

***„Plant productivity and food safety:
Soil science, Microbiology, Agricultural Genetics and Food quality”
15-16.09.2022 r.***

Second day (16th of September 2022)

Session V: Urban soils – Agricultural and urban soils - towards to sustainable use and management

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Intensification of agriculture and increased urbanization to support a growing human population have caused significant changes in the structure and functioning of ecosystems. Due to transformation of traditional land use systems the polarization either towards extensification or intensification is observed. Nowadays, 55% of the world's population lives in urban areas, a proportion that is expected to increase further. During the development of cities, fertile soils, predominantly used for agricultural purposes and providing a wide range of ecosystem services such as food and biomass production, dilution, filtration and sequestration of pollutants, nutrient resources, storing genetic materials, and use for recreation, information and knowledge archives are being transformed into SUTMAs (soils of urban, traffic, industrial, mining and military areas). The designation of new places for settlements, commercial, production usually leads to the soil degradation and a loss of valuable soil resources. Simultaneously, the acreage of agricultural lands, especially in metropolitan areas in the radius of commuting for work is decreased owing to competition for other land uses. The loss of these lands due to urbanization and industrialization has important environmental and socio-economic impacts. Monitoring of changes in soil cover, reasonable spatial planning and protection of the soil environment are crucial aspects of an effective soil management in the strongly anthropized landscapes. Ecosystem services provided by soil in the urban as well as agricultural areas needs to be sustained, enhanced and recreated.

Research subjects includes:

- urban agriculture challenges,
- effects of agricultural practices on soil properties,
- urban soils management strategies.
- soil hazards in the city,
- ecosystem services provided by SUTMAs and agricultural soils.

