



INTERNATIONAL CONGRESS ON NATURAL, HEALTH SCIENCES AND TECHNOLOGY

BOOK OF ABSTRACTS



9TH International Balkan
Conference in Sport Sciences



8TH International Scientific
Conference on Applied Sciences



7TH International Scientific
Conference of the Faculty of
Medical Sciences



6TH International Conference of
Natural Sciences and Mathematics



4TH International Conference of
Food Technology and Nutrition



2ND International Conference on
Sustainable Agriculture Farming
Systems

15 – 17 May, 2024
Tetova, North Macedonia



**International Congress on Natural, Health Sciences
and Technology**

Book of Abstracts

15 – 17 May, 2024

Tetova, Republic of North Macedonia

ISBN: 978-608-217-128-9

Copyright © 2024 by University of Tetova. All rights reserved.

Publisher: University of Tetova

Publication Title: Book of Abstracts of the International Congress
on Natural, Health Sciences and Technology

Copyright holder: University of Tetova

Editor: Prof. Dr. Jusuf Zejneli

Lector: Hatixhe Halimi

Full name of the printing house: Arbëria Design, Tetovo

Year of issue and printing: 2024

Place of issue: Tetovo

Units: 500

ISBN: 978-608-217-128-9

**International Congress on Natural, Health Sciences and
Technology 2024 covers:**

- **9th International Balkan Conference in Sport Sciences**
- **8th International Scientific Conference on Applied Sciences**
- **7th International Scientific Conference of the Faculty of Medical
Sciences**
- **6th International Conference of Natural Sciences and
Mathematics**
- **4th International Conference of Food Technology and Nutrition**
- **2nd International Conference on Sustainable Agriculture
Farming Systems**

- **Organizer:**

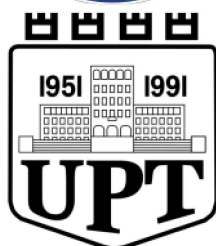
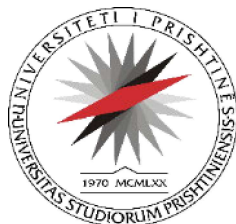


- **Partnerships:**

9th International Balkan Conference in Sport Sciences



8th International Scientific Conference on Applied Sciences



7th International Scientific Conference of the Faculty of Medical Sciences



6th International Conference of Natural Sciences and Mathematics



4th International Conference of Food Technology and Nutrition



2nd International Conference on Sustainable Agriculture Farming Systems



HONORARY PRESIDENT
International Congress on Natural, Health Sciences and
Technology
Prof. Dr. Jusuf Zejneli
Rector of the University of Tetova

Committees

IBCSS'2024

Conference chair

Prof. Dr. Shpresa Memishi

Conference coordinator

Prof. Dr. Fadil Mamuti

Scientific committee

Dr. Sc. Vullnet Ameti

Dr. Sc. Agron Kasa

Dr. Sc. Chad McEvoy

Dr. Sc. Ilhan Toksöz

Dr. Sc. Milan Žvan

Dr. Sc. Fadil Mamuti

Dr. Sc. Harald Tschan

Dr. Sc. Fatmir Pireva

Dr. Sc. Musa Selimi

Dr. Sc. Hasim Rushiti

Dr. Sc. Metin Dalip

Dr. Sc. Clayton Camic

Dr. Sc. Steven Howell

Dr. Sc. James Ressler

Dr. Sc. Monem Jemni

Dr. Sc. Rasiq Hadzic

Dr. Sc. Arben Kaçuri

Dr. Sc. Aida Shehu

Dr. Sc. Jonida Balla

Dr. Sc. Orkida Kosta

Dr. Sc. Elton Spahiu

Dr. Sc. Surven Metolli

Dr. Sc. Andis Bogdani

Dr. Sc. Elona Mehmeti

Dr. Sc. Jona Hoxha

Dr. Sc. Entela Neziri

Dr. Sc. Aisel Oseku

Dr. Sc. Igor Jukic

Dr. Sc. Shpresa Memishi

Dr. Sc. Dejan Madic

Dr. Sc. Borislav Obradovic

Dr. Sc. Abedin Bahtiri

Dr. Sc. Fadil Rexhepi

Dr. Sc. Munir Talovic

Dr. Sc. Kastriot Shaqiri

Dr. Sc. Fatbardha Kovaci

Dr. Sc. Natasha Dako

Dr. Sc. Gjulio Zefi

Dr. Sc. Edmond Biçoku

Dr. Sc. Ramiz Arabaci

Dr. Sc. Ilir Gllareva

Dr. Sc. Besim Gashi

Local organizing committee

Dr. Sc. Besnik Telai

Dr. Sc. Bexhet Toçi

Dr. Sc. Hyjnor Kica

Dr. Sc. Agron Ademi

Dr. Sc. Agim Rexhepi

Dr. Sc. Astrit Iseni

Dr. Sc. Laureta Abazi

Dr. Sc. Alim Hajredini

Dr. Sc. Dardan Dehari

Dr. Sc. Blerim Sulejmani

Dr. Sc. Milazim Kamberi

Dr. Sc. Haki Ismaili

Secretary of the Conference

Agron Sherifi

ISCAS'2024

Conference chair

Prof. Dr. Enis Jakupi

Conference coordinator

Prof. Dr. Kujtim Elezi

Scientific committee

Dr. Sc. Adnan Sozen

Dr. Sc. Ahmet Shala

Dr. Sc. Alexander Aguilar

Dr. Sc. Andera Maliqari

Dr. Sc. Anita Strkal)

Dr. Sc. Ana Trombeva

Gavriloska

Dr. Sc. Arbër Sadiki

Dr. Sc. Asan Idrizi

Dr. Sc. Bedri Dragusha

Dr. Sc. Bojan Karanakov

Dr. Sc. Bilbil Nurçe

Dr. Sc. Binak Beqaj

Dr. Sc. Bujar Demjaha

Dr. Sc. Dean Brkovski

Dr. Sc. Drazan Kozak

Dr. Sc. Edmond Manahasa

Dr. Sc. Elena Dumova

Jovanoska

Dr. Sc. Eliza Hoxha

Dr. Sc. Enis Jakupi

Dr. Sc. Esa Laaksonen

Dr. Sc. Fatih Ungan

Dr. Sc. Ferit Idrizi

Dr. Sc. Feta Sinani

Dr. Sc. Filiz Sonmez

Dr. Sc. Flaka Xërxa Beqiri

Dr. Sc. Florian Nepravishta

Dr. Sc. Florina Jerliu

Dr. Sc. Gajur Kadriu

Dr. Sc. Gëzim Gjata

Dr. Sc. Gezim Hasko

Dr. Sc. Hysni Osmani

Dr. Sc. Imer Zenku

Dr. Sc. Igor Karsaj

Dr. Sc. Idaver Huseini

Dr. Sc. Ilir Mehmedi

Dr. Sc. Ilija Tanackov

Dr. Sc. Irfan Shaqiri

Dr. Sc. Ivica Galiç

Dr. Sc. Irena Zhmak

Dr. Sc. Ivan Jandrlic

Dr. Sc. Jorgaq Kaçani

Dr. Sc. Kemal Edip

Dr. Sc. Kujtim Elezi

Dr. Sc. Lamila Simisiç Pasiç

Dr. Sc. Lindihana Goxha

Dr. Sc. Lulzim Beqiri

Dr. Sc. Misin Misini

Dr. Sc. Muhamet Ahmeti

Dr. Sc. Murat Meha

Dr. Sc. Naser Kabashi

Dr. Sc. Nderim Zeqiri

Dr. Sc. Nenad Bojçetiç

Dr. Sc. Nexhmi Krasniqi

Dr. Sc. Nikolas Patsavos

Dr. Sc. Nuran Saliu

Dr. Sc. Onder Ajer

Dr. Sc. Osman Lindov

Dr. Sc. Odeta Manahasa

Dr. Sc. Ognen Marina

Dr. Sc. Pero Stefanoski

Dr. Sc. Plamen Gramatikov

Dr. Sc. Ragip Hadri

Dr. Sc. Sedat Aruçi

Dr. Sc. Samir Lemes

Dr. Sc. Sokol Dervishi

Dr. Sc. Shinasi Zejneli

Dr. Sc. Tahir Arbneshi

Dr. Sc. Vesna Rafajlovska

Dr. Sc. Violeta Nushi

Dr. Sc. Kaltrina Jashanica
Dr. Sc. Visar Krelani
Dr. Sc. Vladimira Sihankova
Dr. Sc. Vlora Navakazi
Dr. Sc. Zdenka Keran
Dr. Sc. Zilatko V. Sovrefski

Local organizing committee

Mr. Sc. Aurora Saidi
Mr. Sc. Ajla Limani
Mr. Sc. Besnik Çeliku
Mr. Sc. Bujamin Fejzullahi
Mr. Sc. Burim Ukiçi
Mr. Sc. Emir Alija
BSc. Emrush Iseni
BSc. Erda Besimi
BSc. Egzona Zendeli Vejseli
Mr. Sc. Festim Ademi
Mr. Sc. Fjolla Ibraimi
Mr. Sc. Fitore Uzairi
Mr. Sc. Getoar Abduramani
Mr. Sc. Hafije Murati
BSc. Halime Rakipi
Mr. Sc. Jakup Fetai
Mr. Sc. Merita Mustafai
BSc. Nexhbedin Ismaili
BSc. Ulvie Mehmedi
Mr. Sc. Visar Palloshi
Mr. Sc. Xhemile Sejдини
Mr. Sc. Zana Hoxha

Secretary of the Conference

Mr. Sc. Erda Besimi

ISCFMS'2024

Conference chairs

Prof. Dr. Nevzat Elezi

Conference coordinator

Prof. Dr. Arbëresha Ferati

Scientific committee

Dr. Sc. Adem Alushi

Dr. Sc. Adnan Bozalija
Dr. Sc. Agron Dogjani
Dr. Sc. Alajdin Asani
Dr. Sc. Anyla Bulo
Dr. Sc. Arben Gjata
Dr. Sc. Arbëresha Ferati
Dr. Sc. Arijeta Shabani
Dr. Sc. Arlinda Haxhiu
Dr. Sc. Artan Simaku
Dr. Sc. Destan Haliti
Dr. Sc. Dorentina Bexheti
Dr. Sc. Drita Yzairi – Havziu
Dr. Sc. Edit Xhajanka
Dr. Sc. Edita Alili
Dr. Sc. Elona Gaxhja
Dr. Sc. Ermal Pashaj
Dr. Sc. Fatih Ozcelik
Dr. Sc. Fatmir Ferati
Dr. Sc. Ferizata Dika
Haxhirexha
Dr. Sc. Gjergji Koja
Dr. Sc. Ilir Alimehmeti
Dr. Sc. Ilir Demiri
Dr. Sc. Ilirjana Zekja
Dr. Sc. Jetmire Alimani-Jakupi
Dr. Sc. Kastriot Haxhirexha
Dr. Sc. Kenan Ferati
Dr. Sc. Kiro Ivanovski
Dr. Sc. Lindihana Emini
Dr. Sc. Lulzime Ballazhi
Dr. Sc. Lutfi Zulfeari
Dr. Sc. Majlinda Ademi
Dr. Sc. Mazllum Belegu
Dr. Sc. Merale Rexhepi
Dr. Sc. Mitilda Gugu
Dr. Sc. Muhamed Tairi
Dr. Sc. Nasir Behxheti
Dr. Sc. Nevzat Elezi
Dr. Sc. Nexhat Asani
Dr. Sc. Nexhbedin Beadini
Dr. Sc. Nexhbedin Kahremani

Dr. Sc. Nexhibe Nuhii
Dr. Sc. Petrit Bara
Dr. Sc. Pranvera Izairi
Dr. Sc. Prunela Poliçi
Dr. Sc. Ramazan Isufi
Dr. Sc. Sadi Bexheti
Dr. Sc. Sahmedin Saliu
Dr. Sc. Shemsedin Dreshaj
Dr. Sc. Sheqibe Beadini
Dr. Sc. Shkëlqim Hidri
Dr. Sc. Sihana Ahmeti Lika
Dr. Sc. Silva Barra
Dr. Sc. Skender Topi
Dr. Sc. Suzana Manxhuka
Dr. Sc. Teuta Pustina
Dr. Sc. Vegim Zhaku
Dr. Sc. Xheladin Çeka
Dr. Sc. Xheladin Draçini
Dr. Sc. Xhina Mulo
Dr. Sc. Ylli Alicka

Local organizing committee

Dr. Sc. Albulena Beadini
Dr. Sc. Amir Elezi
Dr. Sc. Arbnore Qaili
Dr. Sc. Ariton Rakipi
Dr. Sc. Asim Izairi
Dr. Sc. Atilla Rexhepi
Dr. Sc. Avdi Nazifi
Dr. Sc. Bajram Kamberi
Dr. Sc. Bekim Ismaili
Dr. Sc. Blerim Zeqiri
Dr. Sc. Drita Uzairi Avziu
Dr. Sc. Driton Selmani
Dr. Sc. Ekrem Ismani
Dr. Sc. Fatmir Saliu
Dr. Sc. Florim Selimi
Dr. Sc. Florin Besimi
Dr. Sc. Gjylai Alija
Dr. Sc. Hysni Ismaili
Dr. Sc. Ilber Besimi

Dr. Sc. Ilir Ismaili
Dr. Sc. Ilir Shabani
Dr. Sc. Learta Asani
Dr. Sc. Merita Dauti
Dr. Sc. Nadir Ajruli
Dr. Sc. Nexhbedin Abazi
Dr. Sc. Pellumb Vela
Dr. Sc. Pranvera Ramadani
Dr. Sc. Qail Ibrahim
Dr. Sc. Sabedin Çerkezi
Dr. Sc. Safedin Bilalli
Dr. Sc. Sani Bajrami
Dr. Sc. Sherif Shaqiri
Dr. Sc. Valon Asani
Dr. Sc. Valvita Reçi
Dr. Sc. Veton Ademi
Dr. Sc. Vjosa Xhaferi
Dr. Sc. Zana Osmani Jusufi
Dr. Sc. Zana Sulejmani

Secretary of the conference

Mr. Sc. Neset Kamberi

ICNSM'2024

Conference chair

Prof. Dr. Alit Ibraimi

Conference coordinator

Prof. Dr. Florinda Imeri

Scientific committee

Dr. Sc. Mehmet Karatash
Dr. Sc. Skender Kabashi
Dr. Sc. Costin Bădică
Dr. Sc. Mladen Kuçiniç
Dr. Sc. Ilir Snopçe
Dr. Sc. Resul Hamiti
Dr. Sc. Fatmir Hoxha
Dr. Sc. Damir Kalpić
Dr. Sc. Ferhat Jabeen
Dr. Sc. Blagoj Pavlovski
Dr. Sc. Bujar Durmishi
Dr. Sc. Ismet Hashani

Dr. Sc. Betim Çiço
Dr. Sc. Nexhbedin Beadini
Dr. Sc. Sabri Laçi
Dr. Sc. Altin Gjevori
Dr. Sc. Shpejtim Bulliqi
Dr. Sc. Mohammad Mouradi
Dr. Sc. Kermena Stefanova
Dr. Sc. Agim Haziri
Dr. Sc. Fisnik Dalipi
Dr. Sc. Arben Gjukaj
Dr. Sc. Agim Shabani
Dr. Sc. Fauzi Skenderi
Dr. Sc. Fadil Ajredini
Dr. Sc. Lazim Kamberi
Dr. Sc. Florim Idrizi
Dr. Sc. Flamure Sadiku
Dr. Sc. Krutan Rasimi
Dr. Sc. Neset Izairi
Dr. Sc. Kimet Jusufi
Dr. Sc. Naim Mahmudi
Dr. Sc. Hajdar Kicaj
Dr. Sc. Eljona Zavalani
Dr. Sc. Valbona Tahiri
Dr. Sc. Elmira Kushta
Dr. Sc. Miftar Ramosaco
Dr. Sc. Bekim Fetaji
Dr. Sc. Shpetim Rexhepi
Dr. Sc. Egzona Iseni
Dr. Sc. Fisnik Doko
Dr. Sc. Majlinda Axhiu
Dr. Sc. Mirlinda Ebibi
Dr. Sc. Roland Zisi
Dr. Sc. Frosina Londo
Dr. Sc. Enkeleint A. Mechili
Dr. Sc. Majlinda Zahaj
Dr. Sc. Ermal Xhelilaj

Local organizing committee

Dr. Sc. Merime Mustafi
Dr. Sc. Ahmed Jashari
Dr. Sc. Gazmend Xhaferi

Dr. Sc. Besnik Rexhepi
Mr. Sc. Shkurte Luma - Osmani
Mr. Sc. Nexhibe Sejfuli
Mr. Sc. Mr. Ajten Rushiti
Mr. Sc. Emin Durmishi
Mr. Sc. Mireme Rushiti
Mr. Sc. Egzon Ademi

Secretary of the Conference

Hatixhe Bajrami

ICFTN'2024

Conference chair

Prof. Dr. Xhezair Idrizi

Conference coordinator

Prof. Dr. Erhan Sulejmani

Scientific committee

Dr. Sc. Ayşegül Kırca Toklucu
Dr. Sc. Drago Subaric
Dr. Sc. Elmi Jusufi
Dr. Sc. Gokhan Durmaz
Dr. Sc. Jurislav Babic
Dr. Sc. Joanna Harasym
Dr. Sc. Ljubica Karakasova
Dr. Sc. Magdalena Człapka-
Matyasik
Dr. Sc. Malgorzata Wozniewicz
Dr. Sc. Nexhdet Shala
Dr. Sc. Osman Sağdıç
Dr. Sc. Sokrat Sinaj
Dr. Sc. Tatjana Kalevska
Dr. Sc. Gordana Ristovska
Dr. Sc. Yonca Yüceer
Dr. Sc. Muhammet Arici
Dr. Sc. Osman Sagdic
Dr. Sc. Enes Dertli, Yıldız
Dr. Sc. Hakkı Mevlüt Özcan
Dr. Sc. Salih Karasu
Dr. Sc. Omer Said Toker
Dr. Sc. Burak Öterler
Dr. Sc. Viktorija Stamatovska

Dr. Sc. Shaban Memeti
Dr. Sc. Igor Spiroski
Dr. Sc. Majlinda Sana

Local organizing committee

Dr. Sc. Xhabir Abdullahi
Dr. Sc. Fejzullah Fejzulla
Dr. Sc. Merije Elezi
Dr. Sc. Gafur Xhabiri
Dr. Sc. Namik Durmishi
Dr. Sc. Ismail Ferati
Dr. Sc. Ibrahim Hoxha
Dr. Sc. Petya Ivanova
Dr. Sc. Gjore Nakov
Dr. Sc. Daniela Nikolovska
Nedelkoska
Dr. Sc. Saffet Çelik
Dr. Sc. Alp Yucel
Dr. Sc. Pinar Altinoluk
Mimiroglu
Dr. Sc. Vezirka Jankuloska
Dr. Sc. Iliana Lazova
Dr. Sc. Hava Miftari
Dr. Sc. Durim Alija
Dr. Sc. Pellumb Aleksi
Dr. Sc. Renis Maci
Dr. Sc. Maja Dimitrovska
Mr. Sc. Tanja Stojanovska
Mr. Sc. Zagorka Blazevska
Mr. Sc. Katerina Temelkovska
Ristevska
Mr. Sc. Eleonora Delinikolova

ICSAFS'2024

Conference chair

Asst. Prof. Dr. Bardhyl Limani

Conference coordinator

Asst. Prof. Dr. Zejnedije Ademi
Latifi

Scientific committee

Dr. Sc. Hazir Pollozhani

Dr. Sc. Alirami Saliji
Dr. Sc. Fatbardh Sallaku
Dr. Sc. Vjekoslav Tanaskovikj
Dr. Sc. Mile Markoski
Dr. Sc. Gjergji Mero
Dr. Sc. Gordana Dimitrovska
Dr. Sc. Valentina Pelivanoska
Dr. Sc. Emilija Arsov
Dr. Sc. Nesim Seferi
Dr. Sc. Nikoll Bardhi
Dr. Sc. Hamdi Hoti
Dr. Sc. Florim Idrizi
Dr. Sc. Enver Isufi
Dr. Sc. Elmi Jusufi
Dr. Sc. Dashmir Mamuti
Dr. Sc. Besnik Elezi
Dr. Sc. Emri Murati
Dr. Sc. Kristaq Kume
Dr. Sc. Robert Damo
Dr. Sc. Arben Mehmedi
Dr. Sc. Zvonko Pacanovski
Dr. Sc. Mirjana Jankullovska
Dr. Sc. Stanislava Llazarevska
Dr. Dane Boshev
Dr. Sc. Borçe Makariovski
Dr. Sc. Xhezair Abdija
Dr. Sc. Albulena Beadini
Dr. Sc. Erinda Lika
Dr. Sc. Ilir Kristo
Dr. Sc. Romina Koto
Dr. Sc. Lirika Kupe
Dr. Sc. Marsela Alikaj
Dr. Sc. Marija Srbinoska
Dr. Sc. Biljana Jordanoska
Shishkoska
Dr. Sc. Vesna Krsteska
Dr. Sc. Dijana Blazhekovikj -
Dimovska
Dr. Sc. Vesna Karapetrovska-
Hristova
Dr. Sc. Xhulijana Tomovska

Dr. Sc. Ivana Janeska
Stamenkovska
Dr. Sc. Romina Kabranova
Dr. Sc. Rukie Agic
Dr. Sc. Riste Elenenov
Dr. Sc. Biljana Kuzmanovska
Dr. Sc. Toso Arsov
Dr. Sc. Marina Nacka
Dr. Sc. Koco Porcu
Dr. Sc. Slavco Hristovski
Dr. Sc. Besnik Skënderasi
Dr. Sc. Gjergji Papa
Dr. Sc. Ilir Sosoli
Dr. Sc. Adrian Maho
Dr. Sc. Mehmet Karatas
Dr. Sc. Ana Gavrilovic
Dr. Sc. Sali Zhaku
Dr. Sc. Biljana Balabanova
Dr. Sc. Fidanka Trakova
Dr. Sc. Violeta Dimovska

Dr. Sc. Dimitar Nakov

Local organizing committee

Dr. Sc. Erinda Lika
Dr. Sc. Vjekoslav Tanaskovikj
Dr. Sc. Mile Markoski
Dr. Sc. Gjergji Mero
Dr. Sc. Gordana Dimitrovska
Dr. Sc. Valentina Pelivanoska
Dr. Sc. Emilija Arsov
Dr. Sc. Hirijete Idrizi
Mr. Sc. Bardha Ibishi
Mr. Sc. Leutrim Limani
Besnik Xhezairi

THE EFFECTS OF FEED FORM ON BROILER CHICKEN GROWTH PERFORMANCE

**Dimitar NAKOV^{1*}, Srekkjo GJORGJIEVSKI², Aco
KUZELOV¹, Fidanka ILIEVA¹**

¹ Faculty of Agriculture, Goce Delcev University, Stip, North Macedonia

² Faculty of Agricultural Science and Food, Ss. Cyril and Methodius University in
Skopje, Republic of North Macedonia

*Corresponding author: email: dimitar.nakov@ugd.edu.mk

Abstract

Feed costs represent a substantial portion of farmers' expenses and are a pivotal factor shaping the economics of livestock production. The physical form of diet is one of the main drivers for better digestibility of feed and improved growth performance of farm animals. This study was conducted to investigate the effect of feed particle size and feed form (ground feed mixtures and pelleted feed mixtures) on the growth performance of broiler chickens. Two hundred and forty ROSS 308 FF one-day-old broilers were randomly allocated into two treatment groups, each group comprising 120 broilers or 8 iterations with 15 broilers. The experiment spanned five weeks. Both pelleted and ground feed forms were identical in ingredient and chemical composition. Initially, the broilers in the test group exhibited lower average live body weight and daily gain compared to those in the control group. However, by the end of the trial, the broilers fed with pelleted feed mixtures displayed higher average live body weight and improved daily gain. Analysis of variance (ANOVA) revealed statistically significant differences ($p < 0.001$) between the test and control groups during the 2nd and 3rd weeks of the trial, with significance persisting at $p < 0.01$ by the trial's end. These findings suggest that utilizing pelleted feeds in the intensive fattening of broiler chickens can enhance growth