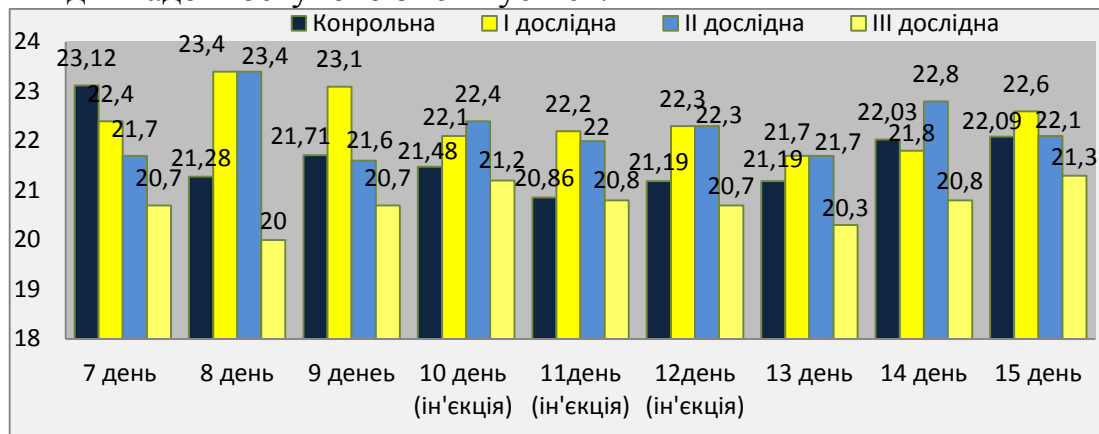


**Всеукраїнська науково-практична конференція  
«Міжгалузеві наукові дослідження:  
можливості та варіанти впровадження»**

порівняно з попереднім днем. Після другої ін'єкції спостерігалася тенденція до зниження надою, відповідно, на 1,8% та 0,4%. У другій і третій дослідних групах у перший день ін'єкції спостерігалася тенденція до збільшення надою, а в наступні дні надої поступово зменшується.



**Рис. 1 Середній надій піддослідних корів у ПП «Галекс Агро»**

Якщо проаналізувати надої у першій дослідній групі, то побачимо, що надій у перший день уведення мікроелементів різко зменшується - на 5,5 % - порівняно з попереднім днем. На другий день ін'єкції він поступово підвищується на 0,5 %, а в наступні дні статевого циклу спостерігаються незначні коливання цього показника.

Отже з результатів дослідження можна зробити висновок, що досліджуванні препарати сприяють підвищенню рівня заплідненості при цьому не маючи негативного впливу на молочну продуктивність.

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**BIOLOGICAL CHEMISTRY**

What do we know about chemistry? It is a complex fundamental science of nature that studies molecular-atomic transformations of substances, their properties and interactions. Without the knowledge achieved in the field of chemical sciences, it is impossible to imagine the functioning, and even in general, the existence of other sciences, which in one way or another rely on basic chemical reactions. Such

transformations occur every day, a person does not even suspect that up to several hundred chemical reactions can occur around him. So even it itself is a whole massif with the most diverse chemical processes.

Biological chemistry, or biochemistry, deals with the detailed study and research of such processes in the biological environment. This science is one of the most important in the educational path of doctors, ecologists, biologists, because it is the knowledge of the interaction of chemical elements and the biological environment (humans, animals, plants, microorganisms, etc.) that makes it possible to prevent, avoid or eliminate the consequences of the harmful effects of harmful chemicals, microbes and bacteria

In a general scientific approach, like other sciences, biological chemistry should be divided into an educational process and a research process. During direct training, pupils and students acquire a powerful stock of theoretical knowledge, which is later used in practical classes.

As for the scientific process, such research is carried out by representatives of higher education (professors and doctors) who have a large stock of both theoretical and practical skills. For the most part, scientific discoveries and certain innovations are developed and discovered thanks to the scientific and research work of highly qualified specialists.

The objects of study of biochemistry are living organisms at various stages of development from the smallest to the largest in evolutionary terms (viruses, bacteria, animals, plants, humans).

Several sections of biochemistry that are fundamental to the complex concept should be singled out:

- static biochemistry - in particular studies the chemical composition of living organisms.

- dynamic biochemistry – studies chemical reactions that are metabolic processes of organisms (metabolic processes).

- functional biochemistry – studies chemical processes and reactions of certain physiological functions of organisms (digestion processes in the intestines, or transmission of neural impulses).

Each chapter covers a wide range of interrelated chemical reactions, allowing for a more detailed understanding of the nature of origin and interaction of chemical and biological elements.

In Ukraine, the main directions of biochemistry research are: research on the structure, properties and synthesis of peptides and amino acids; study of the structure, synthesis and study of the chemical properties of nucleic acids; study of the structure and synthesis of lipids; research on the structure, chemical properties and synthesis of carbohydrates; chemical transformation and synthesis of steroid hormones; research and introduction of agricultural chemicals (pesticides, herbicides, insecticides, etc.); search, synthesis and study of new effective drugs.

Biochemistry's successes largely determine not only the current level of medicine, but also its possible further progress. One of the main problems of biochemistry and molecular biology is the correction of defects in the genetic apparatus. Radical therapy of hereditary diseases associated with mutational changes of certain genes responsible for the synthesis of certain proteins and enzymes is, in principle, possible only by transplanting synthesized in vitro (Latin - in a test tube) or isolated from cells similar "healthy" genes.

An equally important task is mastering the mechanism of regulation of reading genetic information encoded in DNA and deciphering at the molecular level the mechanism of cellular differentiation in ontogenesis, which would allow more detailed and step-by-step changes to be made to the genome. Elucidating the picture of life at the molecular level will allow us to fully understand the processes in the body, will open up new opportunities in the creation of effective medicines, combating premature aging, the development of cardiovascular diseases, and prolonging life.

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### **SOIL SCIENCE AS A SCIENCE**

Soil physics is a phase of soil science that has been receiving increasing interest and attention within the last twenty years. Numerous technical contributions have appeared in English, French, German, and Russian scientific journals. In almost every instance, the individual has been interested in only one particular aspect of the physical properties of the soil. The field is so large that it limits the scope of activity of and one person.

Although much research in the field of soil physics has been accomplished, teachers of the subject have been handicapped by a lack of suitable instructional material. Unless the teacher happens to be closely associated with soil-physics research and has access to the numerous foreign publications, the preparation of a comprehensive course in soil physics is a difficult task.

The author has taught a course in this subject for the past nine years and has been fortunate in having had to review most of the foreign work in conjunction with his research projects. Practical experience in various aspects of soil-physics research, in addition to a rather wide coverage of French, German, and Russian literature, has resulted in the preparation of a complete set of notes which have been used to build up