

Introduction. Invasive plant species represent major threats to the conservation of ecosystems worldwide and have major impacts on economics. Due to their rapid rate of spread in plant communities and their ability to replace native vegetation, invasive species have been reported to directly alter landscape structure, biodiversity functioning and composition. Nowadays, with increasing globalization, plants species are currently being introduced to novel ecosystems at an unprecedented rate.

Aim of the study. The analysis of sp. *Solidago canadensis* L. as invasive plant in Europe and its threats to the local native flora of the Republic of Moldova.

Materials and methods. The bibliographic complex study of the issue including a database of scientific references.

Results. Goldenrod species native to North America are among the exceptionally successful worldwide invaders. Focus of this study is sp. *S. canadensis* L. (Canada goldenrod), which was introduced to Europe from North America as a garden ornamental in the 17th century, today being widely distributed across the whole European continent. Canada goldenrod invades a wide range of habitats: semidry grasslands, lowlands, abandoned fields, roadsides and pastures. In the introduced areas, sp. *S. canadensis* L. promotes monocultures due to its fast growth rate, prolific reproduction as well as strong allelopathic effects on native species. In the Republic of Moldova, sp. *S. canadensis* L. is included in the uncultivated synanthropic flora, being specific for degraded ecosystems and rural areas, particularly in ruderal and human-created habitats, also being cultivated as an ornamental plant.

Conclusions. Canada goldenrod is widely recognized as one of the most widespread invasive species in Europe, nevertheless there is a little knowledge on its distribution and threat invasion for the local flora of the Republic of Moldova. In these circumstances, understanding the distribution of invasive sp. *S. canadensis* L. is important for nature bioconservation and management.

Key words.: *Solidago canadensis* L., invasive plants, biodiversity

360. THE ROLE OF MINERALS IN THE METABOLISM OF SPORTSMEN

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Introduction. Mineral salts, similar to proteins, carbohydrates, fats and vitamins are indispensable to the human body. The human body can not "manufacture" mineral salts, they are received daily through diet. The food as a source of minerals is very important for body health.

Materials and methods. The profile literature and database was evaluated.

Results. Minerals have the ability to maintain cell membrane stability, osmotic balance, and enzyme catalysts. The body loses minerals through urine, feces, sweating daily. In the sportsmen, during physical effort, much of the minerals are eliminated more by sweating. That is why they require a daily intake of minerals much higher than sedentary and passive people. Ca is important for nerve and muscle cells, stimulates the release of acetylcholine, allows muscle contraction (in the absence total decontraction is impossible, resulting in uncontrollable muscle spasms and cramps). Ca activates vital enzymes and increases the permeability of cell membranes. For optimal Ca assimilation, Mg and P are required in a well-defined proportion. Mg activates enzymes, plays a role in the conversion of ATP into muscle. Contrary to Ca, Mg stops decreasing of skeletal muscle excitability limit. K is found in intracellular fluids and maintains osmotic balance, engages in muscle and liver glycogen formation. K acts the transmission of nerve impulses and the onset of muscle contraction. Zn participates in basic

metabolism, cell growth, digestion, testosterone production. Cu is involved in the transport of oxygen, promotes the resorption of Fe through intestine, and indirectly participates in the production of hemoglobin and myoglobin in muscle. The natural sources of minerals are: Mg – pumpkin seeds, spinach, dried plums, beans; K – dried apricots and plums, beans, baked potatoes, spinach, mushrooms; Zn – sprout wheat, pumpkin and sesame seeds, chickpea; Cu – sesame, sunflower seeds, walnuts; Fe – cereals, spirulina, plums, lentils, peanuts, spinach; P – nuts, algae, beans.

Conclusions. People who practice sports must use balanced natural sources of minerals daily.

Key words: sportsmen, minerals, role, natural sources

361. THE ORNAMENTAL PLANTS THROUGH THE LIGHT OF THE ACTIVE PRINCIPLES

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Introduction. The ornamental plants are wide-spread due to their beauty, usually considered to be without any value than decorative one, but there are some of them that also possess spicy (thyme), aromatic (lavender) or food properties (rosemary, basil), not to forget about their therapeutic qualities and toxicity. At first sight, the decorative plants are very harmless with a pleasant smell and look, but their varied chemical composition and therapeutic spectrum does not exclude their toxic potential.

Aim of the study. The selection of ornamental plants with therapeutic potential through the light of the chemical compounds and usage in medicine.

Materials and methods. Analysis of bibliographical data concerning the selected decorative plants used in office or house, their therapeutic and poisonous properties according to the chemical compounds.

Results. The research of chemical composition of these plants showed that the most important substances which they contain are: alkaloids (*Aphelandra squarrosa*, *Scindapsus aureus*, *Acalypha hispida*, *Dieffenbachia maculata*); volatile oils (*Hedera helix*, *Coleus forskohlii*), tannins (*Spathiphyllum cochlearispathum*, *Abutilon pictum*, *Ficus elastica*); flavonoids (*Anthurium andraeanum*, *Colocasia esculenta*); saponosides (*Dizygotheca kerchoveana*, *Fatsia japonica*, *Schefflera actinophylla*) and calcium oxalate (*Philodendron verrucosum*, *Syngonium podophyllum*).

Conclusions. Choosing of ornamental plant is an extremely important decision. Besides their beauty, the decorative plants can have both beneficial and negative effects on the state of the human body. It is necessary to know what effects can have the plants which share with us the same air and space everyday, in order to prevent possible damage to our health.

Key words: ornamental plants, chemical compounds

362. DIETARY FIBERS: EFFECTS ON HUMAN HEALTH

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Introduction. The simple term of dietary fibre originating with Hipsley (1953), but the most consistent definition is: non-digestible carbohydrates and lignin, functional fibers consisting of