

Poultry Digital



Poultry heroes

People and poultry working together



Inside the Poultry heroes issue | Richard Blossom, co-founder and CEO of Hilltribe Organics, Thailand • HenPower: henergising the elderly with Equal Arts • Dr Tracey Jones, director of Food Business, Compassion in World Farming • John Brunnuell, free-range egg producer, USA • Reader Q&A with Mike Colley

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“Poultry heroes of the world”

This edition of *Poultry Digital Magazine* acknowledges a handful of those individuals whose perspective on poultry is innovative and “ruffles a few feathers” in the industry. Seeking to shed some light on their impact, we first meet Richard Blossom (page 12) whose work in Thailand has helped many families to lift themselves out of difficult circumstances through entrepreneurial, free-range egg production.

We then turn to a special programme called HenPower (page 16). Run by the Equal Arts charity, HenPower “henergises” elderly citizens in care facilities across the UK by helping them to hatch, raise and ultimately derive inspiration from their own hens. Dr Tracey Jones and her team at Compassion in World Farming (page 18) have worked tirelessly to promote high welfare yet commercially viable poultry meat and egg production. We hear from them on some of the industry-leading poultry heroes they work with.

Finally, John Brunnquell’s (page 22) experience with individual hen monitoring and his support of free-range eggs in the US have not gone unnoticed.

Thanks always for reading,

Ryan Johnson | Editor



Editor
Ryan Johnson

Contributors
Mike Colley
Jo Cooper
Melanie Epp
Jos Forester-Melville
Ryan Johnson

Design
5m Publishing

Contact

For editorial enquiries please contact
newsdesk@5mpublishing.com

For sales enquiries please contact
sally.pye@5mpublishing.com

5m Publishing
Unit 10
Southill Business Park
Cornbury Park
Charlbury, Oxford
OX7 3EW

 /thepoultrysite

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www.thepoultrysite.com

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Looking ahead

Inside the Processing issue, November 2018 | Handling methods for broilers: a comparison • Hyperspectral imaging during processing



COVER FEATURE

12 Richard Blossom, co-founder and CEO of Hilltribe

Melanie Epp covers a story from the Thailand on a project which has helped families to break out of poverty to sustain themselves



FEATURES

- 16 HenPower: “henergising” the elderly with Equal Arts**
Take a look at how hatching hens as companions is helping elderly citizens across the UK to rediscover their creativity and sense of purpose.
- 18 Dr Tracey Jones, director of Food Business, Compassion in World Farming**
Compassion in World Farming has worked tirelessly to promote not only higher welfare systems for broilers and layers, but also systems which are commercially viable.
- 22 John Brunnquell, free-range egg producer, USA**
Melanie Epp speaks to John Brunnquell who’s working to promote free-range egg production in the US - one hen at a time.

REGULARS

- 5 Latest headlines**
Review key moments in the industry around the world from the past two months with the most important headlines from *The Poultry Site*.
- 24 Introducing...**
Aylesbury ducks have a prominent place in British history, but where’ve they all gone?
- 26 Your questions**
Mike Colley responds to reader queries on keeping roosters and mixed-species flocks
- 27 Events**
Plan your poultry schedule with our round-up of the most important events and conferences for 2018.

Megafarms are “the way that we’re going to feed the country”, reports The Bureau of Investigative Journalism

UK 03 JULY 2018

Growing consumer demand for chicken meat could lead to an increase in the number of industrial-scale poultry farms being built across the UK, the head of Britain’s influential poultry lobby has warned



Andrew Wasley, reporting for [The Bureau of Investigative Journalism](#), writes that more intensive poultry farms of all sizes - including so-called “megafarms”, capable of housing up to a million birds - will likely be needed if the market for chicken continues to expand, according to Richard Griffiths, Chief Executive of the British Poultry Council (BPC).

In an interview with the Guardian and the Bureau, Griffiths said he believed “larger farms are probably the most efficient way to go in terms of technology, resources, impact” and that ultimately such farms are “the way that we’re going to feed the country.”

“Poultry is an attractive option for farmers. It’s a secure option, a secure income, [farmers] get a return on it. So whether that is one shed or twelve sheds... I think that the larger end will see growth.”

The predictions come amid an increasingly tense - and polarised - debate over the future of British farming and food

production post-Brexit. [An investigation by the Guardian and Bureau](#) last year uncovered how the UK is already home to at least 800 US-style “megafarms”, some of them rearing more than a million chickens in vast factory style complexes.

The findings alarmed critics of intensive farming and prompted Michael Gove, the environment secretary, to [tell Parliament](#) that “I do not want to see, and we will not have US-style farming in this country.”

Although Griffiths acknowledges that the availability of land across the UK is likely to be a factor in any expansion of the number of poultry farms - “it depends on a site by site basis, how much space, all that sort of thing” - he said that a wider debate was needed to ask more fundamental questions.

“We’re on a much smaller scale than the US and land use is going to be incredibly important in the future across all sectors, not just food and farming,” he said. “Do we want to devote land to food produc-

tion? If so how much? If so, how can we do it with the smallest possible environmental impact? How do we do it the most efficiently?”

The sector has already seen a significant expansion in recent years: between 2011 and 2017 there was a 27 percent jump in the number of poultry farms holding 40,000 or more birds, and most of Britain’s intensive farms are dedicated to rearing poultry.

According to the BPC, the trend is solely driven by consumer demand: the lobby group calculates that each person in Britain consumes 13 whole poultry birds a year on average, with almost a billion birds being produced annually. The sector has been reported to contribute £3.3 billion to the economy, and is currently seeing annual growth of between 2-3 percent.

It’s this apparently insatiable appetite for poultry - particularly for chicken, now the UK’s favourite meat - that Griffiths believes will drive further expansion: “It’s affordable, everybody knows what to do with it, how to cook it. I think that’s the sort of combination... it’s curry or roast chicken, whatever.”

However, in areas of the country that have seen a concentrated growth - such as Powys, Wales, where recent reports suggest there have been 99 applications for new poultry sheds since 2011 - proposals for new or expanded farms have been met with significant opposition.

Local people, often backed up by professional campaigning organisations, frequently raise concerns - particularly in connection to larger farms - about perceived environmental impacts, health and animal welfare. Last year an animal welfare organisation, Compassion In World Farming, said that the spread of ‘mega-farms’ was “cruel and unnecessary”.

Click [here](#) to read the full story.

Bureau story triggers historic decision to cut antibiotic use in Mumbai

INDIA 09 JULY 2018

The Bombay High Court in Mumbai has ordered veterinary drug stores across the state to stop selling antibiotics for use on livestock unless the farmer has a prescription, to prevent the growing problem of drug resistance. Madlen Davies, The Bureau of Investigative Journalism reports

The order was passed after a [Bureau investigation earlier this year](#) revealed that at least five companies across India were marketing products containing colistin to farmers to make chickens and pigs grow fatter, a practice known as growth promotion.

Colistin is called the 'last resort' antibiotic and is categorised as 'critically important in human medicine' by the World Health Organisation (WHO). It is one of few drugs which still works when a patient is critically ill with an infection resistant to all other antibiotics. Giving colistin to healthy animals to promote growth is against WHO guidelines as it breeds colistin-resistant superbugs which can cause fatal infections in humans.

One of the firms involved, Venky's, is one of India's leading poultry companies. It supplies KFC, McDonald's and Pizza Hut in India.

Lawyer Syed Shehzad Abbas Navqi filed an affidavit after reading the Bureau's investigation, calling for a ban on antibiotics for livestock being sold over the counter. He used our story and background material as evidence, including names we had gathered of companies marketing antibiotics for use as growth promoters.

He also repeated a part of our investigation, buying a packet of Venky's colistin product Colis V over the counter. He showed the packet in court to demonstrate how such products were being marketed as improving weight gain in



ANTIBIOTICS | The order in India was passed after an investigation by the Bureau of Investigative Journalism this year - 'A game of chicken: How Indian poultry farming is creating superbugs'.

chickens as well as controlling disease.

The court ordered the Food and Drug Administration in Maharashtra state to issue a circular to all animal drug stores telling them not to sell colistin to farmers without a valid prescription from a doctor or veterinarian.

Click [here](#) to read the full story.

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British Poultry Council issues warning on a no-deal Brexit

UK 23 JULY 2018

As the prospect of a 'no-deal' Brexit looms, Britain's poultry meat sector has warned of the devastating impact on the cost of food if the UK loses essential workers



British poultry meat businesses, which rear a billion birds for food every year, are planning for a crisis scenario where non-UK labour falls by half in case of a 'no-deal' Brexit. British Poultry Council members are reporting a sharp decline in the availability of these crucial workers even ahead of Brexit.

British Poultry Council Chief Executive, Richard Griffiths, said:

"The British poultry meat sector is incredibly dependent on non-UK labour. Nearly 60 percent of our workforce are EU nationals. Access to skilled workers is imperative for our sector to carry on feeding the nation with safe, wholesome and affordable food.

Barriers to EU nationals working in the UK would be extremely damaging to the industry. We need that workforce to maintain productivity in our sector and contribute to UK food security during a time of uncertainty.

In the case of a 'no-deal' Brexit, our producers' nightmare scenario is a massive loss of workforce. This will have a knock-on effect on the cost of production which will affect the price of food. The latest economic modelling predicts prices rising by around 25 percent in the event of a no-deal."

The British Poultry Council is calling on the Government to recognise food as a special case that is treated as a national security issue.

"Government must ensure that British food, and the quality it represents, stays affordable and available for all. If we cannot support our own production, then there will emerge a two-tier food system with the average citizen forced to rely on lower standard imports.

We need the Government to devise a food strategy that enables EU nationals to fill vacancies in our sector that cannot be filled with UK workers; and that recognises the importance of food and the challenges it faces in being an essential yet perishable product.

British poultry meat producers are committed to carrying on delivering a sustainable, secure and trusted supply of food, produced to world-class standards. We want to work together with Government to develop a robust transition plan to ensure access to the workers we need and to avoid any disruption in the smooth movement of perishable products across the EU." said BPC Chief Executive, Richard Griffiths.

Click [here](#) to read the full story.

Poultry keepers urged to be vigilant of Newcastle Disease

EU 25 JULY 2018

Poultry keepers across the United Kingdom have been urged to be vigilant of Newcastle Disease following reported cases in flocks across Europe.

Recent cases in Belgium, Netherlands and Luxembourg has led to the Animal and Plant Health Agency (APHA) experts have advised that the risk of the disease in UK flocks has risen from 'low' to 'medium'.

Newcastle Disease is caused by a virulent strain of paramyxovirus and can be spread through direct contact with the bodily fluids of infected birds. It can cause severe losses in certain poultry species, including commercial, specialist breeds and pet chickens and other captive and wild birds, including racing pigeons.

Public Health England advise the risk of Newcastle Disease affecting people is very low.

Christine Middlemiss, UK Chief Veterinary Officer, said "The Animal and Plant Health Agency experts have advised that the risk of disease has risen to 'medium' following reports of Newcastle Disease in mainland Europe.

"I urge all poultry keepers - whether of commercial, smallholder flocks or specialist breeds or pet chickens - to remain vigilant to the clinical signs of this disease, and urge them to put in place strong biosecurity measures to ensure the health and welfare of their birds."

Poultry species that are affected by Newcastle Disease may show the following clinical signs:

- Respiratory distress, such as gaping beak, coughing, sneezing, gurgling and rattling
- Nervous behaviour, such as tremors, paralysis and twisting of the neck
- Unusually watery faeces that are yellowish-green in colour
- Depression and a lack of appetite
- Produce fewer eggs which could be misshapen and soft-shelled

If a bird keeper suspects that their birds may be infected with Newcastle Disease, they should contact their private vet and the APHA immediately.

Click [here](#) to read the full story.

FROM OUR SPONSORS



Poultry industry heroes: Sheila Barcsansky

Aviagen International Logistics/Export Manager, whose focus in life is to get chickens to the other side... of the world

Every day, Arbor Acres, Indian River and Ross chicks begin an intricate journey from one of the many Aviagen supply bases to customers around the world.

Sheila is part of a large global team of Aviagen export specialists who, along with a host of third-party contributors, takes care of the effective transport of day-old chicks to ensure customers are happy with an order that arrives safely, healthy and on time.

From the time birds are loaded on their Aviagen-designed pallets until they reach their destinations, the export team makes the health and welfare of chicks, as well as customer satisfaction, their top priority. Doing so requires seamless communication and coordination of shipments along many global departure points.

We caught Sheila at Aviagen's European headquarters in Edinburgh to meet the export team there, fresh from overseeing a shipment from Frankfurt to Saudi Arabia. She had just arrived from Turkey, where she met with colleagues from Asia, Turkey, the Middle East and Africa. While her home is in Huntsville, Alabama in the US, she frequently traverses the continents, meeting with airline operational teams, customers and Aviagen teams, setting up and checking on the progress of bird shipments.

What inspires you about working with Aviagen?

I enjoy all my job brings with it and look forward to coming to work every day - wherever I may be on the globe! What motivates me most is that, as a primary supplier of poultry breeding stock, we help to "feed the world." I collaborate with a large and diverse group of people who share the mission to get our birds safely to customers around the world so they can provide food for their local communities. Aviagen has actually been shipping day-old birds from supply bases across 6 continents for more than 35 years, which means I'm often on the road.





Describe a typical day in the life of a logistics/export manager.

I approach each day with energy and enthusiasm. The export team’s daily tasks actually start before the chicks are hatched; we process customer orders, completing official documentation and coordinating schedules with hatcheries and transport companies. For things to go smoothly, I’m passionate about the importance of having consistent standards, procedures and best practices, staying in constant communication with all involved in the process. We liaise internally with veterinarians, production teams and many others who play a part in the export process, as well as externally with customs, regulatory authorities, local country health ministries, airlines, freight forwarders and others. I mostly come in at the freight part of the process.

Like the rest of the team, my top commitment is to our valuable day-old chicks and our customers.

What are the unique challenges of chick export?

The challenges in the chick transport process are diverse. In every instance, communication, best practices and team work are key. We have to remain alert and engaged, and always do our best to support each other.

How do you ensure chick welfare and quality?

It goes without saying that above all we care about our birds and take every measure possible to meet their unique needs along every step of their journey. In preparation for each trip, chicks are processed and vaccinated according to import and customer requirements. They’re then placed in boxes with room to move around, and pallets are arranged in ways that protect the birds. These pallets are specifically designed to release or hold in heat, depending on the season and destination. Chick vehicles meet the same standards of environmental comfort, sanitation and biosecurity.

What are you most passionate about?

I’m really passionate about taking care of our precious live day-old chicks, and I enjoy educating others and getting them on board with how to best meet their unique needs. My colleagues and I are in constant communication with airlines, discussing with our third-party colleagues the best handling practices, and monitoring every step of the journey. I’m often airside with the birds, overseeing the process and looking after my chicks.

What technologies or innovations have made your life easier?

We’re always looking for ways to improve the export process. Since monitoring is a top priority, tools that have been useful are temperature-logging devices. Our chicks must be kept at the right temperature for their health and comfort, and these automated devices help us by evaluating temperatures during the journey. Of course, our quest for new and improved methods and technologies is never-ending.



What advice would you give somebody entering the poultry industry?

Poultry is an exciting industry, with many challenging opportunities to have a fulfilling career while making a real difference. I think it’s good for newcomers to gain a thorough understanding of the poultry industry, its diversity and many different jobs and the important part it plays.

One of the most crucial things I would say is to have a passion for our birds and our customers. We take care of our chicks as if they’re our babies for the best quality on arrival. Each and every role in the fascinating export process is equally valuable in ensuring the health and welfare of our chicks and in the end ensuring a satisfied customer. To me, that makes poultry export a rewarding job to choose.

What makes Aviagen a great company to work for, and how do its goals align with your own?

I’ve been with Aviagen since 1998 and can honestly say that we share a common commitment and passion to the success of our customers and the health and welfare of the birds in our care. In order to offer a healthy source of protein to their communities, our customers must be able to count on an uninterrupted supply of quality birds delivered to their farms and facilities throughout the globe. To accomplish these goals, the farms, hatcheries, planning departments, export teams, freight forwarders, airlines and customs brokers work together as a family, always looking for better ways to meet the needs of our customers and our very special live cargo.

Cell-cultured protein: a letter to Trump from US meat and poultry groups

USA 27 JULY 2018

In a letter addressed directly to President Trump, seven meat and poultry organisations petition him to level the playing field for animal-derived and lab-grown meats



In the letter, the groups outline the rigorous standards to which they must adhere in the production of animal meat and ask that cell-cultured meat be held to the same standards.

The letter details a recent meeting at which the FDA, excluding the USDA, “asserted itself as the primary regulator of cell-cultured products.”

The signees describe the integral role of the USDA in animal protein regulation and assert that the FDA should not solely be responsible for ensuring the safety and quality of cell-cultured protein, especially given that “it is not only inconsistent with the meat and poultry inspection statutes, but also with the White House’s reorganization plan.”

The organisations which put their name to the letter include:

- American Farm Bureau Federation
- American Sheep Industry Association
- National Cattlemen’s Beef Association
- National Chicken Council
- National Pork Producers Council
- National Turkey Federation
- North American Meat Institute

The Good Food Institute (GFI) was quick to respond to this letter and [issued a statement](#). Defending the FDA, they indicate that the regulatory body has the “expertise necessary to provide adequate oversight of clean meat,” noting that incorporating the USDA as well would be costly.

Click [here](#) to read the full story.

Research could lead to low cost infectious bronchitis vaccine production

UK 28 JULY 2018

A research team led by Dr Erica Bickerton at The Pirbright Institute has genetically modified an infectious bronchitis virus (IBV) vaccine strain so that it can be grown in cell cultures in the lab rather than in hen eggs, which could make vaccine production more efficient and reduce costs.

Infectious bronchitis is the most economically important infectious disease affecting chickens in the UK, and remains a major problem in the global poultry industry despite the existence of many different vaccines. Most IBV strains do not grow in cell cultures so IBV vaccines are currently produced in hen’s eggs, which is a cumbersome and expensive process.

The team’s research, published in the *Journal of Virology*, has now identified the exact genetic code which enables a non-virulent lab strain of IBV to grow in cell cultures rather than eggs. They then transferred this code into a vaccine strain, which allowed it to also be grown in cells.

Dr Bickerton, leader of the Coronaviruses group at Pirbright, said: “To find the genetic code that made the lab strain able to replicate in cell cultures, we scanned the gene that produces the spike protein - the protein which enables the virus to attach to and enter cells - and found a genetic sequence which was unique to that virus. We were able to cut this sequence out of the lab strain and replace it in the vaccine strain to see if this allowed the vaccine strain to replicate in cell cultures too.”

“The most interesting part of the study was discovering that the sequence which allows lab growth of IBV strains results in the change of only three amino acids (the building blocks of proteins) in the spike protein. We can now apply this modification to other IBV vaccine strains, which will help improve the speed and efficiency of IBV studies and can eventually be applied to vaccine production”

Click [here](#) to read the full story.

New Government report confirms benefits of introducing eggs early in weaning

GLOBAL 31 JULY 2018

A new report confirms that allergenic foods, including hen's eggs, can be introduced to a child's diet from around 6 months of age

“Feeding in the first year of life” from The Scientific Advisory Committee on Nutrition (SACN) was published on 17 July 2018 and gives recommendations based on the latest nutrition science.

The report considered existing evidence on infant feeding, the introduction of solid foods and diversification of the infant diet - recommending that advice on complementary feeding should state that foods containing peanut and hen's egg can be introduced from around 6 months of age and need not be differentiated from other solid foods. Importantly it also noted that the deliberate exclusion of eggs beyond 6 to 12 months of age may increase the risk of allergy and once initial exposure has occurred, then it should be maintained otherwise the risk of allergy may be increased.

The report also highlighted the revised advice from the Food Standards Agency (October 2017), which means that infants and other vulnerable groups can now safely eat raw or lightly cooked hen eggs as long as they are from the British Lion quality scheme.

The report also considered attitudes towards solid foods among mothers, using data from the Infant Feeding Survey 2010 which found that nearly half of mothers mentioned not giving their infants particular foods at 8-10 months. Despite the confirmed nutrient rich properties of eggs, 12 percent of mothers said they avoided giving their infants eggs, and 73 percent reported giving them less than once per week. Dr Juliet Gray, registered nutritionist, said: “The report is very welcome, as it clarifies that eggs need not be avoided and their



introduction should not be delayed, and we know from previous research that many mothers delay egg introduction during weaning. Eggs are a nutritious food, containing many key nutrients including high quality protein, vitamin D, selenium, iodine, choline, and omega-3 fatty acids, nutrients that are particularly important for babies.

Click [here](#) to read the full story.

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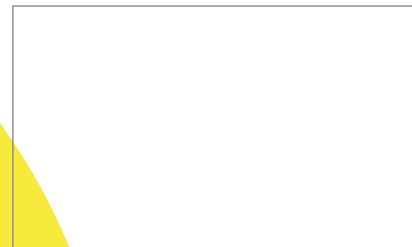
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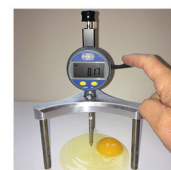
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Poultry hero: Richard Blossom

**Co-founder and CEO of Hilltribe
Organics, Thailand**

Words Melanie Epp

The Chang Rai region of northern Thailand is both spectacular and heartbreaking. While the hilly landscape is lush and green, it's home to some of Thailand's poorest and most marginalised communities, the hill tribe people. It is here where the story of Hilltribe Organics, an agricultural project that's helped 150 families to double their income through the production of organic eggs, begins.

When Richard Blossom, CEO and co-founder of Hilltribe Organics, first visited rural northern Thailand, he was troubled by what he saw. In response, he started a project called Catapult in 2011 with the goal of teaching social entrepreneurship to a group of 12 young adults from around the world. The group stayed in Thailand for a summer where they were broken

into three teams. Each team was given the goal of coming up with a project that would "catapult" poor villages out of poverty.

"Along the way, we saw that rural farm villages were dying," explains Blossom. "Seeing no future at home, almost all children were leaving for the city where they generally became seriously poor. As a result, rural village populations were declining and the average age kept rising."

By the end of the summer, the three teams came up with compelling projects, says Blossom. Without a concrete plan, though, the projects would never be moved forward. In the end they chose the best project and decided to make it a for-profit company. "The best project was based on free-range chickens, so we began to think about how to develop it," says Blossom.





To get the project going, Blossom contacted Arvind Narula, chairman of Urmatt Limited, which operates a contract organic farming network of more than 2,000 rice farmers in northern Thailand. They agreed the business should focus on organic egg production, which they felt would develop a competitive edge in the market. In 2013, Blossom and Narula, along with co-founder Markus Dietrich, launched Hilltribe Organics Limited. Their first task was to design a business model and set up a pilot farm to test that model.

“In early 2014 we started live operations in Wawee Village, one and a half hours north-west of Chiang Rai, with four families and a packing house in Chiang Rai,” says Blossom.

By 2017, Hilltribe Organics was producing about 500,000 eggs each month, earning \$1 million in sales. Business was so successful, in fact, that the company became the clear market leader of the organic-eggs segment in Thailand, with wide distribution across the country and the start of exports to Hong Kong.

“We are still not profitable although not that far away and hope to get there next year,” says Blossom.

Despite not yet being consistently profitable, the project is seen by Blossom as a great success. “We set the business model to double the family income of the farmer families within three months of starting,” he says. “So this has had a huge impact on the lives of the families involved.”



THAILAND | Eknarin Manola, production manager at Hilltribe Organics, with a brood of hens at his feet.

“Looking to the future, he hopes to reach a sustainably profitable model that can be implemented in poverty-stricken communities around the world”

“And it is not just the egg farmers,” he continues. “We also contract the growing of most of our feed from farmers in the same area. So, all together, about 150 families are involved.”

The only factor that limits the company’s growth is the need for capital, but Blossom said they continue to look for new investors. Looking to the future, he hopes to reach a sustainably profitable model that can be implemented in poverty-stricken communities around the world.

“When we started, it was not a project about Thailand,” explains Blossom. “It was about socially marginalised hill tribes and their shrinking rural agricultural communities. Our first goal is to reach a

SUCCESS | Egg farmers the Sancharaenanuraks are one of many hill tribe families to benefit from Hilltribe Organics’ presence in northern Thailand.



“In the plan to develop new markets in other countries, Blossom is also looking to develop value-added egg products as well”

sustainably profitable model so that we can start to take it to the more than 60 countries around the world with similar situations.

“Once we are confident that our model can be exported, we will start our next market,” he continues. “Kunming in China looks interesting, but we have not firmed up yet where to go next.”

In the plan to develop new markets in other countries, Blossom is also looking to develop value-added egg products as well. He believes doing so will help him to improve margins and

to diversify the risks associated with weather and seasonality.

“We started a test of our first value-added product, egg tofu, in late 2017,” he says. “It is a great product, but we don’t yet have it ready to expand. As an organic product, we can’t use the chemical stabilisers other companies use. And it still has a relatively short shelf life, so we are now studying egg noodles.” **PD**

Richard Blossom lives in San Francisco, California in the USA. He manages Hilltribe Organics from his home there and from Thailand, where he travels every other month. Blossom



lived in Singapore for 27 years. He has worked for the food and beverage industry for the better part of his career. He was president of Asia Pacific for PepsiCo and later Frito-Lay. Blossom also worked for Del Monte Pacific for 15 years, working as president of International and most recently as executive director and chief business development officer of Del Monte Foods. He is passionate about using organic agriculture to sustain and rebuild rural farming communities around the world while restoring the earth.



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Poultry heroes: "henergising" the elderly with Equal Arts

Words Ryan Johnson, Jos Forester-Melville

It was 2012 and Billy, a resident at a care facility for the elderly in Gateshead, Tyne and Wear in North East England, was pacing back and forth, uttering a series of female names and making attempts to run out of the door. He and the other residents were quite unsettled. The manager and what became the HenPower team were able to identify that these names belonged to the hens that Billy kept when he was younger and that his pacing and attempts to run out of the building were a result of his feeling that his hens needed to be taken care of and the eggs gathered for the day.

The HenPower team bought Billy six hens and watched as his shoulders

"after applying for National Lottery Funding of one million pounds, the project now operates in more than 60 care homes and schools"

dropped in relief at rediscovering his role - to care for his hens.

HenPower, run by the Equal Arts charity, now 'henergises' elderly residents across the UK and beyond. After applying for National Lottery Funding of one million pounds, the project now operates in more than 60 care homes and schools.

Jos Forester-Melville, programme manager of HenPower, writes that "hens are the catalyst for creative activity to take place. We write songs and poems about our feathered friends; we design sculptures and collages; make paving stones with pebbles and glass, make feathers to hang in windows from glass and windchimes from pottery, working with poets, horticulturalists, musicians and visual artists."

She explains that hens are usually atop the tables during a creative session and that 'hensioners' design and create merchandise to sell, the money from which goes back into the programme to fund more activities. Jos writes that the hens are empowering for the residents, giving them something to be responsible for and feel inspired by. "The one thing that lasts even into dementia developing is the ability to be playful and imagine, and creativity is the ideal means with which to do this," writes Jos who goes on to say that the residents "often rediscover old creative talents in writing or textiles or develop new skills."

When asked about other ways in



which people interact with the hens, Jos explains that the hens are often placed in prominent positions in the garden or in front of the lounge or dining room to provide positive distractions, particularly in the winter and during poor weather. "They love the fact that they can collect eggs and feed them and make friends while they're doing it," Jos said.

Many of the 'Hensioners' even go out on "Hen Road Shows" to promote the programme at other care facilities and schools, and speak at conferences about how much the hens can reduce loneliness and isolation while improving general wellbeing. Margaret Ingram, for example, age 79, flew (for the first time in 50 years) to Bristol where she spoke



and animated and sat on her shoulder watching her activity. When she pondered and sat back to assess her next stroke of paint, the hen dozed and slept on her shoulder.

“They developed an entirely symbiotic relationship where they relied on the care of each other,” explained Jos.

The significance of the hens goes far beyond animal assisted therapy, Jos explained. “It’s the development of human relationships which is at the heart of the success of the programme... by their very nature, hens are social, like we all should be.” She went on to assert that the creativity about the hens makes HenPower special in how it grants residents the ability to take on roles and responsibilities despite being “written off” by society as old, ill or inform. It has allowed the elderly to take on roles

about HenPower. Hensioners have also worked with senior nursing students to describe approaches to caring for the elderly and the benefits of non-medical, relationship-centred approaches to care.

Hensioners especially love working in schools with children, said Jos. At the

schools, they teach students with learning difficulties and disabilities how to hatch chicks and encourage children to form a dementia-friendly environment which is respectful of the elderly.

Jos also explained to us some of the misconceptions that were faced when

HenPower is introduced at a care centre. She said that people sometimes view it as quirky or think it’s about animal assisted therapy. She described working with a photographer from Sweden who just didn’t understand how hens and creativity went together, but once he saw with his own eyes how an elderly woman had formed a relationship with the chick she hatched herself, he said “I get it. I see it working.”

Jos explained that this woman had relatives who could no longer visit her due to her dementia and having to repeat the same conversations, so she was very alone and isolated by the effects of her condition, even while in a room full of people. But “everywhere she went, the hen went too. When she painted, the hen was lively

“The significance of the hens goes far beyond animal assisted therapy”

ious nature of hens that the birds were chosen and they “create a bit of chaos which provides humour and discussion.” Not to mention the fact that they are so diversely beautiful to look at.

Pat Cain, 82 years old said, “In volunteering for HenPower, I have a role and a responsibility. I know I’m needed. My daughter almost has to make an appointment to see me because I’m always busy in schools or at the university with art classes.

“It’s changed my life.” PD



Poultry hero: Dr Tracey Jones

Director of Food Business, Compassion in World Farming

Words Jo Cooper

Animal welfare is moving up the agenda as consumer pressure, market forces and the work of NGOs like us at Compassion in World Farming raise awareness and facilitate change. This has resulted in a number of cage-free egg commitments and higher welfare pledges for broiler chickens in the past few years from global leaders across all food sectors.

The future is cage-free

In 2015, McDonald's US committed to sourcing only cage-free eggs, starting a wave of similar pledges from over 200 companies in the US, including Walmart, the world's largest retailer.

Pledges in Europe soon followed and included the remaining UK supermarkets selling eggs from enriched cages (Tesco, Aldi, Morrisons, Iceland, Lidl and Asda), 7 out of the 8 leading supermarkets in France, and food service giants Sodexo, Compass Group and Elior Group - all pledging to move to a cage free egg supply by 2025 or sooner.

Many of the companies made global commitments, recognising that caged systems for laying hens are outdated, unwanted, do not deliver a good enough quality of life for hens - and are therefore on their way out.

Fit for purpose, fit for future

One of the biggest challenges now facing those companies is to ensure that any new system they introduce truly provides a good quality of life for the hens and remain acceptable to the public well into the future. Future-proofing investment is critical to commercial sustainability and also involves preparing for upcoming issues, such as the need to operate without beak trimming and maintaining good feather coverage, and the need to improve keel bone condition.

Laying hens are gregarious animals with elaborate social behaviours. In the wild they spend much of their time searching for food, foraging and scratching, maintaining their plumage



via dustbathing and preening, and perching in trees at night to avoid predators. They also exhibit a thorough nest building repertoire from careful nest selection and inspection, to settling and laying their eggs.

Producers now need to invest in the best systems to ensure they satisfy the wants and needs of the hens, so they not only have good physical condition and health, but good mental wellbeing and are able to express their repertoire of natural behaviours. New systems also need to be able to operate without beak trimming, with little or no feather pecking and to demonstrate low levels of keel bone fractures.

Important factors to consider in house design are:

- Providing sufficient space to live - the maximum den-

sity permitted in the EU for barn and free-range systems is 9 birds/m² but reducing this to 7 birds/m² can significantly benefit the hens - giving them more space to move freely

- Providing sufficient enrichment materials to occupy the hens such as foraging, pecking and dustbathing substrates, and plenty of perching space
- Providing different functional areas - for example, separate day and night quarters, with high perches for resting, plenty of nest boxes, and separate activity zones for dustbathing, foraging and scratching; or at least access to a veranda and natural light
- Free range systems should have good shade and shelter to encourage outdoor ranging, and a variety of herbs, shrubs, and grasses to satisfy the foraging needs of the hens
- It's also important that the pullet rearing house is similar in design to the laying house as this allows the young hens to get accustomed to perching - especially jumping on and off so they don't injure themselves. They will also be less fearful of their new surroundings when moved into the laying house

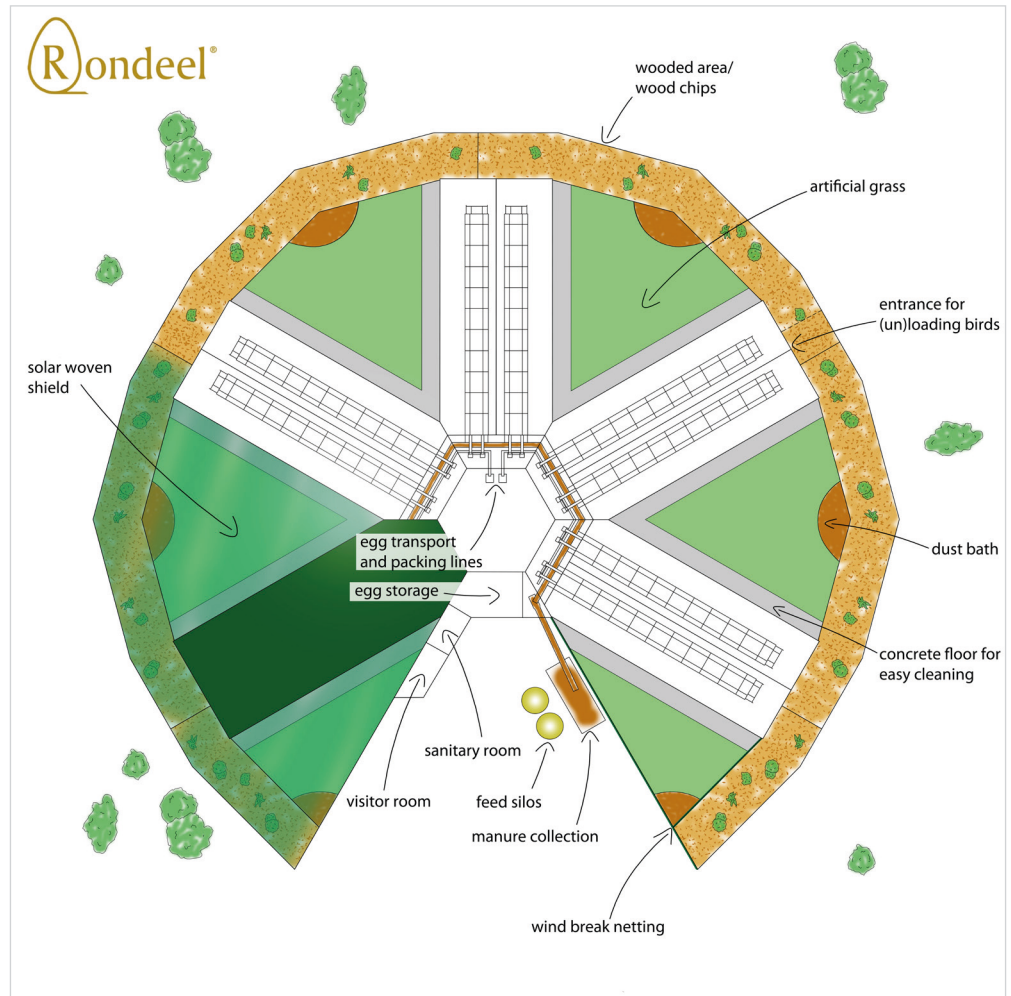
Why combination ('combi') systems are not fit for purpose

Combination ('combi') or convertible housing systems for laying hens feature aspects of both aviaries and conventional cages; they are multi-tiered structures that have doors and internal partitions that convert into a colony-caged system when the doors are closed.

These systems are promoted as offering management and production benefits and are marketed to maximise stocking density, with the ability to be operated in total confinement if market pressures around cage-free production change.

However, these systems are not suitable alternative cage free systems because:

- The birds can be confined in cages either routinely or permanently, causing frustration and limiting the movement of the hens



WELFARE | Rondeel's higher welfare enriched barn system.

- Stocking density is comparable to conventional systems so do not provide any more space to live
- Key features and equipment to encourage important behaviours such as nesting and scratching are lacking
- Movement through the system (within tiers, between tiers, and between rows) is restricted
- Selected access systems confine hens to particular areas within the tiers, when they should have access to the full system at all times

Much of the restrictions/limitations noted above also apply to intensive multi-tier or COMPACT systems.

Half-caged systems, combi-systems, or routinely closing aviaries, and highly intensive COMPACT multi-tier systems, compromise the welfare of the hen and present reputational and commercial investment risk. We advise companies not to invest in these systems, or to modify any existing combi-systems and to invest in well-designed aviary systems as a minimum.

What about cage-free ingredient eggs?

Whole shell eggs are labelled according to method of production (0=organic, 1=free range, 2=barn, 3=caged), so that consumers can clearly identify the system used. However, eggs used as an ingredient in products (e.g. biscuits, pastas,



sandwiches, desserts), are not required to be labelled making it difficult for consumers to identify their source.

Most of the recent cage-free commitments have been for shell eggs only. In the UK, for instance: Aldi, Asda and Tesco have committed to going cage free on their whole/shell eggs (but not ingredient) by 2025; whereas Lidl and Morrisons have made their cage-free pledge on both whole and ingredient eggs.

The retail sector uses a lot of eggs in their product ingredients so it's equally important to commit to cage-free eggs across their entire product offering. In the UK, the Co-op, M&S, and Waitrose already only source whole and ingredient egg from hens in free range systems, while Sainsbury's use both barn and free-range systems.

Converting to cage-free

In support of the transition to cage free production, Compassion provides a [series of resources](#) summarising the latest scientific evidence and best-case examples and advice for cage free production and improving and measuring the welfare of the laying hen. The [Kipster](#) and [Rondeel](#) systems are recommended as higher welfare barn systems that are operating without beak trimming.

Last year, Compassion launched EggTrack in the US - a report summarising the progress made by 73 leading companies on transitioning to their cage-free commitment. By holding companies to account, we hope to stimulate the market to achieve year on year progress and match supply with demand. EggTrack will launch in Europe at the end of September 2018 and include the progress of 85 leading European companies.

The future is brighter for broilers

It's not just laying hens where signs of improvement are evi-

dent - there is also a growing movement committing to better chicken. In Europe alone, 7 billion chickens are reared for meat each year, 90 percent of which live in intensive farming systems, in overcrowded barns, often with little or no natural light, and bred to grow so fast they suffer serious health and welfare problems.

Chickens are sentient beings, capable of feeling a range of emotions from pain to joy and the ability to lead complex lives. They therefore deserve a good quality of life, which considers both their physical well-being, and their mental and behavioural needs too. Delivering good welfare is of course underpinned by the provision of good housing, good feeding, good environment, good breeding and good management - which is why the NGO community are calling on food businesses to offer chickens a better life, with:

- Better genetics for an improved quality of life
- More space to live
- Natural light, perches and pecking substrates to stimulate behaviour
- Humane slaughter
- Compliance with a meaningful third-party animal welfare certification and annual reporting

Companies leading the way for broiler welfare

Over 90 companies in the US (including Subway, Burger King and Kraft Heinz) have made [commitments](#) to improve the lives of meat chickens by 2024, tackling the fundamental problems of fast growing breeds and overcrowding in relatively barren environments, alongside the need for humane slaughter and third-party auditing.



WELFARE | Free-range systems should not practise beak-trimming

In Europe, M&S, Unilever, Nestlé, Danone and contract caterer, Elior Group have all signed up to the [Better Chicken Commitment](#), developed jointly by NGOs including Compassion, promising to achieve their aims by 2026. For M&S that means higher welfare chicken across its entire fresh and ingredient chicken supply, for Unilever's brand Knorr, that means higher welfare chicken in all its bouillon and soups - a truly phenomenal commitment given that the chicken is for ingredients in products where their power in the supply chain is limited, and Elior Group has committed to using higher welfare chicken globally.

However, commitments are just the first step and much more work is needed to understand supply chains, find commercial supply chain solutions and secure supply before companies can begin to implement their better chicken policies. An important aspect in all of this is to remember to bring producers and consumers with you on the journey.

Achieving better welfare for broiler chickens has its challenges. There's no escaping the fact that it costs more to produce, as lower stocking densities and breed change are essential requirements. Longer growing periods and more feed use are inevitable and concerns have been raised from an environmental footprint perspective. This is where innovation and a positive mind-set is required.

A good example of this is the [Windstreek](#) system in the Netherlands which was developed in close collaboration between the producer, processor and retailer. Windstreek incorporates a new, modern design of broiler house, incorporating multiple features for improved welfare (such as functional space) and sustainability (such as low energy use and emissions). The system uses intermediate growth rate strains of bird with known better welfare credentials, reaching market weight at 56 days and reared to 25kg/m², meeting the Dutch Beter Leven assurance scheme at the 1-star level ([read the full case study](#)).

The negative consequences of selecting birds for fast growth rate, high feed efficiency and lean meat deposition are well documented and include poor walking ability, lethargy, muscular-skeletal problems, heart disease, poor immune function and muscle degenerative disease. Improving the welfare out-

comes of the fast-growing strains is important, but a ceiling is reached and does not go far enough to address these fundamental problems.

Planning a roadmap for improvement

Like any business decision, commitments on animal welfare should be made for the long term, embedded into a public facing policy and supported at all company levels to ensure they can be achieved.

Producers need security to invest; they need long term contracts and a clear idea of the type of system and timeframe for transition that is required. Companies should start planning their production system changes now and work closely with suppliers on their implementation plans, and not wait until their commitment deadlines before transitioning.

Building a roadmap now will allow companies time to research and implement the changes required to fulfil their welfare commitments. By working together and exploring business to business connections, by reducing waste and capitalising on full carcass utilization, higher welfare production can become a reality.

The benefits of higher welfare

Higher welfare production may cost more but savings can be made - for example significantly fewer antibiotics are used when robust, slower growing breeds are reared, and there are fewer economic losses associated with meat quality issues. In addition, there are [health benefits for chickens and humans alike](#), when higher welfare standards are implemented.

Eat less and better

At Compassion we advocate we should all eat less meat, waste less and ensure that what we do eat has higher welfare origins if we are to truly value the lives of the animals reared to feed us and to support sustainable food production.

Many consumers are already responding to this call by turning to more flexitarian diets where they eat meat less often. Others are looking to replace animal protein (all or part of the time) with alternative proteins such as the increasingly popular meatless burgers - the [Impossible](#) and [Beyond Meat burgers](#) - as well as simply eating more vegetables.

Companies can capitalise on this by offering more plant-based food options. In addition, companies can develop more blended products with a smaller proportion of meat (replacing with more plant-based proteins) so that higher welfare meat ingredients can be used for the same cost.

Developing sustainable production systems that provide poultry with a good quality of life requires time and effort, and at Compassion we work with companies to help facilitate this change, as well as hold them to account when they fall back on their commitments.

We all have a responsibility to improve the lives of animals and there has never been a more important time for animal welfare within the food industry. By working with leaders in the market, Compassion plays its part and will continue to create positive change for farm animals around the globe. **PD**

Poultry hero: John Brunnquell, USA

Free-range egg producer John Brunnquell puts poultry health and wellbeing at the heart of everything he does

Words Melanie Epp

When third-generation egg farmer John Brunnquell was 22-years old he could espouse all the benefits of caged production. “Birds don’t walk around in their own manure,” he said, “and if they get sick they can be fed quickly.”

“Cages protect them from predators,” he added. But one day when he walked into a cage-free barn, what he saw made him question everything he thought he knew for certain. It was, as he put it, “the beginning of the journey.”

As a young lad, Brunnquell (now 56) grew up on a small family farm with 7,000 chickens. Like other rural American kids his age, Brunnquell joined 4-H. Later, he pursued a Bachelor of Science in Agronomy and a Masters in Poultry Science, both from the University of Wisconsin at Madison.

Today, Brunnquell is president and founder of Egg Innovations, a unique model for organic, free-range egg production, and he is pursuing a PhD in Avian Ethology at the University of Kentucky. “At my heart, I’m a behaviourist,” he said. “I ask the question ‘why’ all the time.”

Understanding hen behaviour

The transition from a young man who knew why caged production was the only choice, to a leader in organic production in the US prompts many important questions. Why, for instance, do we open the doors to allow birds to go outside when only some will use the opportunity? Why, when they go outside, do they go to certain areas? Why do the exact same genetics perform differently under different production systems? What’s the best way to get birds inside at night

“In the case of a chicken, it is hardwired to perch, to scratch, to dust bathe, to pasture and to socialize”



HANDS ON | John Brunnquell with one of his hens

without hurting or scaring them?

“I asked these types of questions all the time,” said Brunnquell, who believes that every animal on Earth is hardwired to perform certain behaviours. He said that, if given the opportunity, animals will express those hardwired behaviours.

“In the case of a chicken, it is hardwired to perch, to scratch, to dust bathe, to pasture and to socialize,” he said. “If you give it an environment where it’s allowed to do that it will display those behaviours in high percentages.”

As the founder and president of Egg Innovations, Brunnquell has designed a building that specifically focuses on the behaviour of animals. Egg Innovations owns 65 layer barns that house 20,000 birds in each barn. It’s a contract model where the farmer owns the building and pays for labour and utilities. Brunnquell owns the birds and farmers are paid

at the upper end of the market. All of the 1.5 million birds under this model have access to the outdoors each day. Of the 65 barns, 60 percent are located in Indiana; the remaining farms are located in Wisconsin and Kentucky.

“My barns all have very dedicated perch areas, dedicated scratch areas, dedicated pasture areas - and we leaned into their behaviour,” he said. “If this is the way the animal wants to behave, why don’t we design a building that lets them behave that way? In theory, good things should happen. And that’s what we found.”

By “good things” Brunnquell isn’t just talking about improved animal welfare, but also improved production. When genetics companies put out their breeder guides, they include information on the production value of the breed at different ages. Brunnquell said his birds consistently outperform those numbers.

“They have a column that says under optimal conditions, it will perform at this level,” he said. “We use that as a benchmark; on average, we produce at

“Brunnquell is unique in the US poultry industry, and sometimes takes flack for deviating from the norm. Undeterred, his long-term goal is to examine and improve poultry welfare from cradle to grave.”

102 percent of optimal standards.” Improvement, however, didn’t come immediately. It came gradually with each change. There was obvious improvement in flock performance, for instance, when he transitioned from caged to cage-free production. “Then we put perches in and let birds outside,” he said. “Every time we took an incre-



mental step, we saw improvements in production and drops in morbidity and mortality.”

Sometime after making the transition, Brunnquell decided to pursue a PhD to better understand hen behaviour. He has since learned about bi-modality (understanding why some birds go outside when others don’t) and allostasis (achieving stability and balance through physiological or behavioural change). He applies this knowledge to Egg Innovations. He hopes that what he does will not only influence the way Americans eat eggs, but also how farmers produce them.

“I don’t know if I’ll achieve those goals, but along the way I expect we’ll have a little bit of influence,” he said.

What is especially unique about Egg Innovations is that all 65 buildings are identical - the same length, the same width and housed with the same equipment. Having 65 perfectly replicated barns for commercial-sized flocks is the perfect tool for conducting research. Brunnquell works closely with researchers from the Center for Proper Housing, Poultry and Rabbits (ZTHZ) in Switzerland. Led by Michael Toscano, ZTHZ researchers run small-scale trials with the goal of better understanding hen behaviour. Sometimes Brunnquell applies their research in his barns to see if what they’ve found works on the commercial scale. The relationship benefits both parties.

In one of his projects, Brunnquell examines how light, particularly light



wavelength, impacts hen behaviour during depopulation. The literature seems to support the idea that blue LED lighting calms the birds, which leads to more injury-free depopulation.

Brunnquell is unique in the US poultry industry, and sometimes takes flack for deviating from the norm. Undeterred, his long-term goal is to examine and improve poultry welfare from cradle to grave. It’s this kind of curiosity - and dedication - that makes John Brunnquell a poultry hero. **PD**

Introducing...

The Aylesbury

Words Ryan Johnson

This sturdy duck was originally bred in the town of Aylesbury, Buckinghamshire. Originally developed for the table, it's pale skin made for an attractive meat bird with its white feathers making for excellent quilt filling. It was originally bred in the early 1800s and became popular throughout that century with a new trainline into London markets enabling its spread.

However, with the introduction of the Pekin to the UK by 1873, the Aylesbury began to decline in popularity owing to the Pekin being cheaper to raise. The Aylesbury breed then experienced a significant decline by the time of the First World War, with the Second World War only making matters worse. The disruption to duck farming caused by the wars and the introduction of the hardier, cheaper Pekin meant that the number of Aylesbury ducks dwindled, made worse by the inbreeding resulting from the already fewer numbers.

In the US, the Aylesbury is listed as critically endangered by [The Livestock Conservancy](#) and there are currently very few remaining Aylesbury flocks in the UK with the last remaining pure Aylesbury meat ducks owned by Richard Waller in Chesham, but the duck remains a symbol of the town of Aylesbury. **PD**



YOUR QUESTIONS

Poultry professional Mike Colley answers the best questions from The Poultry Site community



Got a question? Email newsdesk@5mpublishing.com | Twitter [@thepoultrysite](https://twitter.com/thepoultrysite) | Facebook [/ThePoultrySite](https://www.facebook.com/ThePoultrySite) | Forum forum.thepoultrysite.com | Post Unit 10, Southhill Business Park, Cornury Park, Charlbury, Oxford, OX7 3EW

Q: Is it beneficial to have a rooster in my backyard flock and, if I choose to have one, what should I know?

A: I adore cockerels - something I inherited from my father. The gloss of their feathers, the erect and assertive stance, sometimes with beautiful colours and big fan-like tails - and sometimes with large, unusual combs and feathery crests. Roosters have big characters that can never really be conveyed in a painting or photograph, from the tiny Serama to the massive commercial meat birds, there is always a sense of impressiveness, even if its only in the mind of cockerel himself.

Other than the character and beauty of these birds and the way they interact with humans, there is little benefit to having a rooster. However, a rooster somehow makes a flock complete in quite subtle ways. Females can feel more secure and fulfilled with a male around; you will notice females pecking at the wattles, beak and face of a male. The male seems to really enjoy this, like a dog being stroked. The disadvantages

of having a male around, though, are numerous and here's a brief list:

- **Unwanted noise.** The early morning crowing will really upset your neighbours and make you very unpopular in the neighbourhood. As well as the crowing there are the loud alarm calls which can go on all day with few breaks.
- **Aggression.** Having a little bantam cockerel running at you and pecking your heels can be quite amusing but having a 7kg rooster chasing your children around the garden is quite a different matter. Aggression in males tends to be unpredictable and not necessarily breed correlated - it is also impossible to predict towards whom the aggression will be directed. Basically, your cockerel, unless socialised from a very early age, sees

“The early morning crowing will really upset your neighbours”

anything bigger than himself as a threat, which he will either submit to or relentlessly assault. Unless you can put something between you and him, or run very fast, he will keep going and I can assure you pecks and kicks can be very painful, draw blood and leave bruises.

- **Fertile eggs.** Not everyone wants to eat fertile eggs. In fact, the thought of eating fertile eggs is abhorrent to some. It's not currently illegal to sell fertile eggs and being fertile does not mean you will ever see a developed embryo. They look the same, taste the same and pose only a small increase to the risk of carrying a food-borne sickness, which will be eradicated once cooked.
- **Bullied females.** Over-mating is a really common problem in a small domestic flock. Unless you have more than 15 females to your one male, you may well have females with bare backs and bald backs of heads. You may even have birds with severe lacerations on their flanks. This can be elevated by trimming spurs and toe nails; you can also get saddles for hens that prevent damage.

In conclusion, having a cockerel around is great, but every rose has its thorns - and roosters can be a lot of trouble.

Mike Colley

Mike has had an interest in all things chicken since he first asked his mum on the school bus “what colour eggs do different coloured chickens lay?” aged five. Over the next 45 years Mike developed his knowledge of poultry: in his backyard, breeding, hatching, showing and selling chickens, as well as in the commercial poultry industry as an Area Manager and, latterly, a Research Manager.



EVENTS

Poultry events from around the globe

Arkansas Nutrition Conference

Date: 11-13 September 2018

Location: Rogers, Arkansas, USA

The Arkansas Nutrition Conference is an annual educational event and is coordinated by the Feed Manufacturers Committee of The Poultry Federation.

www.vet.uga.edu/pdrc/conference

SPACE

Date: 11-14 September 2018

Location: Rennes, France

SPACE is the world event for all professionals of livestock production: cattle (milk and beef), poultry, pigs, ovine, goats, rabbits and aquaculture.

uk.space.fr/EN/VisiterEn.aspx

IEC Global Leadership Conference Kyoto 2018

Date: 9-13 September 2018

Location: IEC Kyoto

The IEC Global Leadership Conference gathers CEOs and leaders from the IEC's 300 member companies. These companies represent 80 countries and all business areas of the egg industry. The IEC's mission is to bring together the most influential leaders in egg production and egg processing in pursuit of efficient business practices and positive change across our industry.

<https://www.internationalegg.com/events/iec-global-leadership-conference-kyoto-2018-2/>

VIV China

Date: 17-19 September 2018

Location: Nanjing, China

National and international exhibitors at VIV China 2018 will represent their solutions and innovations within the Feed to Food chain.

www.vivchina.nl/en/Bezoeker/About-VIV.aspx



NANJING, CHINA | VIV China will be held in Nanjing from September 17-19, 2018

XVth European Poultry Conference

Date: 17-21 September 2018

Location: Dubrovnik, Croatia

The conference will be structured around plenary meetings, workshops, a poster session and an exhibition, as well as technical tours giving an overview of various relevant developments in the area of poultry science. The scientific programme of the XV European Poultry Conference has been developed in collaboration with the Chairmen of the Working Groups of the European federation of WPSA.

www.epc2018.com

5th Caribbean Poultry Association International Technical Symposium

Date: 27-28 September 2018

Location: Paramaribo, Suriname

To discuss "The Hatch Process: PreHatch, Hatch and PostHatch" and "Regional and International Poultry Trade Issues."

desmondali@caribbeanpoultry.org

Agrena

Date: 25-27 October 2018

Location: Cairo, Egypt

Agrena has stood the test of time to

establish itself as the Middle Eastern region's largest and most prestigious poultry, livestock and fish show. It emphasises providing opportunities to broaden your horizons and to see the latest technologies, products and services.

www.agrena.net

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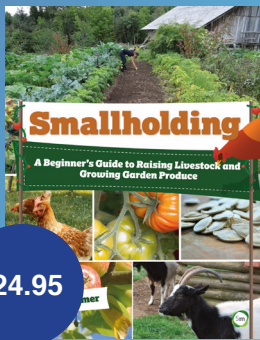
Date: 13-16 November

Location: Hanover, Germany

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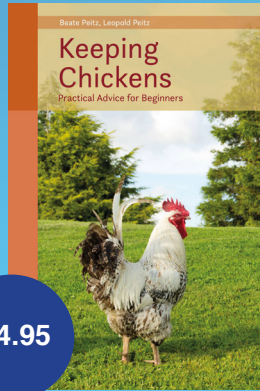
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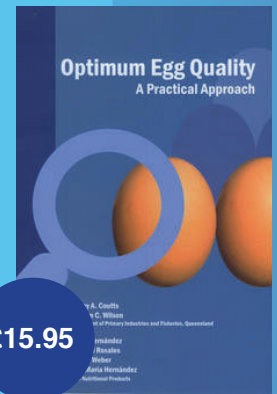
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