

Dr. Mahmoud Bahgat



Co-Founder & Host:
Dr.Mahmoud Samy

International



Sharpen your skills

Animal Health Market سوق صحة الحيوان

Online zoom 7 pm Egy_8 pm KSA_9 pm UAE





Dr. Mahmoud Samy Marketing Manager

AGENDA



- 1. Introduction
- 2. About International Veterinary Club (Objective, Vision & Mission)
- 3. Role of Veterinarians
- 4. Cattle Market In Numbers
- 5. Poultry Market In Numbers
- **6. TOP 10 Veterinary Industry Trends**
- 7. TOP Players in AH Market





Mahmoud Samy Marketing & Technical Director



I Have a 17 Y of experience in Both Human & Animal Health Sector















My current position is Member of the Board of Director at

During my Career in Animal Health, I led a lot of Animal Health strategic projects and Launching many companies in the Market (Framelco Netherlands, Agrana Austria) Beside the Range of Anticoccidial Products in the Egyptian Market with Market Share of 50% of the whole products in the Market Beside Launching the Animal Health sector in one of the top National Company in the Egyptian Market (EVA Pharma) From the scratch.



About The IVC







About IVC



The International Veterinary Club is a Global Community for veterinarians. We connect professionals, facilitate knowledge sharing, and foster professional growth through online forums, webinars, and more...





Our Vision

To be the global cornerstone of veterinary excellence, empowering a connected community of professionals to advance animal health and welfare through knowledge sharing, collaboration, and innovation.

Our Mission

To foster a dynamic and inclusive online platform that connects veterinarians worldwide, facilitates the seamless exchange of knowledge and best practices, and empowers members to achieve professional and personal growth.



IVC Activities



- 1. Online forums for knowledge sharing and case discussions
- 2. Webinars and workshops featuring renowned veterinarians
- 3. Continuing education courses and certifications
- 4. Mentorship programs connecting experienced and aspiring veterinarians
- 5. Networking events and social gatherings
- 6. Job boards and career resources
- 7. Advocacy for animal welfare and ethical veterinary practices



IVC Activities



Co-Founder & Host: **Dr.Mahmoud Samy** 0020100 704 1756



Yeterinary Club Sharpen your skills



Club Founder Dr. Mahmoud Bahgat © KSA 00966568654916 Egy 00201094932932



Monthly Meeting on zoom (



Every 4th Wednesday 7 pm Egy 8 pm KSA

9 pm UAE

Wednesday 7pm 25/12/2024



Vetrinary Business Basics Dr. Mahmoud Samy Veterinary Expert

Wednesday 7pm 22/1/2024



Vet Clinics Business (Q&A) **Dr.Ahmed Elnabrawy** Veterinary Expert

Wednesday 7pm 26/2/2025

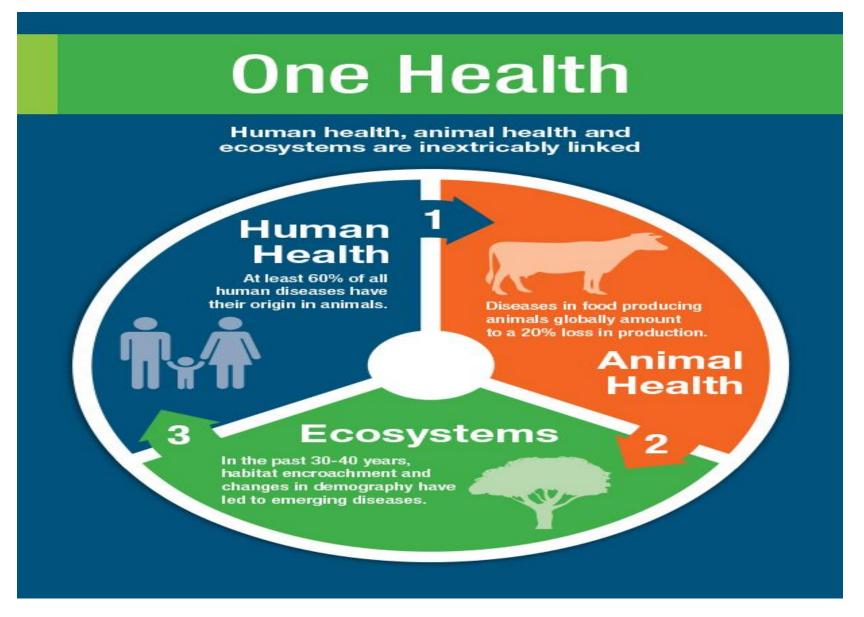


Veterinary Market Trends Dr.Osama Shedeed Veterinary Expert in Saudi Market

Join Zoom Meeting: https://zoom.us/j/95490223798?pwd=WUILdDEvTEdTTU1TQjI6T2FMc3d4UT09 Meeting ID: 3798 9022 954 Passcode: 127875 #IVC #International_Veterinary_Club #Veterinary_Club **#Veterinary**



Using a One Health Approach to Protect Health for All











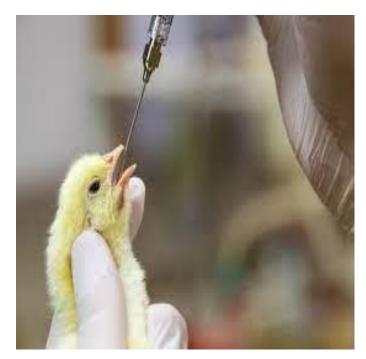


Introduction: Veterinarians are medical professionals who specialize in the diagnosis, treatment, and prevention of diseases and injuries in animals. - Their role is not limited to animal health but also extends to the impact of animal health on human health.







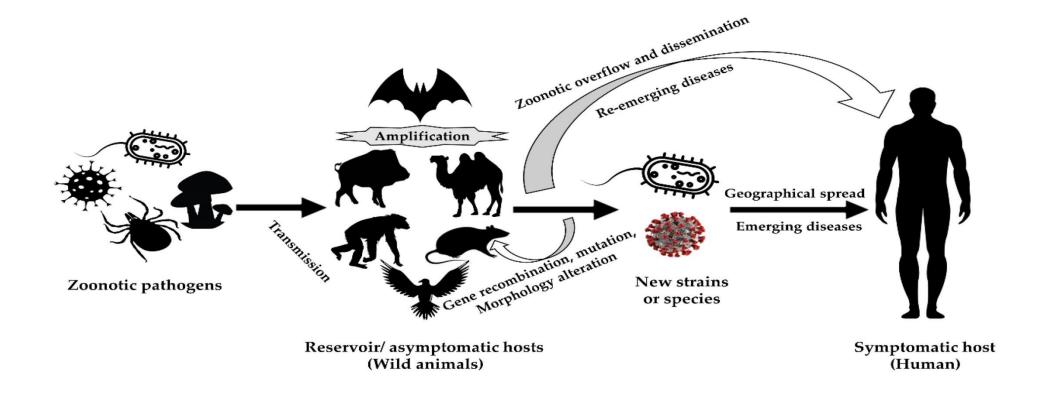




Animal Health: One of the primary roles of veterinarians is to promote animal health and welfare.- They provide routine checkups and vaccinations to prevent illnesses and diseases.- They also diagnose and treat illnesses and injuries in animals, from minor ailments to lifethreatening conditions.







Public Health- Veterinarians play a critical role in protecting public health.- They monitor and control the spread of zoonotic diseases, which are diseases that can be transmitted from animals to humans.- They also ensure that animals used for food production are healthy and free from diseases that could harm human health.



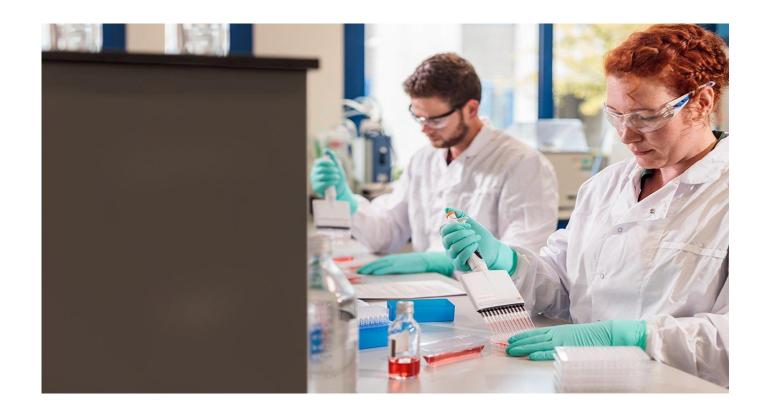




Public Health- Veterinarians play a critical role in inspecting Milk and Meat Products which reflect directly on human Health







Research- Veterinarians are involved in research to improve animal health and welfare.- They work to develop new treatments and vaccines for animal diseases.- They also study the impact of animal health on human health and the environment.







Education- Veterinarians are educators, providing information and advice to animal owners and the public.- They educate pet owners on proper nutrition, exercise, and care for their animals.- They also provide information to the public on zoonotic diseases and how to prevent them.



Animal Health / Market Sectors





Poultry



Livestock



Companion Animals



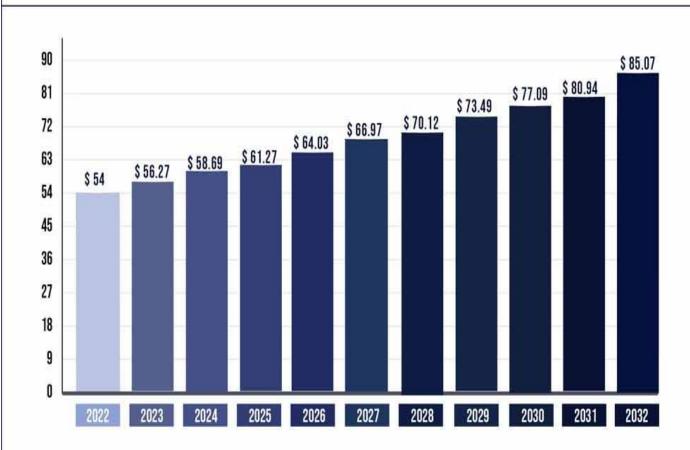
Aquaculture/Marine





PRECEDENCE RESEARCH

ANIMAL HEALTHCARE MARKET SIZE 2022 TO 2032 (USD BILLION)



Source: www.precedenceresearch.com

•Market Size:

- In 2023, the global animal health market size was estimated to be around USD 62.4 billion.
- It is projected to reach USD 66.9 billion in 2024.
- By 2030, it is expected to reach USD 112.3 billion.

•Growth Rate:

 The market is expected to grow at a Compound Annual Growth Rate (CAGR) of 9.0% from 2024 to 2030.



Key Livestock Species

Cattle: Beef and dairy cattle are major components of the livestock market.

Swine: Pork is a significant source of protein globally.

Poultry: Chicken and other poultry species are widely consumed and produced.

Sheep and Goats: Important sources of meat, milk, and fiber (wool).

Major Players

Producers: Farmers, ranchers, and agricultural cooperatives.

Processors: Meat processing plants, slaughterhouses, and dairy processors.

Feed Manufacturers: Companies producing animal feed ingredients and complete feeds.

Input Suppliers: Providers of veterinary services, pharmaceuticals, and other inputs.

Retailers and Distributors: Supermarkets, grocery stores, and foodservice distributors.





Key Market Segments



Meat Production: Beef, pork, poultry, lamb, mutton.

Dairy Production: Milk, cheese, yogurt, butter.

Livestock Feed: Grains, protein sources, vitamins, minerals.

Veterinary Services: Animal healthcare, pharmaceuticals, diagnostics.

Livestock Genetics: Breeding stock, artificial insemination.



Global Production and Consumption



Asia: A major producer and consumer of livestock products, with China and India being key players.

North America: A significant producer and consumer of beef, pork, and poultry.

South America: A major producer of beef and poultry, with Brazil being a leading exporter.

Europe: Focus on high-quality meat and dairy products, with a strong emphasis on animal welfare and sustainability.

Africa: Growing livestock production, driven by increasing demand for protein.



Key Trends



Growing demand for protein: Global population growth and rising incomes are driving increased demand for meat and dairy products.

Sustainability: Growing focus on sustainable livestock production practices, including reduced environmental impact, improved animal welfare, and antibiotic stewardship.

Technological advancements: Precision agriculture, biotechnology, and digital technologies are transforming livestock production.

Consumer preferences: Changing consumer preferences, such as demand for organic and locally sourced products, are influencing the market.

Global trade: International trade in livestock and livestock products plays a significant role in global food security.



Challenges



Disease outbreaks: Animal diseases can have a significant impact on production and trade.

Climate change: Climate change poses challenges to livestock production, such as heat stress and changes in feed availability.

Environmental concerns: Livestock production can contribute to environmental issues like greenhouse gas emissions and water pollution.

Animal welfare: Growing public concern about animal welfare is influencing production practices.



Data Sources



FAOSTAT (Food and Agriculture Organization of the United Nations)

USDA (United States Department of Agriculture)

OECD (Organization for Economic Co-operation and Development)

Industry reports and market research publications



The Global cattle market





Market Size & Forecast (Approximate):

•2023: The global cattle market size (including beef and dairy) was estimated to be around USD 1.5 trillion.

•2030: It's projected to reach USD 2.1 trillion by 2030, exhibiting a Compound Annual Growth Rate (CAGR) of around 4.5%.



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Table C.4. World meat projections

Calendar year

| | | Average 2019-21est | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|-------------------------|--------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| WORLD | | | | | | | | | | | | |
| BEEF AND VEAL | | | | | | | | | | | | |
| Production | kt cwe | 70 556 | 72 217 | 72 937 | 73 339 | 73 784 | 74 220 | 74 690 | 75 139 | 75 539 | 75 956 | 76 384 |
| Consumption | kt cwe | 70 684 | 72 234 | 72 939 | 73 342 | 73 776 | 74 216 | 74 688 | 75 141 | 75 542 | 75 958 | 76 386 |
| PIGMEAT | | | | | | | | | | | | |
| Production | kt cwe | 110 613 | 120 822 | 123 512 | 124 026 | 124 758 | 125 380 | 125 992 | 126 713 | 127 441 | 128 185 | 128 895 |
| Consumption | kt cwe | 110 471 | 120 819 | 123 440 | 124 024 | 124 757 | 125 378 | 125 988 | 126 710 | 127 435 | 128 184 | 128 893 |
| POULTRY MEAT | | | | | | | | | | | | |
| Production | kt rtc | 132 476 | 135 929 | 137 777 | 139 715 | 141 848 | 143 808 | 145 748 | 147 725 | 149 733 | 151 788 | 153 850 |
| Consumption | kt rtc | 130 832 | 135 959 | 137 714 | 139 637 | 141 821 | 143 808 | 145 757 | 147 723 | 149 743 | 151 784 | 153 846 |
| SHEEP MEAT | | | | | | | | | | | | |
| Production | kt cwe | 15 640 | 16 201 | 16 455 | 16 670 | 16 877 | 17 086 | 17 295 | 17 499 | 17 697 | 17 893 | 18 076 |
| Consumption | kt cwe | 15 695 | 16 209 | 16 463 | 16 678 | 16 884 | 17 093 | 17 302 | 17 505 | 17 704 | 17 899 | 18 081 |
| TOTAL MEAT | | | | | | | | | | | | |
| Per capita consumption1 | kg rwt | 34.1 | 35.2 | 35.4 | 35.4 | 35.5 | 35.5 | 35.5 | 35.5 | 35.5 | 35.6 | 35.6 |



Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agroutl-data-en.

Table C.11. World prices (cont.)

Real price

| | | Average 2019-21est | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|-------------------------------------|-----------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| CEREALS | | | | | | ****** | | | | | | |
| Wheat1 | USD/t | 294.4 | 325.2 | 259.5 | 232.1 | 224.3 | 219.4 | 218.5 | 216.5 | 214.4 | 212.6 | 210.6 |
| Maize ² | USD/t | 227.7 | 252.1 | 199.2 | 178.3 | 171.3 | 167.8 | 167.9 | 166.1 | 164.0 | 162.1 | 160.2 |
| Other coarse grains ³ | USD/t | 251.0 | 300.0 | 236.6 | 211.2 | 202.2 | 196.2 | 196.7 | 195.4 | 194.1 | 192.5 | 190.8 |
| Rice ⁴ | USD/t | 416.4 | 374.9 | 365.9 | 360.9 | 357.2 | 351.8 | 346.1 | 340.1 | 334.3 | 328.7 | 323.2 |
| Distiller's dry grains ⁵ | USD/t | 192.1 | 172.0 | 161.6 | 155.4 | 148.6 | 144.7 | 144.2 | 143.0 | 141.6 | 139.9 | 137.7 |
| OILSEEDS | 000/1 | 102.1 | 172.0 | 101.0 | 155.4 | 140.0 | 1.4.4.2 | 144.2 | 140.0 | 1.41,0 | 100.0 | 101.1 |
| 74970 PP 27. | LIOD # | 504.0 | C07.0 | 454.0 | 101.0 | **** | 444.0 | 444.0 | *** | 400.0 | 4004 | 400.0 |
| Soybean ⁶ | USD/t | 524.8 | 527.3 | 454.2 | 421.0 | 415.0 | 411.3 | 411.3 | 411.7 | 408.0 | 406.1 | 406.8 |
| Other oilseeds ⁷ | USD/t | 627.6 | 678.0 | 538.9 | 518.6 | 488.8 | 481.6 | 485.2 | 482.1 | 479.8 | 477.9 | 476.1 |
| Protein meals ⁸ | USD/t | 418.9 | 411.7 | 357.6 | 332.8 | 324,5 | 321.5 | 324.1 | 323.6 | 322.9 | 322.5 | 320.5 |
| Vegetable oils ⁹ | USD/t | 1174.2 | 1 146.5 | 997.0 | 989.1 | 961.2 | 957.5 | 949.4 | 945.7 | 939.9 | 936.7 | 933.4 |
| MEAT | | | | | | | | | | | | |
| Beef and veal | | | | | | | | | | | | |
| Price, EU14 | USD/t dwt | 4 339.4 | 4876.3 | 4 205.1 | 3 794.6 | 3 743.5 | 3 696.0 | 3 659.9 | 3 611.9 | 3 575.9 | 3 537.2 | 3492.6 |
| Price, United States ¹⁵ | USD/t dwt | 4 245.0 | 4 657.5 | 4 336.2 | 4 088.5 | 3 932.8 | 3 891.3 | 3 850.4 | 3 797.4 | 3 755.4 | 3 713.8 | 3 669.8 |
| Price, Brazil16 | USD/t dwt | 4 626.7 | 5 241.3 | 4 492.0 | 4 052.9 | 4 006.4 | 3 962.6 | 3 921.4 | 3 868.1 | 3 830.9 | 3 791.3 | 3744.3 |
| Pigmeat | | | | | | | | | | | | |
| Price, EU17 | USD/t dwt | 1 891.7 | 1 738.2 | 1 530.9 | 1 546.2 | 1 521.3 | 1 505.5 | 1 494.3 | 1 472.0 | 1 454.8 | 1 425.6 | 1397.2 |
| Price, United States ¹⁸ | USD/t dwt | 1 660.2 | 2 104.4 | 1 650.4 | 1 534.4 | 1 426.3 | 1 419.7 | 1 410.2 | 1 387.4 | 1 364.9 | 1 335.9 | 1 304.1 |
| Price, Brazil ¹⁹ | USD/t dwt | 2 419.9 | 2 384.4 | 2 077.2 | 2 108.8 | 2 061.3 | 2 034.4 | 2013.8 | 1 982.4 | 1 959.5 | 1 919.9 | 1879.0 |
| Poultry meat | | | | | | | | | | | | |
| Price, EU ²⁰ | USD/t rtc | 2 228.3 | 2 302.9 | 2 150.8 | 2 130.5 | 2 130.3 | 2 126.0 | 2 122.8 | 2 098.3 | 2 068.3 | 2 040.7 | 2013.4 |
| Price, United States ²¹ | USD/t rtc | 1 087.4 | 1 147.2 | 1 018.7 | 1 002.6 | 999.9 | 995.6 | 993.1 | 980.6 | 965.9 | 951.9 | 928.8 |
| Price, Brazif ² | USD/t rtc | 1 597.8 | 1 703.1 | 1510.0 | 1 486.3 | 1 482.5 | 1 477.0 | 1 474.5 | 1 457.3 | 1 435.6 | 1 415.3 | 1394.6 |
| Sheep meat | | | | | | | | | | | | |
| Price, New Zealand ²³ | USD/t dwt | 5 036.5 | 4 671.6 | 4 500.2 | 4 426.1 | 4 373.7 | 4 340.7 | 4316.1 | 4 269.9 | 4 245.0 | 4 205.6 | 4151.9 |
| ISH AND SEAFOOD | | | | | | | | | | | | |
| Product traded ²⁴ | USD/t | 3 187.7 | 3714.8 | 3 261.3 | 3 231.7 | 3 128.2 | 3 127.2 | 3 147.1 | 3 283.9 | 3 103.7 | 3 089.3 | 3078.2 |
| Aquaculture ²⁵ | USD/t | 3 119.5 | 3 520.0 | 3 113.0 | 3 111.9 | 3 042.0 | 3 064.9 | 3 100.1 | 3 240.7 | 3 095.1 | 3 106.9 | 3 119.1 |
| Capture ²⁶ | USD/t | 1 939.2 | 2 085.5 | 1 893.5 | 1 872.2 | 1819.4 | 1810.0 | 1 809.6 | 1 857.5 | 1 775.7 | 1 760.9 | 1747.7 |
| Meal ²⁷ | USD/t | 1 497.4 | 1 466.3 | 1 356.1 | 1 380.7 | 1 206.6 | 1 212.8 | 1 262.3 | 1 328.3 | 1 250.0 | 1 256.6 | 1 263.6 |
| Oi128 | USD/t | 1 966.7 | 2 176.0 | 1 853.2 | 1713.6 | 1 519.2 | 1 494.4 | 1 490.1 | 1 737.8 | 1 599.6 | 1 611.4 | 1623.2 |

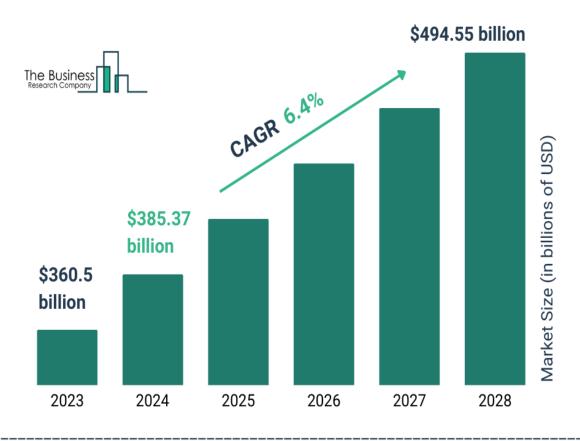








Poultry Global Market Report 2024



Poultry Market Size 2024 And Growth Rate

The poultry market size has grown strongly in recent years. It will grow from \$360.5 billion in 2023 to \$385.37 billion in 2024 at a compound annual growth rate (CAGR) of 6.9%.

The growth in the historic period can be attributed to strong economic growth in emerging markets, rise in consumption of meat, low interest rates, increased awareness about the health benefits, and rise in disposable income.





Poultry Market Segmentation

1) By Type:

Chicken, Turkey, Ducks, Other Poultry

2) By Product Type:

Fresh/Chilled, Frozen, Ready-To-Cook, Ready-To-Eat, Other Product Types

3) By Nature:

Organic, Conventional

4) By Distribution Channel:

Supermarkets/Hypermarkets, Convenience Stores, Food Services, E-Commerce, Other Distribution Channels





Poultry Market Growth Forecast

The poultry market size is expected to see strong growth in the next few years. It will grow to \$494.55 billion in 2028 at a compound annual growth rate (CAGR) of 6.4%.

The growth in the forecast period can be attributed to rise in consumption of protein, increasing government support, rapid urbanization and increasing population.

Major trends in the forecast period include technology advancements, organic poultry, camera-based weighing systems, use of artificial intelligence, increasing investments and strategic partnerships and acquisitions..





Lower input costs and affordability

Feed efficiency and cost reduction

Advancements in poultry nutrition and management practices have led to improved feed efficiency. Lower input costs—particularly for feed, vaccines, and medications—have made chicken production more economically viable. As a result, consumers benefit from affordable chicken prices, encouraging higher consumption.

The role of technology

Precision agriculture, genetic selection, and data-driven decision-making have revolutionized poultry farming. Farmers can optimize feed conversion ratios, reduce waste, and enhance productivity. These technological innovations contribute to the industry's growth.





Consumer behavior and price sensitivity

Chicken as the preferred protein

In an increasingly health-conscious world, chicken remains a popular choice. It is lean, versatile, and adaptable to various cuisines. As inflation eases and wages improve, consumers continue to prioritize affordability, making chicken an attractive option.

The Rise of convenience foods

Processed chicken products—such as nuggets, sausages, and ready-to-eat meals—have gained prominence. Convenience-driven demand further fuels the industry. As urbanization continues, time-strapped consumers seek quick, nutritious options.





Regional patterns and opportunities

Southeast Asia: a hotbed of growth

Countries like Indonesia, Vietnam, and Thailand are witnessing robust poultry demand. Rising incomes, population growth, and changing dietary habits drive consumption. Investments in infrastructure and supply chain logistics are critical for sustained growth.

Middle East and Latin America

These regions exhibit steady growth, albeit at levels slightly below the global average. **Urbanization, increased protein intake, and expanding middle-class populations contribute to poultry consumption.** Producers must balance supply with demand to avoid oversupply challenges.





Geopolitical challenges and input costs

Navigating uncertainties

Global geopolitical tensions impact input costs. The conflict in Ukraine disrupts grain markets, affecting feed prices. Additionally, climate risks and energy costs remain volatile. Producers must adapt to these challenges while maintaining profitability.

Trade dynamics

Raw chicken vs. processed poultry

While raw chicken trade continues to expand, processed poultry faces hurdles. Foodservice markets in importing countries demand convenience and quality. Brazil, Thailand, and China, as major exporters, must address these preferences to sustain growth.









Top 10 Veterinary Industry Trends in 2024

International

Veterinary Club

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- 1. Novel Veterinary Medicine
- 2. Artificial Intelligence (AI)
- 3. Veterinary Telehealth
- 4. Advanced Diagnostics
- 5. Wearable's
- 6. Livestock Rehabilitation
- 7. Genomics
- 8. Practice Management Systems (PMS)
- 9. Micro chipping
- 10. Virtual Reality (VR)



1. Novel Veterinary Medicine



Esox Biologics offers a Biologic Therapy

UK-based startup **Esox Biologics** develops **Aquabody**, a biologic therapy designed for aquatic environments to prevent diseases. **Tackling the overuse of antibiotics in aquaculture**, Aquabody combats antimicrobial resistance and preserves beneficial microbes.

The startup also offers rapid pathogen detection via automated qPCR, genome sequencing for microbial threat identification, and metagenomic analysis for comprehensive microbiome insights.

Xeptiva Therapeutics provides a Chronic Neuroinflammation Treatment

Uruguayan startup Xeptiva Therapeutics offers recombinant multi-target immunogens targeting neurogenic inflammation. These immunogens, designed as conformational isomers, mimic immunogenic epitopes without the biological activity of inflammatory mediators. The vaccination elicits antibodies against key inflammation mediators like growth factors and interleukins. They reduce chronic inflammation and symptoms like pain and itching in pets.

Xeptiva Therapeutics' product pipeline focuses on common pet ailments like osteoarthritis chronic pain and atopic dermatitis, improving the quality of life for aging pets. Its approach also emphasizes early detection and comprehensive treatment plans involving active owner participation. This enables personalized, effective pain management for companion animals.



2. Artificial Intelligence

Sylvester.Al enables Facial Cues-based Pain Analysis



Canadian startup <u>Sylvester.Al</u> makes Tably, an Al-powered API that interprets cats' facial cues to assess their pain levels. Trained on vet-approved pain scales, it analyzes key facial indicators like ear position and muzzle tension from photos. Moreover, the API utilizes various AI techniques, including object detection, image suitability detection, object extraction, image categorization, and result analysis.

To ensure accuracy, the company's algorithm first verifies the presence of a feline face in the image and only then proceeds to a more detailed AI analysis. This step minimizes errors and enhances the reliability of the results. The tool also aids in post-procedure care and ongoing health monitoring, providing cat owners and veterinarians with precise, reliable insights. This improves feline healthcare management,

in-clinic

andremotely.

DeepFarm facilitates Cattle Behavior Tracking

South Korean startup <u>DeepFarm</u> combines AI and animal science to innovate in the farming and livestock sector. Its AFA (AI for Animal) solution monitors and tracks cattle behavior. This AI-driven system provides real-time data notifications to farmers and managers, enabling the prediction and prevention of various issues associated with cattle rearing and management.

AFA also operates autonomously through embedded devices with cameras, eliminating the need for server-based image data analysis. This non-intrusive, stress-free approach improves farm productivity and aids in identifying and monitoring livestock behavior effectively.

3. Veterinary Telehealth



Pawlyclinic enhances In-Clinic Veterinary Services

Singaporean startup <u>Pawlyclinic</u> provides a platform for veterinarians to provide comprehensive care remotely. For example, it provides flexible work scheduling and digital storage, increases client interaction, and simplifies the review of medical records. Also, the platform offers medication prescription and delivery, as well as referrals for in-clinic care and diagnostic tests.

This way, the platform enhances in-clinic veterinary services and empowers pet parents to better manage their pets' health conveniently. In cases where teleconsultation is not suitable, vets refer pet parents to the startup's network of clinics, ensuring seamless and continuous care.

CocoVeto builds a Farm Animals Telemedicine App

France-based startup <u>CocoVeto</u> develops an app, *CocoFeed,* for breeders and rural veterinarians. It utilizes Al to address veterinarian scarcity and assist breeders in their transition processes. The app enables rapid response and provides thematic sheets on animal feed prevention, enhancing knowledge transfer to farmers. The agroecological-committed app further reduces production losses and offers enhanced support.

CocoVeto also offers a virtual assistant and video-conferencing service, accelerating pathology treatr These solutions ensure legal security in breeder-veterinarian exchanges, simplify health monitoring support innovative approaches in agricultural management. For breeders, the app reduces mor through prevention, aids knowledge acquisition, and increases livestock income.

4. Advanced Diagnostics



Kidney-Chek aids in Kidney Issues Detection

Canadian startup <u>Kidney-Chek</u> offers a saliva test that measures salivary urea to identify potential kidney issues. The diagnostic tool changes color to signal health concerns, allowing for timely veterinary intervention. The startup also detects severe dehydration and other health issues. The tests can be performed at home with a mouth swab, providing results within minutes.

MI:RNA Diagnostics advances Animal Health Screening

UK-based MI:RNA Diagnostics develops two solutions – NEMO Johne's Disease Screening for cattle and NEMO Cardiac Health Screening for cats and dogs. The Johne's Disease Screening solution employs Al and statistical modeling to detect cattle in the pre-shedding or pre-clinical stage of Johne's disease from blood samples. Moreover, it allows vet doctors to better understand the resilience of the disease to protect the herd.

Its cardiac health screening solution for cats and dogs also identifies early-stage heart disease from a blood sample. For this, it utilizes miRNA profiling for precise diagnosis and management of conditions like myxomatous mitral valve disease (MMVD) in dogs and hypertrophic cardiomyopathy in cats. With high accuracy, sensitivity, and specificity, the startup offers an effective solution for early detection breed screening, and pre-anesthetic evaluation.

5. Wearable's



Monil simplifies Animal Health Monitoring

Norwegian startup <u>Monil</u> aids in cattle farming with its virtual fencing system. The startup's technology enhances animal health monitoring, simplifies pasture management, and ensures efficient use of land. Its system includes a mobile app and a collar (the "clave") that allows farmers to set up virtual fences to establish grazing boundaries. This enables farmers to track animal movements in real time and receive instant alerts on any irregularities.

The startup enables farmers to better understand the grazing patterns and have a know-how of animal health and behavior. Further, Monil's app offers insights into the well-being, activity levels, and estrus cycles of livestock.

Fond Solutions streamlines Animal Habit Tracking

Indian startup <u>Fond Solutions</u> offers *FlufFit* which allows pet owners to monitor and manage dogs' activities by tracking their walking, playing, and sleeping habits to understand their sleep patterns with ease. Equipped with patent-pending technology, *FlufFit* measures the dogs' body temperature and assists in effective weight management. The device also connects the dogs to veterinarians, delivering health insights for proactive care.

This healthcare device translates complex data into simple daily insights accessible via a connected result, it enables pet owners to better understand the physical and emotional health of dogs. The appreciation personalized fitness goals based on the dog's breed, weight, and age, addressing the common issurblestity. Fond offers features like activity and sleep quality tracking, and vet-reviewed insights to diseases.

6. Livestock Rehabilitation

Veterinary Club Sharpen your skills

Caremed advances Shock Wave Lithotripsy for Urinary Stone Removal

Turkish startup <u>Caremed</u> provides *PetLith*, a urinary stone removal tech for animals. It utilizes an animal-specific extracorporeal shock wave lithotripsy system that features advanced robotic electrohydraulic therapy. This non-invasive, <u>pain-free solution breaks down urinary stones in animals</u>, offering a high level of precision and tissue protection during treatment.

Compatible with various X-ray and ultrasound systems, the system allows for accurate stone localization and tracking. *PetLith*'s collaborative robot arm further ensures precise targeting. *PetLith*'s user-friendly design, economical operation, and quick treatment times make it an efficient and cost-effective choice for veterinary lithotripsy.

Wimba offers 4D-printed Orthopedic Products for Animals

Polish startup <u>Wimba</u> offers *V-OP*, a range of 4D-printed orthopedic products for animals. For instance, its carpus orthosis supports wrist joints and tarsus orthosis supports the ankle. These products use the *Wimba Therapy System* which features adjustable fastening systems and a controlled motion and rehabilitation monitoring component.

The startup also has a *WimbaSCAN* smartphone app that simplifies measurement collection for plas and bands. *Wimba Boots* shields animals' paws from extreme temperatures and harmful elements salt, snow, and debris. *Wimba Prostheses* for limbs further provides a balanced and biomechanical solution for pets with limb impairments. Wimba's products thus address various animal condition degenerative diseases to injuries.

7. Genomics



PetDx offers a Liquid Biopsy Test

US-based startup <u>PetDx</u> develops *OncoK9*, a liquid biopsy test that uses NGS for early multi-cancer detection (MCED) in dogs. It employs advanced genomic analysis and proprietary bioinformatics algorithms to detect cancer signals from a blood draw. Performed at PetDx's ISO-certified lab in San Diego, *OncoK9* uses Illumina NovaSeq 6000 instruments for its complex testing.

The *OncoK9* test process involves collecting a blood sample containing cell-free DNA from healthy and potentially cancerous cells. The sample undergoes centrifugation to separate its components, followed by extraction and sequencing of cell-free DNA. PetDx's specialized bioinformatics algorithms then analyze the data to identify cancer-associated genomic alterations. The final step is a clinical report sent to the veterinarian, to detect canine cancer early on.

Breedi specializes in Genetic Testing & Selection

Dutch startup <u>Breedi</u> offers genetic testing and genomic selection, including full-cycle genetic testing with estimated breeding value (EBV) and genomic breeding value (GBV). The service enhances farm profitability by improving animal productivity, fertility, and longevity. Additionally, it provides breeding centers with verified pedigrees and breeding tools. The service encompasses genotyping, productivity and health profise disease carrier detection, and inbreeding control, using advanced algorithms for breeding value calculated and training for staff in genomic selection, sampling tec

and data utilization.

8. Practice Management Systems

VetSnap develops Controlled Drug Log Software



US-based startup <u>VetSnap</u> advances DEA compliance for veterinary practices with its digital controlled drug log software. This cloud-based solution transforms the traditional paper logbook into an automated, error-reducing system that integrates with PMS. It also simplifies inventory management by automatically flagging log errors, reconciling inventory levels, and integrating patient and client data. Accessible on any browser or mobile device, VetSnap's software eliminates the need for hardware and tedious software upgrades. Key features of the software include efficient and controlled drug inventory management, real-time inventory breakdown, simplified logging and invoicing processes, and automated overnight drug log reconciliation with

next-dayfixes

Petabyte offers Cloud-based Veterinary Practice Management

US-based <u>Petabyte</u> provides a veterinary practice management solution that offers actionable insights to improve productivity and patient care. The cloud-based software consolidates and analyzes data from the practice management system, marketing, CRM, ERP, and more. It cleanses, consolidates, and standardizes data utilizing a digital directory, AAHA accounting codes, and proprietary algorithms. The software then converts it into a secure, encrypted asset accessible only to the user.

Built-in dashboards and custom reporting tools further empower the teams with location-specific or wide visibility. Additionally, the report builder feature monitors KPIs, schedules emailed reports, and s to share insights. For enterprise-level analytics, Petabyte audits new acquisitions, generates custom and leverages the full capabilities on demand.

9. Microchipping

VetChip manufactures a Biosensing Microchip



Australian startup <u>VetChip</u> develops a biosensing microchip for continuous health monitoring. Implanted under the animal's skin, it tracks key biometric indicators like temperature, heart rate, respiratory rate, and oxygenation levels. The owner's smartphone wirelessly receives this data which the proprietary AI software analyzes to detect any health abnormalities. Owners receive automatic alerts about unusual health changes, thus enabling timely intervention.

The company's microchip also includes a location monitoring feature, making it a valuable tool for farming and agriculture. It integrates with smart farming practices, enhancing biosecurity, early disease detection, animal welfare, and yield optimization. VetChip's proactive health monitoring system thus ensures early intervention for improved animal health outcomes and disease management.

ICOE Pet provides Ultra-Wideband (UWB) Location Tracking

US-based startup **ICOE Pet** makes a microchip compatible with smartphones and existing scanners. It offers advanced features like real-time tracking, temperature monitoring, and heartbeat measurement. With smartphone scanning and ultra-wideband tracking, farmers reduce prolonged separation when the animals go missing.

Designed for a range of applications, the microchip enhances safety and health monitoring for pets, zoo animals, and wildlife. For instance, it facilitates remote health assessments in zoos and st livestock management with automated counting and health alerts. Further, the company's microch preventing human-wildlife conflicts and enhances the safety of marine life like manatees against boat strikes.

10. Virtual Reality



VET VR simplifies Animal Anatomy Study

Latvian startup <u>VET VR</u> allows students to learn animal anatomy through VR, offering an immersive and interactive 3D educational experience. This technology allows users to explore detailed models of animal structures, from bones and muscles to internal organs, enhancing comprehension and retention.

The startup's VR solution also allows learners to select and learn about specific anatomical parts with pop-ups, realistic virtual models, and model manipulation. Additionally, VET VR provides a VR training environment for veterinary procedures like TPLO surgery, allowing doctors to practice and repeat surgical steps in a life-like, risk-free setting. This learning tool enhances visual memory and offers a comprehensive, hands-on learning experience.

Virtonomy advances Digital Twin-based In-silico Trials

German startup <u>Virtonomy</u> develops a digital twin solution, *v-Patients*, providing an alternative to traditional in vivo and in vitro testing. Its database includes virtual human and animal patients derived from real CT scans. The solution further allows for the selection of specific populations based on various criteria such as disease, age, sex, and ethnicity.

Moreover, it features advanced 3D visualization, interactive implantation, accurate measureme statistical shape models for analyzing different demographic groups and identifying worst-case an These features aid in device design optimization, virtual patient cohort analysis, statistical population and more.

Poultry Main Therapeutic Area



Pharmaceuticals

Antibiotics

Anticoccidial feed Additives

Anticoccidial Oral solution

Mucolytics

Vaccines

Agricultural

Feed Additives

Premixes (Mineral & Vitamins)

Immune Stimulants Oral sol

AntiMycotoxines Oral sol.

Amino Acids Oral sol.





Challenges

Registration

Specialty

Counterfeit

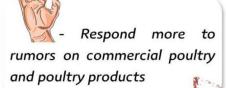
Costing

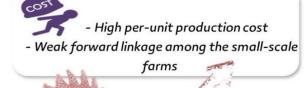
Packaging

Distribution

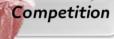




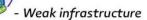




- Lack resources - No access to formal financial institutes to credit - High rate for bank loans



Capital



- Demand and supply miss-match
- Information gap on market stability and estimation

Market

Small scale poultry farming

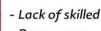
Supply chain

Dependency on the dealers/agents for feeds, medicines, operational necessities

Veterinary and extension services

Rumors

Educational and knowledge



- Poor access
- Less regulatory control - Inadequate extension programs

Biosecurity

- Minimum biosecurity knowledge
- Less implementation performance

No institutional training on poultry farming

- Lack of qualification and farming experience







وزارة الصحة الإدارة المركزية للشنون الصيدليا الإدارة العامة للتسجيل ادارة تسجيل الأدوية البيطرية

Kindly find below (version1 – dated 12/5/2016) for the guidance list of reference countries to be used in checking the reference of your product submitted for new request inquiry form

| Name | Home page | | |
|--------------------------|--|--|--|
| EMEA | http://www.ema.europa.eu/ema/index.jsp?curl=pages/medicines/landing/vet_epar_sea h.jsp∣=WC0b01ac058001fa1c | | |
| FDA | http://www.accessdata.fda.gov/scripts/animaldrugsatfda/ | | |
| Australia | https://portal.apvma.gov.au/pubcris;isessionid=x5v7gxmHUeaBh1cOiOd12A | | |
| UK | https://www.vmd.defra.gov.uk/ProductInformationDatabase/Default.aspx | | |
| Canada | http://webprod5.hc-sc.gc.ca/dpd-bdpp/start-debuter.do?lang=eng | | |
| Japan | http://www.nval.go.jp/asp/asp_dbDR_idx.asp | | |
| IRELAND | http://www.hpra.ie/homepage/veterinary | | |
| Italy | https://www.vetinfo.sanita.it/j6 prontuario/farmaci/public/prodottomd/ http://www.salute.gov.it/farmaciVetWeb/FarmaciVetServlet | | |
| Germany | www.pharmnet-bund.de/static/de/index.html | | |
| France | http://www.ircp.anmv.anses.fr/ | | |
| Swissmedic(Switz erland) | https://www.swissmedic.ch/arzneimittel/00156/00221/00222/00230/index.html?lang=en | | |
| Spain | http://www.aemps.gob.es/cima/fichasTecnicas.do?metodo=buscar | | |
| Sweden | https://lakemedelsverket.se/LMF/Lakemedel/Veterinara/?letter=A | | |
| Belgium1 | http://www.fagg-afmps.be/fr/veterinaire/ | | |
| Belgium2 | http://www.bcfi-vet.be/nl/nldrugsearch.php | | |
| Austria | https://aspregister.basg.gv.at/aspregister/faces/aspregister.jspx? adf.ctrl- state=16hd8zsrz4 4& afrLoop=20307259760246721 | | |
| Denmark | http://www.produktresume.dk/docushare/dsweb/View/Collection-72 | | |
| Netherlands | http://db.cbg-meb.nl/ords/f?p=111:1:0:::SESSION:P0_DOMAIN,P0_LANG:V,EN | | |
| New Zealand | https://eatsafe.nzfsa.govt.nz/web/public/21 | | |
| Portugal | http://medvet.dgav.pt/Pesquisar | | |

Kindly note the following:

• The submitted request inquiry form should be matched to the Reference (The same Active ingredient, Strength, Dosage form, Route of administration).

otherwise it will be considered as no reference.

- The submitted reference product should be valid (i.e. registered & marketed).
- · Any modification on this list will be announced.



International

Veterinary Club

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AH Target Customers







Consultants





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Distributers

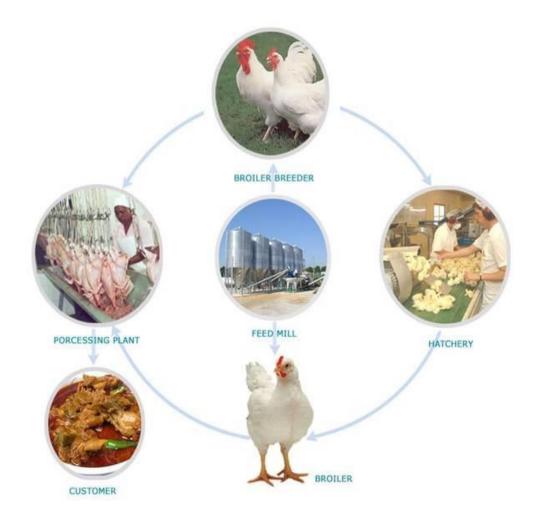






AH Target Customers







Key Accounts (Integrators)

End Users



Egyptian Poultry Industry



13 B.



100 B.



3 Million



1.3 B. BR





Raw Material Importation 2022







8.5 MT

4 MT



Top Players























Top National Manufacturing Companies





















Top Feed & Feed additives Manufacturing Companies























Top Feed & Feed additives Manufacturing Companies























Top Vaccine Producing Companies



















Top Vaccine Producing Companies













Global Top 20 Animal Health Companies in 2023

| Company | | Sales 2023 |
|--|------------------------------------|----------------|
| 1. Zoetis | zoetis | \$8.08 Billion |
| 2. Merck Animal Health | MSD Animal Health | \$5.55 Billion |
| 3. Boheringer Ingelheim Animal Health | Boehringer Ingelheim | \$4.89 Billion |
| 4. Elanco | Elanco | \$4.7 Billion |
| 5. IDEXX Laboratories | | \$3.8 Billion |
| 6. Ceva Santé Animale | Ceva | \$2.3 Billion |
| 7. Virbac | Virbac | \$2.5 Billion |
| 8. Phibro Animal Health | Phibro ANIMAL HEALTH CORPORATION O | \$1.1 Billion |
| 9. Dechra Pharmaceuticals | Dechra | \$1.6 Billion |
| Heska Corporation | | \$1.1 Billion |





Global Top 20 Animal Health Companies in 2023

| Company | Sales 2023 |
|-------------------------------|----------------|
| 11. Vetoquinol | \$1.5 Billion |
| Alltech | \$2.3 Billion |
| Nutreco | \$15.2 Billion |
| Cargill Animal Nutrition | \$13.2 Billion |
| ADM Animal Nutrition | \$9.6 Billion |
| Kemin Industries | \$3.3 Billion |
| DSM Animal Nutrition & Health | \$2.5 Billion |
| Novus International | \$1.8 Billion |
| Adisseo | \$1.6 Billion |





Top 20 Poultry Producing Companies Worldwide (Approximate Revenue - 2023)

Veterinary Club
Sharpen your skills

Tyson Foods (USA): \$50 Billion (Poultry is a significant portion of their revenue)

JBS S.A. (Brazil): \$53 Billion (Poultry is a key segment within their diverse portfolio)

BRF S.A. (Brazil): \$10 Billion (Strong focus on poultry production)

Pilgrim's Pride (USA): \$9 Billion (Primarily focused on chicken production)

Sanderson Farms (USA): \$4 Billion (Primarily focused on chicken production)

Perdue Farms (USA): \$13 Billion (Poultry is a major segment along with other proteins)

Koch Foods (USA): \$3 Billion (Primarily focused on chicken production)

Charoen Pokphand Foods (Thailand): \$18 Billion (Diversified, with poultry a major segment)

Japfa Ltd. (Singapore): \$11 Billion (Poultry is a key segment within their diversified operations)

Wellhope Foods (China): \$5 Billion (Poultry is a significant part of their business)



Top 20 Poultry Producing Companies Worldwide (Approximate Revenue - 2023)



Aviagen (UK): \$1.5 Billion (Focus on poultry breeding and genetics)

Hubbard (USA): \$1 Billion (Focus on poultry breeding and genetics)

Cobb-Vantress (USA): \$1 Billion (Focus on poultry breeding and genetics)

Ross Breeders (USA): \$1 Billion (Focus on poultry breeding and genetics)

Lohmann Animal Health (Germany): \$1 Billion (Focus on poultry breeding and genetics)

IntAgra (Brazil): \$1 Billion (Focus on poultry production and processing)

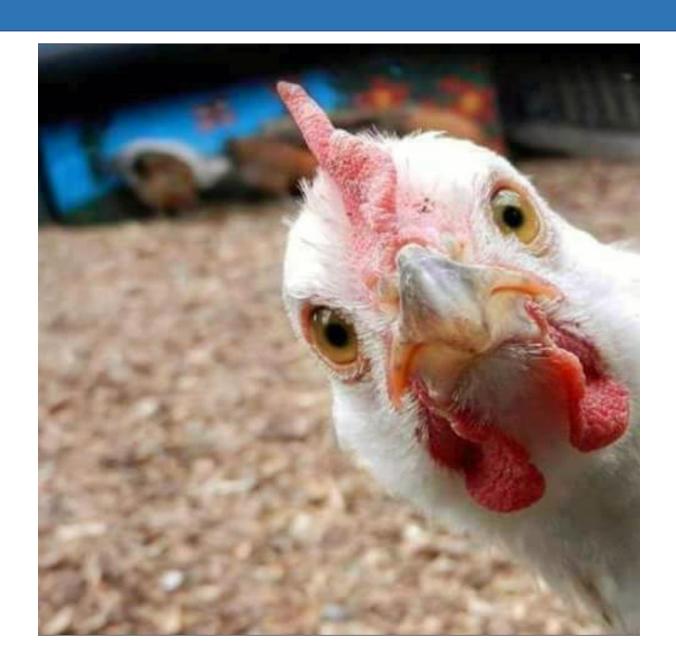
George's Inc. (USA): \$1 Billion (Focus on poultry production)

FACC (France): \$0.8 Billion (Focus on poultry production and processing)

Aramour (Brazil): \$0.7 Billion (Focus on poultry production and processing)







Thank you!

