



UGA Poultry Nutrition Newsletter

December, 2023

Upcoming Poultry Events

2024

Jan 23-26	International Poultry Short Course Athens, GA	<u>RSVP</u>
Jan, 29 - Feb 1	ISPF and IPPE Athens, GA	<u>RSVP</u>
Jan 30	AFIA Feed Education Program Atlanta, GA	<u>RSVP</u>
Jan 31	Feed Your ESG: How Feed Will Help Hit Sustainability Targets Atlanta, GA	<u>RSVP</u>

Feb
21-24

NTF Annual Convention
Austin, TX

[RSVP](#)

Mar
3-7

Purchasing and Ingredient Suppliers Conference
Orlando, FL

[RSVP](#)

Mar
5-7

Food Safety Conference
Hot Spring, AR

[RSVP](#)

Mar
18-20

Annual Meat Conference
Nashville, TN

[RSVP](#)

Mar
26

UGA Alumni & Friends Reception
Tifton, GA

[RSVP](#)

Mar
27

Deep South Poultry Conference
Tifton, GA

[RSVP](#)

Poultry Event Calendar 2024!

All new!!! Download Poultry Event Flyer and assess it anytime for future planning (Updated on Dec 2023)

[Download](#)

Eggsplora Poultry Events

January
 International Poultry Show (Greece) | Athens GA | 1/23-24
 40th Food Inspection Training | Atlanta GA | 1/23
 2024 New York, New York Poultry Show (Johannesburg, Georgia) | Athens GA | 23
 NTPCA Annual Conventions and Exhibitions | Atlanta GA | 1/28-31
 International Poultry and Processing Expo | Atlanta GA | 1/28-31

February
 111 Annual Convention | Austin TX | 2/28-29

March
 Feed Safety Conference | Hot Springs AR | 3-7
 Feed Mill Management Seminar | Nashville TN | 3-8
 Purchasing and Ingredient Suppliers Conference | Orlando FL | 3-7
 Annual Meat Conference | Nashville TN | 3/6-8
 Annual B. Friends Reception | Tifton GA | 3/26
 2024 Deep South Poultry Conference | Tifton GA | 3/27

April
 UGA Nutrition Workshop | Athens GA | 4-4
 UGA Meat Nutrition Workshop | Athens GA | 4-4
 2024 Poultry Disease Conference | Salt Lake City UT | 4-17
 Workforce Success and Employment Conference | Nashville TN | 4-17
 FARM | 4-18
 2024 International Conference on Poultry Nutrition | Nashville TN | 4-18
 Health & Safety Series (Poultry) | 4-18

May
 Precision Poultry Seminar | Verona | 5-5
 Capabilities Seminar | Kansas City MO | 5-5
 International Poultry Congress | Bursa Turkey | 5-11
 International Avian Respiratory Disease Conference | Athens GA | 5-11
 Poultry Processing Exhibition | Nashville TN | 5-16-18

June
 USDA FOS Training | Nashville TN | 6-6
 Feed Industry Institute | Minneapolis MN | 6-20
 Avian Influenza (AI) Detection Training | Athens GA | 6-20-21
 European Poultry Conference | Valencia Spain | 6-20-21
 Global Management Seminar | Warsaw Poland | 6-20-21

July
 AAEP Annual Meeting | St. Louis MO | 7-11
 2024 Poultry Show | Nashville TN | 7-14
 SC Poultry Education Annual Conference | New Orleans LA | 7-14
 10th International Symposium on Avian's Disease and Avian Herpetology | St. Louis MO | 7-14
 Poultry Science Association Annual Meeting | Louisville KY | 7-15-16
 2024 Poultry Nutrition Annual Conference | San Antonio TX | 7-18-19
 Chicken Marketing Seminar | Birmingham AL | 7-25-26

August
 National Avian Conference for the Poultry Industry | Seattle WA | 8-19-21
 Avian Infectious Diseases Conference | Seattle WA | 8-22-23

September
 United Feed Conference | Salt Lake City UT | 9-19-22
 California Poultry Education Annual Conference | Monterey CA | 9-12-13
 Environmental Management Seminar | Birmingham AL | 9-19-20

October
 Science Network Day | Perry GA | 9-13
 Poultry Disease & Food Inspection | Nashville TN | 10-17
 International Conferences on Poultry Science | Lisbon Portugal | 10-19-20

TBD
 National Feed & Grain Association Nutrition Seminar | TBD | Apr
 Southern Egg Industry Conference | TBD | May
 Avian Nutrition Conference | Little Rock AR | Sep
 USA Avian Conference | Athens GA | 5-6
 USA Breeder Conference | Athens GA | Sep
 Symposium on the Health and Production of Food Animals | St. Louis MO | Jul - Nov
 Poultry Tech Seminar | Athens GA | Nov
 Cold Weather Workshop | Athens GA | Nov

November
 European Symposium on Poultry Nutrition | Bristol UK | TBD
 2024 National Poultry Health, Production and Loss Prevention | Boston MA | TBD
 NTPCA 2024 Fall Meeting | Chicago IL | TBD
 NTP Leadership Conference | TBD | TBD
 Feed Tech Seminar | TBD | TBD
 Processing Expo | TBD | TBD
 2024 Poultry and Egg Nutrition Progress | TBD | TBD
 Food Animal Nutrition Seminar | TBD | TBD
 Live Poultry, Health & Nutrition Seminar | TBD | TBD
 Air Cargo Seminars | TBD | TBD

Check www.poultryworld.com for more.
 Sponsored by UGA Poultry Nutrition Research
 Check and Qualify! Feed formulation at your finger tips.

CHEN Lab
 Poultry Nutrition Research Laboratory
 University of Georgia

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 Updated on: Dec 2023
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Poultry News

[November Business Update: What's new in the world of poultry? \(Poultry World\)](#)

- The summary of the latest business updates from the global poultry industry this October.

[FDA Releases 2022 Antimicrobial Sales Data \(NCC\)](#)

- FDA and Center for Veterinary Medicine (CVM) recently announced its 2022 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals.

[Is poultry industry moving away from NAE? \(WATT Poultry\)](#)

- Tyson Foods will move to no antibiotic important to human medicine (NAIHM) by end of 2023. Check out this interview of Tyson Foods, Perdue Farms, and Wayne-Sanderson Farms about their insight into NAE production.

[Modest global growth for poultry sector next year \(Poultry World\)](#)

- The poultry and aquaculture sectors are set to see modest growth next year as the animal protein sector faces future unfavorable market conditions.

[H5N1 Bird Flu: Current Situation Summary \(CDC\)](#)

- Check out the latest situation of HPAI.

UGA Poultry Research Highlight



Dr. Lilong Chai is a tenure-track Assistant Professor & Engineering Specialist in the Department of Poultry Science, College of Agricultural and Environmental Sciences at the University of Georgia (UGA). He is also a member of the UGA Institute of Integrative Precision Agriculture and Center for Brain-inspired Artificial Intelligence. His primary research/Extension interests include animal environmental engineering, precision poultry farming, and animal health and welfare. Chai's contribution includes author/co-author of 180+ publications (66 peer-

Intrigued by Dr. Li's work?

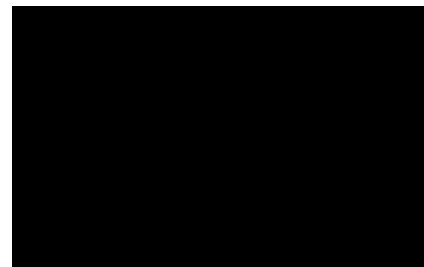
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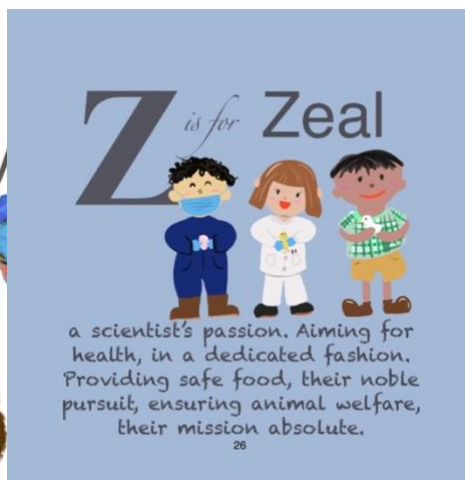
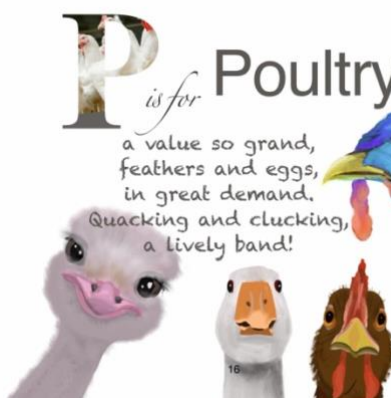
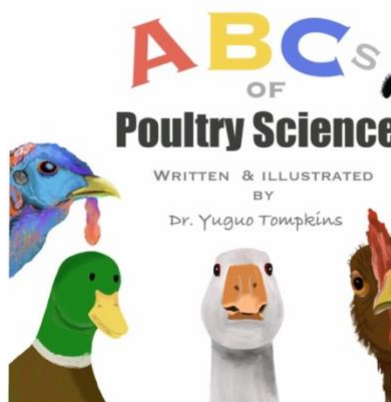
reviewed journal articles, 75 conference papers/abstracts, 30 Extension articles, and two books), PI/Co-PI of 30 grants or contracts, and 20 honors/awards. Chai is currently serving as the President of AOCABFE (Association of Overseas Chinese Agricultural, Biological, and Food Engineers), Chair of the Animal Environmental Air Quality Committee of ASABE, and the Coordinator for the Georgia Precision Poultry Farming Conference and Georgia Layer Conference.



Looking for the perfect **Christmas and New Year gift?**

Discover the ABCs Book of Poultry Science by **Dr. Yuguo Thompkins, an alum of the Department of Poultry Science at the University of Georgia.** This captivating book invites children to a delightful journey into the poultry world, beautifully illustrated by poultry professional with adorable pictures and engaging rhymes. It's a gift that combines education with fun, making it a unique and memorable present for the festive season.

[Check it out!](#)



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2023 DECEMBER



In this issue, read about research summaries encompassing:

- 4 Broilers studies
- 4 Layer studies
- 1 breeder study,
- 1 quail study
- 3 Literature reviews

from 14 research institutes and 9 countries

POULTRY NUTRITION RESEARCH SUMMARY

Chongxiao (Sean) Chen*, Xixi Chen #, Catherine Fudge*, Muhammad Ali*, Nicolás Mejía-Abaunza*, and Lily Xu #

* Department of Poultry Science, University of Georgia

Nutribins LLC

LATEST NUTRITION RESEARCH AT A GLANCE

POULTRY

In broilers, dietary **copper requirement** is estimated to be 10.5-13.8 mg/kg (22d-42d). The mRNA expression levels of CuZnSOD in the liver and Monoamine oxidase B in the heart could be effective biomarkers for estimating dietary Cu requirements.

Yangzhou University/ [Link](#)

In broilers, supplementing 200 ppm/kg **essential oils extracted from Citrus sinensis and Xylopia aromatica** reduced serum triglycerides and cholesterol levels on d14 without affecting performance.

University of Rio de Janeiro, Brazil/ [Link](#)

In broilers under coccidiosis, supplementing 3 to 6 g/kg **lemon peel powder** improved growth performance, and cecum morphology, while cecal lesions, mortality, and fecal oocyst excretion on d 35 were reduced.

University of Agriculture (Pakistan), Animals/ [Link](#)



In broilers, supplementing **olive oil by-product** (22.5 mg/kg) and **vitamin E** (10mg/kg) showed comparable benefits compared to birds supplemented with only vitamin E at 40mg/kg.

Universidad Politécnica de Madrid / [Link](#)

In laying hens, feeding 1,200 mg/kg **Ginkgo biloba** extract alleviated fatty liver hemorrhagic syndrome (FLHS), enhanced antioxidant capacity, reduced lipid synthesis makers and inflammatory cytokines. These effects might be attributed to its gut microbiota modulation effect.

China Agricultural University/ [Link](#)

In layer pullets fed with a **precision feeding system**, when comparing Meal Every Visit (MEV) vs. Restricted Feeding strategies, it was found that birds under MEV had higher BW, Feed Intake, and reduced BW uniformity.

University of Alberta / [Link](#)

In 26-week laying hens, replacing soybean meal with **3% fermented rapeseed meal** for 90 days, decreased digesta viscosity, increased P digestibility, and enhanced egg appearance. There was no negative effect on performance and egg quality.

Wroclaw University of Environmental and Life Sciences, Poland/ [Link](#)

POULTRY

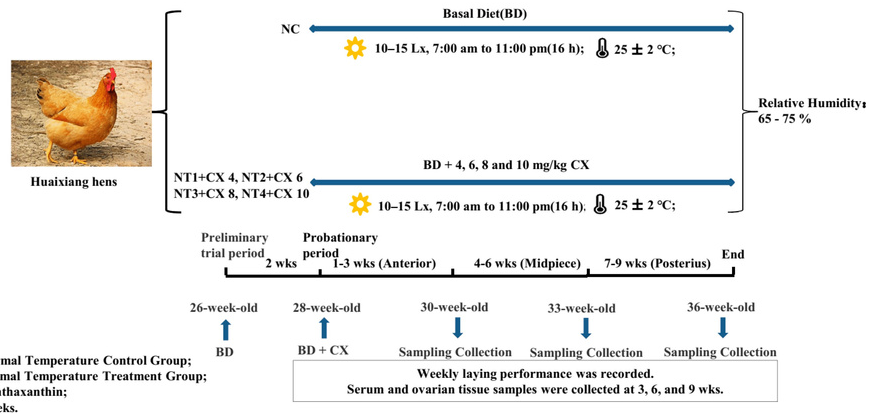
LATEST NUTRITION RESEARCH AT A GLANCE

In 26- to 36-week Huaixiang hens, supplementing 6-10 mg/kg **Canthaxanthin** had positive effects on laying rate, ovarian structure, and follicle development through enhancing antioxidant activities. 6 mg/kg was the optimal inclusion level.

Guangdong Ocean University / [Link](#)

In breeders, supplementing 0.6% **perilla seed meal** improved lipid metabolism and antioxidant capacity, increased egg protein content and Haugh unit, and therefore enhanced fertility and hatchability.

South China Agricultural University / [Link](#)



In 7-35-day-old European quails, the AMEn levels were estimated for different lipid sources: soybean oil = 8854 kcal/kg, corn = 7701 kcal/kg, distilled corn oil = 7937 kcal/kg, poultry fat = 7906 kcal/kg, and beef tallow = 7776 kcal/kg. Feeding 8% **Distilled corn oil** enhanced carcass yield, and skin and meat color, while lipid sources did not affect performance.

Federal University of Visosa / [Link](#)

In pheasant hens, replacing 75% inorganic **Ca, Fe, Zn, and Cu** salts by their **glycine chelates**, along with the supplementation of **Vit. D (2500 IU)** and **L-carnitine (100mg/kg)**, improved mineral absorption, increased egg production, reduced rejection rate, and yielded a higher polyunsaturated fatty acids content and a favorable ratio of PUFA ω-3/ω-6 in egg york fat.

University of Life Sciences in Lublin, Poland / [Link](#)

Review #1

The mechanism, benefits, and research gaps of fermented soybean meal as a high-quality protein source for livestock and poultry

Fermented soybean meal removes multiple antinutritional factors in SBM and improves meat quality, performance, and intestine morphology due to probiotic effects. This review covers the methods involved in fermented soybean meals, their application in different livestock animals, and their benefits in production.

Northeast Agricultural University / [Link](#)

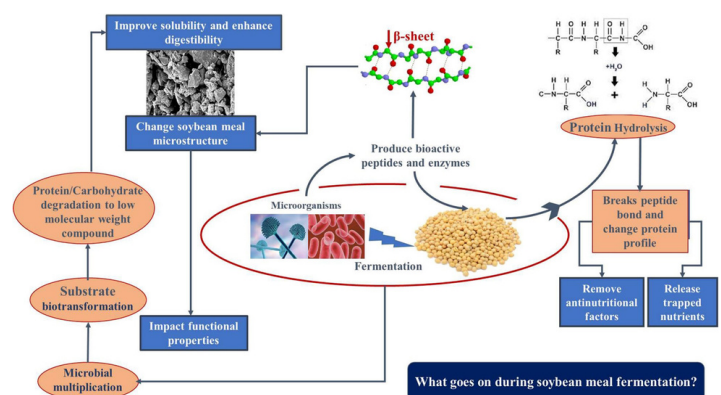


Fig. The mechanism by which fermentation improves the nutritional value of soybean meal

Review#2

Bee products for poultry and rabbits: current challenges and prospects

Bee products contain many potentially beneficial compounds for poultry production, including growth and modulate the immune response. This review discusses bee propolis, pollen, royal jelly and bee venom, common products produced by honeybees. These products contain phenols, vitamins B and C, anti-microbials, tannins and fatty acids. This review covers these products effects on growth, reproduction, and immunological effects in poultry.

University of Damanhur / [Link](#)

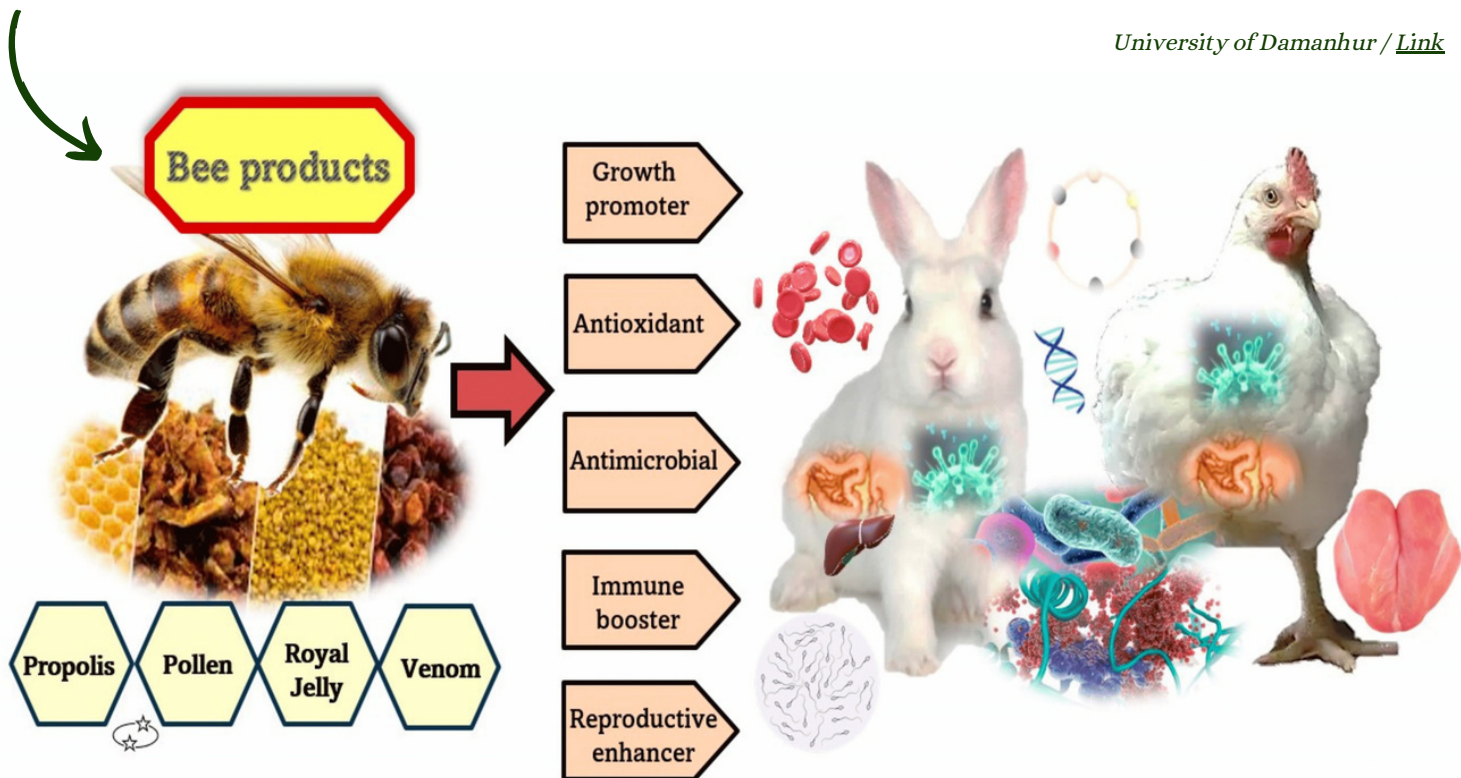
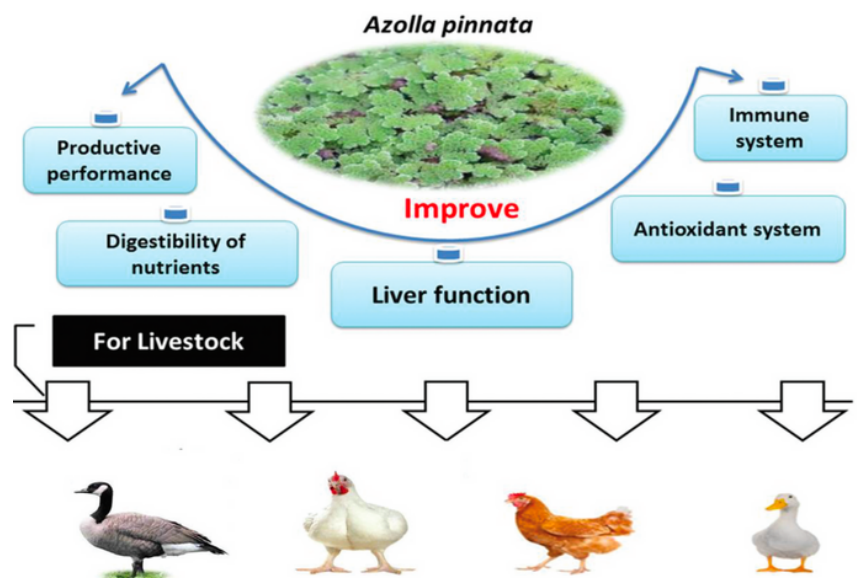


Fig. Possible benefits of bee products in improving growth performance of poultry and rabbits

Review#3

The role of Azolla in poultry feed

Azolla (*Azolla pinnata*) is an aquatic fern with various pharmacological properties and a good nutritional profile. This review summarizes the Azolla's composition, production, and nutritional values as well as its different advantages on growth performance, meat quality, and immune system of broilers, layers, and ducks.



Zagazig University (Egypt), World Poultry Science Journal | [Link](#)

Fig. The beneficial effects of azolla on poultry