**06** | DECEMBER 2021





### PREFACE CHALLENGING PERIOD 2021

REGULATIONS RESTRICT THE USE OF ANTIMICROBIALS

## COMMERCE ATIN-AMERIKA IS IN FOCUS

RESEARCH AND DEVELOPMENT

RECENT RESEARCH AND Development results At Bábolna tetra

OUR ONE-MINUTE



## **CHALLENGING PERIOD** 2021

Year 2021 brought many unpleasant surprises for the manufacturing companies. Farming has been heavily hampered by **THE SHORTAGE OF GOODS CAUSED BY OR BLAMED ON THE WORLD EPIDEMIC, AND** the multitude of **PRICE INCREASES**.

There have been unprecedented problems, that seemed unthinkable in pre-pandemic everyday life. This has been compounded by total chaos in the energy sector. Gas and electricity prices have tripled since the middle of the year, so new contracts are transforming our costs in an unpredictable way.

Despite all of this, Bábolna TETRA continued implementing its planned developments in 2021 as well. At the beginning of the year, we accredited our expanded, renovated microbiology, ELISA and PCR laboratory, whose high-quality services are now available to our partners as well. We have architecturally redesigned the entire area of the Laboratory, acquired new equipment and increased the number of the department's staff.

We have also expanded our capacities. We installed a new technology at one of our parent stock farms and replaced the feeding systems at two farms in Uraiújfalu.

A year-long energy investment program also ended this year. In the course of this, we implemented lighting and heating modernization at 9 farms, and also installed a 35 kWp solar cell system at one of our layer farms.

We are also trying to improve the working conditions, and on the grounds of this we have built a new social building on our older growing farm, so our colleagues working at the farm can work in a better, more comfortable environment.

Minor conservation reconstructions are going on, including the replacement of the roof of our pedigree farm near Bábolna and the renovation of the entire electrical system of our two older poultry farms.

We also need to maintain our roads to our farms, especially those where we transport hatching eggs on a daily basis. For the good of this, we blacktopped a 150-metre road leading to a layer farm this year.



To be honest, I do not believe that order in the world is slowly recovering, so I am preparing for a challenging period in 2022, and in these circumstances we must continue to develop and move forward.

ÁDÁM SZABÓ | Strategic Director

## LATIN-AMERIKA IS IN FOCUS

0 00

**BÁBOLNA TETRA LTD. DELIVERS REGULARLY TO 4 CONTINENTS** - Europe, Africa, Asia and North America - from the heart of Europe, from a small village in Vas County, where the center of laying hybrid breeding is located. The growing interest, the exponentially expanding business relationships and the goal of a global presence have inspired us to **TARGET LATIN AMERICA** as well.

Actually we are not talking about entering the market, as Bábolna TETRA regularly delivered to several South American countries in the 1990s, and its name is still familiar for the market participants. Through its Peruvian joint venture, it sold large quantities of HARCO and TETRA-SL day-old chicks produced by local grandparent stocks. At that time, Colombia was one of the company's largest markets, where TETRA hybrids were especially popular.

However, due to the huge geographical distance, it seemed a reasonable move over time to serve South American customers from the north of the continent through Centurion Poultry in the United States. The two companies signed a cooperation agreement in 2009. As a result of this, TETRA Americana still sells millions of TETRA day-old chicks in the area per year.

Due to the global demographic explosion, the poultry market is also constantly developing. And the pandemic has intensified the trend towards selfsufficiency. In addition to industrial-scale poultry family farms, small poultry farms are also gaining ground, providing a reliable source of income and food for poorer families even in the most difficult times.

South America, as an area with low production costs, plays a significant role in poultry production worldwide, due to the production of feed materials with high efficiency in huge quantities. Brazil - after the US and China - is on the podium among the world's largest poultry producers. And Mexico is on the fifth place in the world ranking of egg production.



Peru 1998

BRAZIL - AFTER THE US AND CHINA -IS ON THE PODIUM AMONG THE WORLD'S LARGEST POULTRY PRODUCERS. AND MEXICO IS ON THE FIFTH PLACE IN THE WORLD RANKING OF EGG PRODUCTION.

From this year, thanks to a development within the company, we will give priority to the sale of breeding animals within a new organizational framework, which means a much more conscious market-building activity than before. One of the main goals of our breeding strategy is to begin shipments to the Central and South American markets. We hope that we will be able to play a more serious role in the poultry breeding market in the region.

In addition to the laying hybrids, we also see huge potential for dualpurpose breeds, which can make a major contribution to self-sufficiency, women's participation and the reduction of poverty in less developed or poor regions.

The preparatory steps of market entry are already under way. Several major Latin American hatcheries and potential partners have been contacted and pre-negotiated for the sale of layer and dual-purpose parent stocks. In parallel, consultations have been started with "National Food Chain Safety Agency" with the authorities of the main target markets - Colombia, Mexico, Ecuador, Chile and Guatemala - on the necessary veterinary data provision and authorization procedures, which are extremely time consuming due to local market protection regulations.

**TETRA** hybrids in the world - 1999

We hope that with the lifting of travel restrictions in 2022, we will finally be able to meet our potential Latin American partners in person. In January, after a 2-year long hiatus, we will be welcoming them again at IPPE International Poultry Trade Fair in Atlanta, and we are planning many visits in the area during the year.

LUKÁTS ORSOLYA | key account manager

Peru 1998



Photos: Dr. Előd Bajcsy

## **RECENT RESEARCH AND DEVELOPMENT RESULTS** AT BÁBOLNA TETRA

At the end of this year, two consortium research and **DEVELOPMENT PROJECTS** will be completed, in which **BÁBOLNA TETRA**, as the **LEADER OF THE ACONSORTIUM** or its member, played a significant role in achieving the set goals.

In the framework of the project "GINOP-2.3.4-15-2016-00005: Development of crop production and animal husbandry technologies adapted to climate change in order to achieve sustainable agriculture and quality food production in an intensive production environment" the possibility of the improvement of heat tolerance in laying hens by selection was examined. In the case of coloured broilers, based on the previously known positive effect of the naked neck gene, this trait was introduced in the existing lines. The selection for better heat tolerance of the birds tested during the tender period was carried out in 11 stables of different farms of Bábolna TETRA, in which devices for continuously measuring and recording the internal temperature and humidity data of the buildings were placed. Measurements were performed in each barn for nearly 5 years, over several production periods. To create new hybrids, TETRA geneticists not only have improved resistance to heat stress of their certain lines, but the selection work of recent years in terms of production indicators (eggs and meat production) are also showing



success. At the end of the project, the portfolio of the breeding company will be expanded with 2 new products.

> In the case of TETRA TINT, a new market segment opens, the cream-colored egg, which has not been available to the Breeding Company in the absence of a product so far. This is a growing part of table egg production in some areas.

TETRA HT, as a heat-tolerant (HT), coloured broiler, will be popular mainly in regions where climatic conditions require more heatresistant, naked necked birds and where the aim is to replace local breeds for more efficient poultry production. As Bábolna TETRA already sells on the dual purpose / colour broiler market, it considers the market penetration of this product to be feasible in the current sales channels.

In the framework of the project "2018-1.3.1-VKE-2018-00042: Development of a new, domestic brown layer for enhancing international competitiveness, taking into account European priorities and applying innovative selection methods", TETRA examined the aggressive behaviour of feather pecking, and the incidence of deaths and the relationship between plumage status and bird condition. The result of the tender is a new brown layer, called TETRA COUNTRY, with a particularly calm temperament and no aggression, especially suitable for indoor and free-range alternative housing.

TETRA HT

One of the main directions of this research and development project was to examine the incidence of deaths due to feather pecking and aggressive behaviour in the Rhode Island lines of TETRA. No debeaking were performed throughout the experiments.

The results suggest that the origin of hens in both types played a significant role in the onset and damage of aggression. For both type of Rhode Island lines, males with their families have been found, that did not have any aggression at all, and other's offspring dropped out of production solely due to aggression.

In the breeding work great emphasis was placed on the condition of the plumage and the examination of the relationship between body composition (condition).

The plumage condition of the hens at 20, 46, and 62 weeks of age was examined on five different body parts: neck, breast, wings, back, and tail. By summing the plumage points of the different body parts, the total plumage point was calculated for each hen, which could vary from 5 to 20.



Figure 1. Development of plumage scores of non-beaked laying hens of different lines at 20, 46, and 62 weeks of age

To determine the body fat content of laying hens in the live state, computed tomography (CT) examinations were performed, before which the body weight of the experimental animals was measured individually.

Comparing these results with the change in live weight, we found that the greatest deterioration in plumage condition was associated with the least weight gain (line 1), while the birds with the least damaged plumage were also associated with the best weight gain (line 3). Like the condition of the plumage, the condition of the hens in line 1 was the worst during the entire period of the experiment (Fig. 2).



Figure 2. Development of the body fat content of non - beaked laying hens of different lines at 20, 46, and 62 weeks of age

In line 3, however, a steady increase in body fat was observed throughout the study period.

From these results, the worst plumage was associated with the worst condition (line 1) and the best condition plumage was associated with the best condition (line 3).

The selection work was accompanied by molecular genetic research (genome sequencing, MAS), the establishment of TETRA microbiological monitoring program, and the study of experimental crosses in free range condition.

TETRA COUNTRY developed in this project is a product specifically proposed for alternative housing, which will be available to our partners from the beginning of 2022.

#### ACKNOWLEDGMENTS

The tests presented were implemented with the support of GINOP-2.3.4-15-2016-00005 and 2018-1.3.1-VKE-2018-00042.



## REGULATIONS RESTRICT THE USE OF ANTIMICROBIALS

REGULATIONS RESTRICT THE USE OF ANTIMICROBIALS IN HUNGARY AND THE EU FROM 28<sup>TH</sup> OF JANUARY 2022

The first antibiotic, penicillin, discovered by Alexander Fleming (1874-1965) in 1928, helped cure patients or save many people's lives. The use of antibiotics, however, carries tremendous responsibilities. It could be a drug but also poison for both humans and animals. Recently, the discovery and product patenting of new antibiotics have diminished substantially. In the meantime, pathogens keep changing, adapting to the effects of antibiotics by developing new resistant strains and thus therapies becoming less effective.

In 2018 Vytenis Andriukaitis, a former European Commissioner already pointed out the importance and possibility of a shift in his lecture:

"Antimicrobial resistance (AMR) causes the death of 33,000 people in Europe annually. Most of these cases could be avoided if we abandoned the unnecessary use of antibiotics. Furthermore, if the infections spreading in hospitals and communities were diagnosed and prevented more effectively. Therefore, I ask everyone who has a say in influencing the prevention and cure of infections to double efforts to act against the threat of antimicrobial resistance. Besides raising awareness and providing more information, we need to join all our efforts and consider animal health, environmental and human health aspects to fight against antimicrobial resistance.

As of 2022, in the EU, the use of antimicrobials for growth

promotion in animals will be prohibited, and the preventive use of antimicrobials via medicated feed and in groups of animals. There will also be restrictions on the metaphylactic use of antimicrobials and the possibility of reserving certain antimicrobials for human use only. In addition, for their exports into the EU, non-EU countries will have to respect the ban on antimicrobials for growth promotion, as well as the restrictions on antimicrobials reserved for human use.

Antimicrobial resistance (AMR) is the resistance of a microorganism to an antimicrobial medicine to which it was initially sensitive. AMR occurs naturally, but the phenomenon is hugely increased by excessive and inappropriate use of antimicrobial medicines and poor infection control and hygiene practices in humans and animals. A study of the European Centre for Disease Prevention and Control (ECDC) and the 'AMR Collaborative Group', recently published in The Lancet journal, estimated that infections with antibiotic-resistant bacteria would have caused 33,000 deaths in 2015 in Europe.

Fighting AMR does not only lead to better health, but it also has significant economic benefits. The OECD's report published earlier this month (with the support of the Commission and ECDC) estimates that by stepping up our efforts to fight AMR, we can save up to 4.8 billion dollars a year in Europe, North America and Australia." In respect of the above, several chapters of the Hungarian Veterinary Medicinal Products Decree No. 128/2009. (X.6.) FVM (Ministry of Agriculture and Rural Development) has been amended by Decree No. 27/2021. (VIII.11.) AM (Ministry of Agriculture).

#### AMENDMENT NO. 27/2021. (VIII.11.) AM (MINISTRY OF AGRICULTURE) TO VETERINARY MEDICINAL PRODUCTS DECREE NO. 128/2009. (X.6.) FVM (MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT)

(Extracts for veterinarians and livestock owners)

A product can only be authorised for food-producing animals if its active substance has been authorised for that specific animal and the withdrawal period has also been submitted. Before its use, the owner of a large livestock farm declares the veterinarian's name, activity ID code, and farm breeding ID number to the retailer. Veterinary medicinal products subject to prescription can only be sold if prescribed by a veterinarian or the attending veterinarian placed a proper order for them. Only one medicinal product can be made out and supplied for one prescription. The prescribed quantity should be adjusted to the minimum amount required for the therapy.

Medicinal products containing an antibiotic active substance for food-producing animals - if administered by farmers - can only be ordered for a maximum of 7-day treatment. The prescription is made out in 3 copies and must be filed for 5 years. It should contain the product's name, the pack size, the ID of the treated animal or animal group, the dosage regimen, the withdrawal period, the signature, stamp, or an equivalent electronic form of identification of the veterinarian. The following text should be written on the prescription: "I the undersigned acknowledge the information regarding the treatment". The animal keeper should also sign the prescription under the above text and include his full name, address, and farm breeding ID number. The 'Rp.' abbreviation in the upper left corner and the prescription's number and date are compulsory elements. The animal keeper is informed on the mode of application, the risks of usage and antimicrobial resistance. The veterinarian should be responsible for providing professional information, and the animal keeper should be liable for the proper administration of the medicinal product and the compliance with the withdrawal period. Data about the use and distribution of the antibiotic veterinary medicinal product and medicated feed should be reported online by the veterinarian, the retailer and wholesaler and the medicated feed producer on the National Food Chain Safety Office (NÉBIH) website. The user should report no later than the 15th day of the following month, and the distributor should provide information no later than the 1st of March of the following year. It is strictly forbidden to administer 3rd and 4th generation cephalosporin, colistin and fluoroquinolone antibiotics to food-producing animals for prophylaxis. They can only be used for therapy and metaphylaxis if justified by sensitivity tests on samples taken from dead or diseased animals or by the monthly reference tests on the given farm. The attending veterinarian makes an

**antibiotic reduction plan** for the farm and is obliged to conduct a yearly self-monitoring. The veterinarian inspects implementation.

The regulations above are already in force however, there are new mandatory chapters in the EU legislation system that will be effective on 28<sup>th</sup> January 2022 in Hungary. The new regulations are included in the Regulation (EU) 2019/6 of the European Parliament and the Council of 11 December 2018.

#### REGULATION (EU) 2019/6 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON VETERINARY MEDICINAL PRODUCTS

The Regulation was published on 7<sup>th</sup> of January, 2019 and enters into force on 28<sup>th</sup> of January, 2022 (Extracts for veterinarians and livestock owners)

### The main provisions of the Regulation against antimicrobial resistance (AMR)

Among other things, it deals with public health issues. It includes **mitigating the risk of AMR development against human and veterinary medicinal products.** In the case of the authorisation of a new product, it should be considered that the combined **use of several antimicrobial active substances may represent a particular risk concerning the development of antimicrobial resistance.** Unfortunately, the development of new antimicrobials has not kept pace with the increase of resistance to existing antimicrobials.

Therefore, it is essential that the efficacy of existing antimicrobials be maintained for as long as possible. It is becoming necessary that specific antimicrobial active substances administered in human therapy be restricted or banned in animal treatments. Therefore, the misuse and overuse of antimicrobials cause public and animal health concerns. Thus, veterinarians have a crucial role in the proper use of antimicrobials.

#### **TERMS:**

Antimicrobial resistance (AMR) means the ability of micro-organisms to survive or grow in the presence of a concentration of an antimicrobial agent, which is usually sufficient to inhibit or kill micro-organisms of the same species.

Antimicrobial means any substance with a direct action on micro-organisms used for treatment or prevention of infections or infectious diseases, including antibiotics, antivirals, antifungals and anti-protozoal.

*Antibiotic* means any substance with a direct action on bacteria used for treatment or prevention of infections or infectious diseases.

*Metaphylaxis* means the administration of a medicinal product to a group of animals after a diagnosis of clinical disease in part of the group has been established, to treat the clinically sick animals and control the spread of the disease to animals in close contact and at risk and which may already be subclinically infected.

*Prophylaxis* means administering a medicinal product to an animal or group of animals before clinical signs of a disease to prevent the occurrence of disease or infection.

#### | SCIENCE |

### Marketing authorisation of the veterinary medicinal product is refused:

- if its benefit-risk balance is unfavourable,
- if it is an antimicrobial veterinary medicinal product presented for use as *a performance enhancer* to promote the growth of treated animals or to increase yields from treated animals,
- if *the risk for public health* in case of the development of antimicrobial *resistance* or antiparasitic resistance *outweighs* the benefits of the veterinary medicinal product to animal health,
- if the antimicrobial is *reserved for treatment of certain infections in humans.*

#### Essential rules for veterinary prescription issue

- A veterinary prescription for an antimicrobial medicinal product *for metaphylaxis* shall only be issued *after a veterinarian's diagnosis* of the infectious disease.
- The veterinarian shall be able to justify a veterinary prescription of antimicrobial medicinal products, in particular for metaphylaxis and prophylaxis. Such prescription shall be issued only after a *clinical examination or any other proper assessment* of the animal's health status or group of animals by a veterinarian.
- The veterinary prescription shall contain *the identification of the animal or groups of animals* to be treated, *the* full *name and contact details of the animal owner or keeper, the issue date, the full name and contact details of the veterinarian*, including, if available, *the professional number*, the *signature* or an equivalent electronic form of identification of the veterinarian.
- The prescription shall also include the *name* of the prescribed *medicinal product*, including *its active substances*, the pharmaceutical form and strength, the *quantity* prescribed, or the number of packs, including pack size, *dosage regimen*, *the withdrawal period* even if such period is zero, any *warnings* necessary to ensure the proper use including, where relevant, to ensure prudent use of antimicrobials.
- The quantity of the medicinal products prescribed shall be limited to the *amount required for the therapy concerned. Regarding antimicrobial medicinal products for metaphylaxis or prophylaxis*, they shall be prescribed *only for a limited duration to cover the risk period.*
- A veterinary prescription for antimicrobial medicinal products shall be *valid for five days* from the date of its issue.

If a veterinary medicinal product classified as subject to veterinary prescription may be administered without a veterinary prescription by a veterinarian personally. The veterinarian shall keep records of such personal administration.

#### Antimicrobial medicinal products:

- shall not be applied routinely nor used to compensate for poor hygiene, inadequate animal husbandry or lack of care or to compensate for poor farm management,
- <u>shall not be used</u> in animals <u>to promote growth nor</u> <u>to increase yield</u>,

- <u>shall not be used for prophylaxis</u> other than in exceptional cases, for the administration to an individual animal or a restricted number of animals when the risk of an infection or an infectious disease is very high, and the consequences are likely to be severe. In such cases, the use of antibiotic medicinal products for prophylaxis shall be limited to the administration to an individual animal only,
- shall be used for metaphylaxis only when the risk of spread of an infection or an infectious disease in the group of animals is high and where no other appropriate alternatives are available.

Owners or the keepers of food-producing animals shall keep records of the medicinal products they use and a copy of the veterinary prescription for 5 years. Records shall include:

- the *date of the first administration*, the *name*, and the administered *quantity* of the *medicinal product*,
- the *name or company name* and permanent address or registered place of business *of the supplier*,
- the *evidence of acquisition* of the medicinal products they use
- the identification of the *animal or group of animals treated*,
- the name and contact details of the prescribing veterinarian,
- the withdrawal period, even if such period is zero, and the duration of treatment.

If the information is already available on the copy of a veterinary prescription, it does not need to be recorded separately.

Use of medicinal products outside the terms of the marketing authorisation in food-producing animal species, the withdrawal period of the above products shall not be less than:

- the most extended withdrawal period for meat and offal multiplied by factor 1.5,
- 28 days if the medicinal product is not authorised for food-producing animals,
- one day, if the medicinal product has a zero-withdrawal period and is used in a different taxonomic family than the target species authorised,
- the most extended withdrawal period for eggs of any animal species multiplied by factor 1.5,
- 10 days if the product is not authorised for animals producing eggs for human consumption.

Designate antimicrobials reserved for treating certain infections in humans cannot be administered outside the terms of the marketing authorisation.

The above extract guides to the responsible use of antibiotics and antimicrobial medicinal products for attending veterinarians, owners and keepers of foodproducing animals.

> DR. ELŐD BAJCSY | Veterinary Expert on Poultry Medicine

# OUR ONE-MINUTE NEWS from the last three months

#### **OCTOBER 20, 2021**

This year we were able to rejoin the "PickUp! Volunteerly for a clean Hungary" campaign to clean up our environment together and take another step towards sustainability.



### MEZŐGAZDASÁGI NAGYDÍJ ÁLLATTENYÉSZTÉS

#### OCTOBER 10, 2021

Bábolna TETRA Ltd. gained another national award.



This time received the Agricultural Grand Prize of animal husbandry at this year's National Agricultural and Food Exhibition.

#### **SEPTEMBER 25, 2021**

We are truly proud that this year we received **the grand prize of poultry breeding** at two exhibitions held in Hungary, the **Farmer Expo** in Debrecen and the XXVIII. Animal Husbandry and Agriculture Exhibition in Hódmezővásárhely.









**TETRA NEWSLETTER** by Bábolna TETRA Ltd. Editor-in-Chief: Gábor Seres • Director of Publishing: Szabolcs Németh Photos: Ildikó Búza • Design: arttitude.hu Published by: **Bábolna TETRA Ltd.** H-2943, Bábolna, Radnóti M. u. 16., tel.: +36 95 345 008



Bábolna TETRA Ltd. does not accept responsibility for any occurrent errors, omissions, and inaccuracies. In no event, Bábolna TETRA Ltd. is liable for any damages arising out of or in connection with the use of the content of this publication. TETRA Newsletter is the property of Bábolna TETRA Kft. Copy and distribution of this publication or any part of it is not allowed without the written permission of Bábolna TETRA Kft.