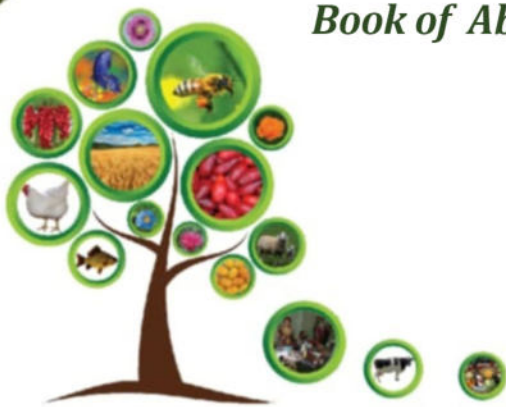




SUA
Slovak University
of Agriculture
in Nitra



Book of Abstracts of the **6th** *International Scientific Conference*

**AGROBIODIVERSITY FOR
IMPROVING THE NUTRITION, HEALTH,
QUALITY OF PEOPLE LIFE
AND NATURE**

Nitra 2024

DOI: <https://doi.org/10.15414/2024.9788055227702>



Arboretum and Department of Physiography in
Bolestraszyce



M.M. Gryshko National Botanical Garden
of the National Academy of Sciences of Ukraine, Kyiv,
Ukraine

Department of Fruit Plants Acclimatization



SUA
Slovak University
of Agriculture
in Nitra

Slovak University of Agriculture in Nitra
Institute of Plant and Environmental Sciences
Institute of Food Sciences



Botanical Garden of Ivan Franko
National University of Lviv

Book of Abstracts

of the

**6th International Scientific
Conference**

**Agrobiodiversity for Improving
the Nutrition, Health, Quality of People
Life and Nature**

September 8, 2024

Nitra 2024

Title: Book of Abstracts of the 6th International Scientific Conference Agrobiodiversity for Improving the Nutrition, Health, Quality of People Life and Nature

Editor: Ján Brindza

Managing Editor: Olga Grygorieva

Associate Editors: Olena Vergun, Vladimíra Horčinová Sedláčková

Reviewers: Members of International Scientific Committee of the 6th International Scientific Conference (In accordance with the ethical rules for reviewing process with exclusion of possible conflict of interests)

Author of e-environment design, graphic design: Olga Grygorieva

Cover designed: Olga Grygorieva, Marina Korz

Publication place: Nitra

Publication year: 2024

Language: English

Form: online

Edition: *AgroBioNet*

Publisher: Slovak University of Agriculture in Nitra

The publication was approved by the Rector of the Slovak University of Agriculture in Nitra on 16th September 2024 as an online peer reviewed book of abstracts of an International Scientific Conference.

In the Book of Abstracts prepared with minor editing and published, corresponding co-authors are responsible for the accuracy of their submitted abstracts.

This work is published under the license of the Creative Commons Attribution NonCommercial 4.0 International Public License (CC BY-NC 4.0).

<https://creativecommons.org/licenses/by-nc/4.0/>



ISBN 978-80-552-2770-2

DOI: <https://doi.org/10.15414/2024.9788055227702>

CONSERVATION PROBLEM Matiashuk R., Gubar L., Krylov Ya, Tkachenko I.	89
PROSPECTS OF FORMATION THERAPEUTIC LOCATIONS ON THE BASE OF SPECIES OF LOCAL FLORA Matiashuk R., Tkachenko I.	90
SENSITIVITY OF POLLEN OF PHYTO-INDICATOR SPECIES TO ATMOSPHERIC AIR QUALITY Moroz A., Brodyak I., Kucharska A., Sybirna N.	91
HYPOGLYCEMIC EFFECT OF FRUIT EXTRACTS FROM DIFFERENT CULTIVARS OF CORNELIAN CHERRY (<i>CORNUS MAS</i> L.) UNDER TYPE 1 DIABETES MELLITUS Nebykov M., Opalko A., Nebykova T., Opalko O.	92
ANTHROPO-ADAPTABILITY SORBODID CROPS <i>SORBUS</i> S. L. CHARACTERISTICS Novalska V., Hnatiuk T.	93
BACTERIAL DISEASES OF LENTILS Olefirenko A., Kyslychenko V., Iosypenko O.	94
STUDY OF THE HYDROXYCINNAMIC ACIDS OF RUSSELL'S LISIANTHUS HERB Omelkovets T., Konovalova O., Kalista M.	95
RED OAK (<i>QUERCUS RUBRA</i> L.) FRUITS AS A SOURCE OF MINERAL ELEMENTS Palamarchuk O., Dzhurenko N., Sokol O., Ledenev S.	96
RESERVE POTENTIAL OF PROSPECTIVE PHYTOADAPTOGENS Panchenko T., Grabovskiyi M., Lozinska T.	97
CHANGES IN THE QUALITY OF GREEN MASS AND PEA GRAIN DEPENDING ON THE USE OF MICROFERTILISERS AND AMMONIUM SULPHATE Panghyova E., Gašparovski I., Gašparovski J.	98
RISKS AND MICROBIOLOGY OF HONEY AND BEE PRODUCTS Pereboichuk O.	99
COLLECTION OF LESS COMMON ORNAMENTAL PERENNIALS AS A PROSPECTIVE SOURCE FOR DIVERSIFYING THE ASSORTMENT OF PLANTS USED IN THE FORMATION OF ARTIFICIAL LANDSCAPES IN UKRAINE Petryn T., Nagalievskaa M., Wasser S., Sybirna N.	100
STATE OF THE ENZYMATIC LINK OF THE ANTIOXIDANT SYSTEM OF ERYTHROCYTES IN RATS WITH THE METABOLIC SYNDROME AND AFTER THE ADMINISTRATION OF <i>GANODERMA LUCIDUM</i> EXTRACT Piekutowska M.	101
FORGOTTEN CULTIVATED SPECIES IN POLAND: THE EXAMPLE OF COMMON FLAX (<i>LINUM USITATISSIMUM</i> L.) Poláková K., Demianová A., Bobko M., Mesárošová A., Švecová T., Jurčaga L., Lidiková J., Belej L., Bobková A.	102
CHARACTERIZATION OF CASCARA AS A COFFEE CO-PRODUCT WITH AN EMPHASIS ON FATTY ACID PROFILE Porokhniava O., Kodzhebash A., Koval M.	103
GENUS <i>PHYSOCARPUS</i> (CAMBESS.) RAF. IN MODERN GARDEN Predanócyová K., Kubicová L.	104
IMPACT OF ORGANIC AGRICULTURE ON CONSUMER CHOICES IN THE SLOVAK MEAT MARKET Prokopiv A., Lyskovets A.	105
FORMATION OF THE DATABASE OF PLANT COLLECTIONS OF THE BOTANICAL GARDEN Prokopiv A., Tryguba I.	106
PHENOLOGICAL FEATURES AND FRUITING OF <i>CORNUS MAS</i> L. CULTIVARS IN IVAN FRANKO NATIONAL UNIVERSITY OF LVIV BOTANICAL GARDEN Pryvedeniuk N., Hlushchenko L.	107
PROSPECTS OF <i>PRIMULA VERIS</i> L. GROWING IN UKRAINE	

CHANGES IN THE QUALITY OF GREEN MASS AND PEA GRAIN DEPENDING ON THE USE OF MICROFERTILISERS AND AMMONIUM SULPHATE

Taras Panchenko, Mykola Grabovskyi, Tatiana Lozinska

Bila Tserkva National Agrarian University, Bila Tserkva, Ukraine; E-mail.: panchenko.taras@gmail.com

Peas (*Pisum sativum* L.) are demanding in terms of mineral nutrition, especially trace elements, which play an important role in plant growth and development, as their lack can cause serious disruptions in plant function.

The research aimed to study the effect of microfertilizers (sulphur, boron, zinc, manganese, molybdenum) and ammonium sulphate on the content of carotene and protein in green mass and pea grains. The research was conducted in 2022–2023 with the Madonna pea variety in the Bila Tserkva National Agrarian University (Ukraine) experimental field. Ammonium sulphate (NH₄)₂SO₄ with content of (N – 21%, S – 24%) was applied by pre-sowing seed treatment before sowing peas and microfertilizers on the day of sowing.

According to the results of the research, it was found that the positive effect of nitrogen, sulphur, and trace elements on the process of carotene accumulation was observed in the earlier stages of pea plant development (before flowering). With the introduction of molybdenum and ammonium sulphate, it was noted that during the years of research, a characteristic dark green color of pea plants was observed in the plots. During the period of bean formation, the effect of fertilizers decreased, which is associated with earlier maturation of plants under the influence of microelements.

All microelements, except zinc, increased pea grains' protein content over the years of research. The highest protein content in the green mass of peas was obtained by applying ammonium sulphate – 17.6%, boron – 16.5%, and molybdenum – 16.9%. The increase in protein content in the vegetative and grain parts of peas can be explained by an increase in the number and weight of leaves. In our study, we observed an increase in leaf weight and size in pea plants under the influence of ammonium sulphate and trace elements.

According to the results of the research, it can be concluded that it is important to use trace elements in the cultivation of peas, especially manganese boron and molybdenum. Their use allows obtaining an increase in carotene in green mass within 51.2% and an increase in protein content by 2.5–3.6%, and in grain by 2.1–2.9%, compared to variants without their application.

Keywords: peas, microfertilizers, ammonium sulphate, carotene content, protein content.