

Situation After Typhoon – Never give up!

With the desire to rebuild what was lost during the super typhoon was their driving force, the owners decided to embark on a new venture. They decided to purchase H&N SUPER NICK Parent Stocks. The aim is to secure the supply of quality DOCs for their commercial farm. The breed of choice is SUPER NICK because they have had SUPER NICK commercials in their farm before and they were quite satisfied with its performance. The large size of the eggs with its strong shells is a perfect match for their market. The productivity of SUPER NICK will warrant the return of investments and ensure profit for the Chanlim family. As with their commercial flocks, SUPER NICK parent stocks are placed in closed houses with enriched family cages.

The automated nests will ensure the collection of clean hatching eggs. The cages are the first of its kind to be installed in the Philippines. Aside from the benefits of the closed house system in terms of the general well being of the birds, the house is 'foreign bird proof' as opposed to open houses. This serves as an additional feature for biosecurity.

Gilbert Cervantes

Profile of Biyinzika International Limited – It Is Possible!



In Uganda, Biyinzika means “It Is Possible” and we at Biyinzika Poultry International Ltd really take this to heart. At Biyinzika, we strive to be the leading poultry company in Uganda by empowering our employees and supporting our customers with deliveries

of high quality products and services to bring about positive changes within all of our homes, businesses and communities.

General Overview

Biyinzika Poultry International Limited is involved primarily in the business of rearing parent stock for the production of commercial broilers and layer day-old chicks. Incorporated in Uganda in 1990, the company has undergone steady development in Uganda’s poultry sector and currently produces 194,000 broiler chicks and 60,000 layer chicks per week, which constitutes

approximately over 50 % share of the local market. The company’s breeder farms together with their two hatcheries are located in the Mukono District and have a capacity to produce over 500,000 chicks/week.

Biyinzika Poultry has grain storage silos with the capacity of storing up to 30,000 metric tons, and a state of the art feed mill with a production capacity of 12.5 tons per

hour. We are proud to announce that we recently received our HACCP Certification.

H&N Brown Nick – the best choice

Currently, Biyinzika is H&N’s largest customer in East Africa. It produces as well as distributes H&N Brown Nick layer chicks not only to customers within Uganda, but also to the other countries in the East African region. We at Biyinzika truly enjoy



Biyinzika Poultry Limited



working with H&N International and are very happy with the performance of the H&N Brown Nick breed. H&N International provides us outstanding technical service along with continuous support from their energetic H&N representatives.

Main Objective

Biyinzika's main objective is to help to develop the small to medium scale poultry sector across Uganda and the region by enabling easy access to the main inputs as required by poultry farmers. This includes healthy day-old-chicks as well as specially formulated nutritious feed along with pelleted broiler feed for optimal growth and

performance. These quality products are sold in all of the company's 31 branches nation-wide along with excellent technical support provided by our suitably qualified staff to farmers.

Recent Developments

Recently, Biyinzika has diversified into the large-scale production of commercial broilers and is intending to put up an abattoir so as to add value and sell dressed chicken into the retail market.

Future Plans

Further diversification and growth is being planned for the near future. This includes:

- Expanding our range of livestock feeds offered to farmers to include pig, dairy and beef
- Production of point-of laying hens for sale to layer farmers
- Production of quality dog-food for private pet owners as well as security companies

Craig Neilson

New Western H&N



U. S. A. Distributor

In January, 2016 Merrill's Poultry Farm Inc. of Paul, Idaho agreed to become the newest H&N distributor in the U. S. A. Merrill's is a family owned hatchery business that was founded in 1924 and has thus been distributing layer chicks throughout the western United States for over 90 years. Currently Merrill's has an annual layer chick capacity of seven million. From its base in southern Idaho Merrill's can easily deliver chicks to customers located in Utah, Montana, Washington, Oregon and California.

Mr. Jack Merrill the current company president represents the third generation of his family to manage this business. He reports that his customers are pleased that he has changed to H&N "BROWN NICK" and "NICK CHICK" from their previous breeds.

Mr. Merrill went on to say that his customers will gladly follow him to H&N. Thus, Merrill's will have a ready made customer base for H&N layer chicks.

Mr. Merrill went on to say "With egg producers in the western U. S. A. moving more towards cage free housing and management, we feel H&N layers will be an excellent choice. Due to our company's structure, we feel we can work closely with H&N in more fully developing the presence of "NICK CHICK" and "BROWN NICK" layers in this region. We are pleased to acquire this H&N franchise and our thanks to H&N for giving us the opportunity to join their distribution network".

Marketing Department



H&N and Haavisto's The Launch in Scandinavia

In July 2015, we were very delighted to bring in the first H&N Breeders into Scandinavia. These H&N NICK CHICK birds were delivered to our new customer, Haavisto's Breeding Farm.

Haavisto's History and Company Structure

Haavisto's Breeding Farm was founded in 1906 and is still a family-owned company. Mr. Marko Haavisto manages the company as its Managing Director and has a total of 11 staff working on his farm. The latter's father, Jarmo Haavisto and his mother, Hilppa Haavisto, both officially retired, are still working full time and are helping with the daily operations of the business. Haavisto's Breeding

Farm has about 22-30,000 breeders in production. They are making plans to build a new hatchery now and in 5 years, replace the current hatchery. Beside the breeders and hatchery, they also have almost 200 hectares of land where wheat, oat and barley are grown. All of these raw materials are used in the daily diets for breeders and commercial flocks.



Breeding Farm

Own Packing Company

Satamuna Oy is the packing company that is owned by Marko Haavisto and his younger brother, Toni Haavisto. The company packs over 10 million kilogram of eggs annually. The 2 Haavisto brothers also own about 100,000 commercial H&N layers.

H&N Field Results

In Finland and in Estonia, the first H&N commercial flocks produced very good results. The Haavisto brothers are very pleased with these first results. We hope that these results will continue in the future thereby making the H&N breed together with the Haavisto family a great success!

Leon Schouren

H&N International's Launch of H&N's "CRYSTAL NICK"

Pakistan is one of the most important countries of the South Asian Region. It is home to approximately 200 million people making it the seventh most populous country in the world. With a growth rate of close to 2% per year, Pakistan's population is expected to reach 314 million by the year 2050. Meanwhile, Pakistan has an annual economic growth of 3.7% of Gross Domestic Product (GDP).

Egg Consumption

With the increasing population and consumer purchasing power comes an increase in demand for inexpensive, high quality animal protein. Eggs are the cheapest form of animal protein available. At the moment, the annual per capita egg consumption in Pakistan is almost 70 eggs, which isn't very high according to WHO standards. This means there is a huge potential for growth in the egg industry.

There are approximately 50 million commercial laying hens in Pakistan serving the market, where demand is nearly 100% for white eggs.

Egg Production

Egg production in Pakistan is growing at an average rate of 5% per year. This means the Pakistani egg industry is one of the fastest growing industries in the world. The egg industry in Pakistan is making a tremendous contribution to bridge the gap between the supply and demand

of animal protein. In addition, the poultry industry of Pakistan generates employment and provides a source of income to more than 1.5 million people.

H&N Crystal Nick Launch

Due to the demand for medium-sized eggs in the market, H&N INTERNATIONAL has launched a new breed by the name of 'H&N CRYSTAL NICK' together with their local partner, "Awaz Poultry Pakistan".

On 28th January 2016, H&N INTERNATIONAL along with Awaz Poultry Pakistan, organized a seminar to officially launch "H&N's CRYSTAL NICK". The event was held at the Best Western Hotel Faisalabad Pakistan. Approximately 180 layer farmers and local consultants from across the region participated in this event.

With the introduction of H&N's CRYSTAL NICK in the Pakistani market, people are getting more interested in buying the new breed due to its lesser feed intake, slightly higher number of eggs with an acceptable egg size.

Guests and Speakers

The guest of honour at the seminar was Mr. Amir Razzaq, the chairman of layer controlled farms association and Big Layer Farmer of Pakistan. There were 5 national and international speakers at the seminar, all of whom shared valued information regarding modern layer management and its genetics. The welcome address was delivered by Mr. Muhammad Atif, Director of Awaz Poultry. The first presentation was given by Mr. Muhammad Zahid Rahim, Director at Awaz Poultry. He provided useful knowledge on "Awaz Poultry's History and its future Prospects".

Unveiling Ceremony of in Faisalabad Pakistan

The second presentation on “H&N’s History and its Products” was given by Dr. Sohail Habib Syed, Sales & Service Manager at H&N INTERNATIONAL GmbH Germany.

The third presentation on “Genetics of H&N INTERNATIONAL with Special Focus on Modern Layer Management” was given by Mr. Leon Schouren, Technical Services Manager at H&N INTERNATIONAL GmbH Germany.

The fourth presentation on “Biosecurity on the Farms with the Practical Approach” was given by a local poultry consultant, Dr. Ahmed Din Anjum. The fifth presentation on “Vaccination and Disease Protection”, was given by Dr. Frahan, Director of Forward Solutions. These presentations were followed by a question and answer session.

To Close the Seminar

The guest of honour thanked H&N INTERNATIONAL and its Partner Awaz Poultry in Pakistan for providing a unique opportunity to layer farmers to adopt the scientific approach in modern poultry farming. He also emphasized the need to educate the people regarding the consumption of eggs per capita that can be helpful to eliminate hunger and poverty in the country. The words of thanks were given by Dr. Umer Masood, CEO of the Awaz Group of Companies. All participants were served with a lavish lunch at the end of the event.

Dr. Sohail Habib Syed





Photo Caption: H&N Avicultura staff at the H&N stand during the July, 2016 Egg Festival in Bastos, Brazil; l. to r. Dirceu Sakata, Sales Mgr.; Barbara Zilla, Admin. Mgr.; Eliton Basi, Sales Rep.; Cacio Fracaro, Gen. Mgr.; Dr. Matheus Mizuma, Veterinarian; Fabio Katayama, Sales Rep. and Seme Neto, Sales Rep.

Successful Product Launch for “BROWN NICK” in Brazil and Paraguay

In November, 2015 a seminar was held by H&N's Brazilian distributor H&N Avicultura for the product launch of H&N “BROWN NICK” in the South American markets of Brazil and Paraguay. The seminar venue was the town of Bastos which is known as the egg basket of Brazil. Attendees included 15 Brazilian egg producers representing production from nearly 17 million layers. All H&N chicks for the Brazilian and Paraguayan markets are produced at modern state of the art facilities located in Nova Granada, Sao Paulo State. From this strategically located site chicks can be efficiently shipped to customers throughout Brazil and Paraguay.



South American Egg Market

Brazil is the largest egg producer on the South American continent as well as being second only to Mexico in Latin America and seventh largest in the world. Currently Brazil has a population of 160 million commercial layers, 20 % of which are brown. Paraguay is a much smaller market with about 2.5 million layers and 100 % demand for brown eggs. However Paraguay is significant for H&N Avicultura. They've become the main chick supplier for Maehara Farms; the largest egg producer in Paraguay which has close to half the layers in the market.

H&N Avicultura

H&N Avicultura has been prominently represented since its inception in 2011 by Brazilian egg industry veterans Dr. Mario Nihei and Mr. Dirceu Sakata who are based in the Sao Paulo City area. Dr. Milton Mizuma who is based in Bastos continues to provide technical support, assisted by his son Dr. Matheus Mizuma. Very importantly Mr. Cacio Fracaro who is well known and respected throughout the Brazilian egg industry has recently been appointed general manager of H&N Avicultura. Mr. Fracaro has brought along with him an experienced team of seven egg industry specialists who have contacts throughout Brazil. With this large influx of new talent and expertise H&N Avicultura is poised to quickly and significantly expand the presence of H&N layers throughout Brazil and Paraguay.



Rich Wall

H&N ACADEMY 2016

Thank you for joining us!

The H&N Academy was held in April of this year. We welcomed many customers from different countries and were pleased to present them an interesting program with enough time for interactive discussions and, of course, to socialize.

Programme

On Monday, 25.04.16, our Managing Director, Javier Ramírez, started the week with a warm welcome. Afterwards, the participants had the chance to introduce themselves. The seminar commenced with general topics such as "Housing and Brooding", "Parent Stock Management" and "Hatching Egg Handling & Incubation". The day after, emphasis was put on "Feeding and Feed Formulation for PS and Commercial". In the afternoon, the group went to Bremerhaven for a sightseeing tour as part of the social program, which should not fall short during such an informative week. Our teams from the genetic department and the veterinary laboratory managed the seminar on Wednesday. The seminar was concluded with a visit of Agromix Hatchery and Rondeel Ewijk in the Netherlands.

Thank you

We appreciate the trust our customers place in our capability to transfer part of our know-how to the participants and we sincerely do hope that everyone will benefit from the various presentations we put together. It was indeed a great pleasure to have passionate discussions within the group and also an amazing experience for us to be a part of the strong team spirit that came to life during the training.

Marketing

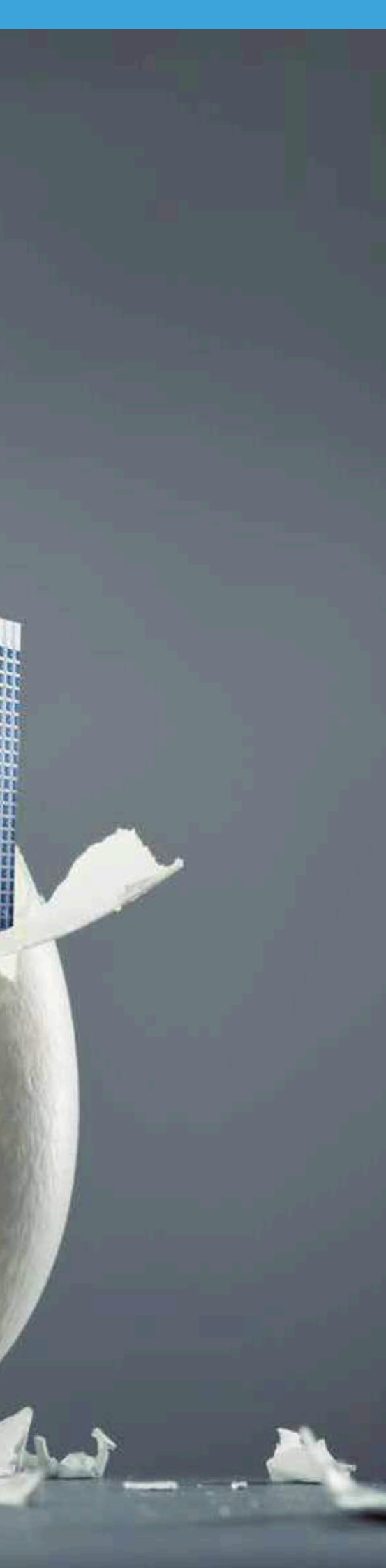


We are looking forward to our next H&N Hatchery Academy in July 2017!



Laying Hen Housing in the U. S. A.: A Crisis is on the Horizon





Background

Ban on Conventional Cages

In November, 2008 a referendum was included in the ballot for the election that was held in the state of California. Known as Proposition 2 or “Prop 2” this measure included a proposed ban on conventional cages for laying hens. United Egg Producers (UEP) is a cooperative whose members account for approximately of 95% of the eggs produced in the United States. UEP spent \$10 million in an effort to defeat Prop 2. However, nearly two thirds of those casting ballots voted in favor of Prop 2, which constituted a resounding defeat for the egg industry. Consequently similar measures have been passed in the states of Arizona, Michigan, Ohio, Oregon, Washington and Wisconsin. A similar measure was passed in Massachusetts in November, 2016 election with 78% of voters in favor of banning conventional cages.

The Egg Bill

In response, in 2011 UEP reached a compromise with the Humane Society of the United States (HSUS), the largest and most powerful animal rights group in the U. S. A. In this agreement known as “the Egg Bill”, HSUS retreated from its “no cages” stance to one in which they agreed to accept enriched colony cages. Egg producers would have had until 2029 to fully convert to enriched colony cages. The goal was to have this agreement passed as legislation by the U. S. Congress. This initiative was pursued by UEP and HSUS until 2013 but ultimately it was defeated by opposition from beef and pork industry groups and the American Farm Bureau. These organizations wished to avoid having a precedent set by which the U. S. Congress would mandate animal husbandry practices.

Coalition for Sustainable Egg Supply

As a means of further evaluating options for layer hen housing, the Coalition for

Sustainable Egg Supply (CSES) was established. This group includes 29 members representing egg producers, universities, animal welfare groups, poultry industry organizations, restaurant chains and food manufacturers and distributors. CSES conducted a study that compared results of two consecutively housed white egg layer flocks over a three year period. Systems evaluated included conventional cages, enriched cages and cage free aviaries. Five parameters as follows were measured for each system.

- Food Safety and Quality; no significant differences between the systems
- Animal Health and Well Being; Enriched cages were best, aviaries the worst
- Environment – Enriched cages were best, aviaries the worst
- Worker Health and Safety – Conventional and enriched cages were both better than aviaries
- Food Affordability – compared to conventional cages, production cost was 13% higher for enriched cages and 36% higher for aviaries

Performance Results

In addition, layers in enriched cages had the best production performance with the exception of slightly higher lay cycle mortality compared to conventional cages. Layers housed in aviaries did not perform as well as those in conventional and enriched cages. In addition, lay cycle mortality in aviaries was more than double that of conventional and enriched cages. It can thus be reasonably concluded that enriched cages offered a solution that provided for better performance and a welfare compromise that was accepted by animal rights activists such as HSUS. Aviaries proved to be the worst system in each parameter except food safety and quality where it was only equal to and not better than conventional or enriched cages.

Results of this study confirmed that egg production from aviaries is actually less sustainable than it would be from conventional



or enriched cages. Although conventional cages proved to be the most cost effective, this system isn't acceptable to the animal rights groups, food industry companies and much of the consuming public.

Animal Rights and Political Correctness

Animal rights groups have been extremely effective in framing the discussion regarding layer hen housing. Their perspective is based on emotional rather than science based reasoning. Due to their well funded efforts, these groups have succeeded in convincing most consumers that cage free housing is superior to cages in terms of animal welfare and sustainability. In fact, results of the CSES study indicate that the reverse is true. As mentioned, enriched cages would have been a reasonable and acceptable compromise. Unfortunately however, the vast majority of consumers don't take the time nor do they have the interest in discerning the differences between conventional and enriched cages. To the average consumer, cages are bad and cage free is good. Stated differently, cage free is "politically correct".

Reaction by the Food Industry Intention

Thus far, 121 companies in six sectors of the food industry (supermarkets, restaurants, distributors, manufacturers, convenience stores and hospitality and travel companies) have declared their intention to source only cage free eggs. The vast majority intend to have this policy in place by not later than 2025.

Tipping Points

Certain announcements are seen as "tipping points" that accelerated the movement towards cage free eggs. The first was the announcement by McDonald's which uses in excess of 1.2 billion eggs in its U. S. restaurants annually. Another was the announcement by Walmart which accounts for 25% of the groceries sold in the U. S. including annual sales of 11.5 billion eggs. This prompted other prominent companies such as Burger King, Wendy's, Starbucks, Albertson/Safeway, Kroger and Costco to follow suit.

Consequences of CSES Findings

It's interesting to note that five companies committing to cage free eggs are CSES

members. This is in spite of the CSES findings which indicate enriched cages are superior to cage free aviaries. Consequently nearly 58 billion cage free eggs would be needed by 2025. This is equivalent to production from over 214 million layers, or more than two thirds of the current U. S. layer flock.

Consequences for the U. S. Egg Industry

What is the definition of cage free?

It has now been determined that the future of egg production in the U. S. will be cage free. However, what is the definition of cage free? Nothing has been mandated or passed into law that specifies what is and isn't actually cage free. Including UEP, there are three animal welfare certifying bodies (the others being Humane Farm Animal Certified and American Humane Certified) that determine what is acceptable as humane housing conditions for laying hens. Currently UEP and American Humane don't prohibit doors on any replacement pullet or laying hen enclosures. HFAC however will not certify as cage free any system that includes doors in either



growing or laying systems. This is an important distinction as it is very likely food industry companies, animal rights activists and consumers will not accept the presence of doors.

Financial Consequences

There are also huge financial consequences on the horizon for the U. S. egg industry. It could cost as much as \$45 per laying hen to complete the conversion to cage free housing. Currently, 16.6 million layers are in cage free housing or more than 197 million less than what will be needed by 2025. This calculates out to a cost of nearly 8.9 billion dollars for the entire industry to convert to cage free housing. Existing cage facilities will probably be deemed worthless by lenders for use as collateral. This means egg producers will have to finance cage free conversions with their own funds.

Cage Free Equipment

Another bottleneck appears in the form of availability of cage free poultry house equipment. There are only about ten companies worldwide who manufacture and

install this equipment. The possibilities of equipment shortages and lacking availability of trained installation technicians looms very large. Finding employees willing to work in cage free houses is also more difficult due to higher dust and ammonia levels and greater ergonomic challenges such as picking up floor eggs. More workers, at least two times as many will be needed to care for flocks in cage free houses.

The Marketplace: What Will Happen in the Future?

Certain prominent egg industry figures believe that it is physically and financially impossible to achieve the specified scale of conversion to cage free housing by 2025. It has already been expressed that food companies and animal rights activists may have to give the egg industry some additional time. How willing the animal rights groups would be willing to do this remains to be seen.

Costs and Rules

As we've already seen, production costs in cage free systems are considerably higher.

Low income consumers often depend on government food programs to meet their food budgets. Some but not all of these programs don't allow purchase of specialty items such as cage free eggs. If these rules aren't changed, low income consumers would have limited or even no access to eggs. Also, during the 2015 avian influenza crisis some food manufacturers switched to egg substitutes due to the high cost of eggs. This phenomenon could repeat itself when only higher cost cage free eggs are available.

Humane Conditions for Layer Hen Housing

Incorrect perceptions of what constitutes humane conditions for layer hen housing have driven the demand for a cage free egg supply. However, this is what the marketplace says it wants. The U. S. egg industry now faces a period of almost cataclysmic change ahead as it struggles to meet consumer demand for a continuous, reasonably priced supply of fresh eggs.

Rich Wall



Imprint

EDITOR

Marketing Department
H&N International GmbH
Am Seedeich 9 | 27472 Cuxhaven | Germany
Phone +49 (0)4721 5 64-0 | Fax +49 (0)4721 5 64-111
E-mail: info@hn-int.com | Internet: www.hn-int.com

PHOTO CREDITS

H&N International GmbH; Can Yesil / Shutterstock.com, nito / Shutterstock.com, muratart / Shutterstock.com, prapass / Shutterstock.com, everything possible / Shutterstock.com, racorn / Shutterstock.com, loca4motion / Shutterstock.com, Shanti Hesse / Shutterstock.com, Silverfoxz / Shutterstock.com, patrice6000 / Shutterstock.com,

GOTOMEDIA WERBE- UND MEDIENAGENTUR
www.gotomedia.de