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MODERN HORTICULTURE

Digital textbook written for MSc course students

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Up-to-date technologies of medicinal plants: Krisztina Szabó, Ildikó Novák, Péter Rajhárt.
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Modern systems in production and commerce in ornamentals: András Neményi.
Botany: Vera Pós, Erzsébet Jakucs, Imre Rimóczi, József Nagy, Mária Lujza Reményi, Dániel Varga, Anna-Mária Csergő, Imre Rimóczi, Sándor Barabás, Dániel Varga.

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Chapters and authors

Up-to-date technologies of medicinal plant production

- National and international importance of medicinal and aromatic plants and their production - Jenő Bernáth
- Breeding and applications of varieties in medicinal plant production - Éva Zámboriné Németh
- Significance of growing area, crop rotation and soil tillage technologies in medicinal plant production - Beáta Gosztola, László Varga, Hella Simkó
- Propagation technologies applied in medicinal plant cultivation - Zsuzsanna Pluhár, Beáta Gosztola
- Nutrient supply of medicinal plants - Éva Zámboriné Németh
- Water supply of medicinal plants - Éva Zámboriné Németh
- Up-to-date plant protection and weed control technologies of medicinal plant production - Péter Radácsi, Péter Rajhárt
- Harvesting of Medicinal Plants - Péter Radácsi, Zsuzsanna Pluhár
- Primary and secondary processing, extraction, storage and trading of medicinal plants - Szilvia Sárosi, Zsuzsanna Pluhár
- Quality Assurance in the medicinal plant production systems - Zsuzsanna Pluhár

Special technical knowledge in horticulture

- Modern tractors in horticulture - András Wieser
- Machines used before and during planting - Sándor Kurtán
- Trellises in fruit and vegetable production - Zoltán Láng
- Dimensioning and selecting modern irrigation systems - Miklós Hegybíró
- The principles of forest protection, frost protection methods - Sándor Nagy
- Opportunities in Plant Protection - Sándor Nagy
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- Vegetable harvesting technologies - Zoltán Láng
- Fruit harvesting technologies - Zoltán Láng
- Special machines used in wine-growing - Sándor Kurtán
- Sorting and grading - Zoltán Láng
- Plant growing structures - Sándor Nagy

Evaluation of fruit cultivars

- Apple breeding trends and aims in the world - Magdolna Tóth
- Pear breeding trends and aims in the world - Magdolna Tóth
- Major aspects and results of sweet cherry and sour cherry breeding - Zsuzsanna Békefi
- Major aspects and results of apricot breeding - László Szalay
- Trends of peach breeding and international results - László Szalay
- The present situation of cultivar innovation and cultivar use of strawberry - Szilvia Kovács
- The present situation of cultivar innovation and cultivar use of raspberry and blackberry - Szilvia Kovács
- International breeding trends and the most important new cultivars of nuts - Géza Bujdosó
- Flowering and fertilization biology background and main ordering principles of cultivar association - Zsuzsanna Békefi

- Major trends of European and Japanese plum breeding and its results recommended for cultivation - Szilvia Kovács

Climate change

- Climate modelling - Csaba Torma, Levente Torma
- Biosphere services and the significance of biosphere protection - Levente Hufnagel, Levente Horváth
- Aquatic and wet habitats, hydrobiological impacts - Levente Hufnagel, Levente Horváth
- Terrestrial communities - Levente Hufnagel, Levente Horváth
- Phenomena in phenology and population dynamics - Levente Hufnagel, Levente Horváth
- Renewable energy resources - Levente Horváth
- Sustainable development - Mária Csete, Levente Horváth
- Environmental economics - Mária Csete, Levente Horváth
- Climate policy - Levente Horváth

Modern Mushroom Cultivation Technologies

- Cultivated mushroom species of the world, Europe and Hungary - Anna Szabó
- The nutritional values of mushrooms - Anna Szabó
- Biology of cultivated mushrooms - András Geösel
- Spawn production - András Geösel
- Preparation of button mushroom compost and the use of spent compost - Anna Szabó
- Button (*Agaricus bisporus* Lange/Imbach) mushroom growing - Anna Szabó
- Pests and pathogens in button mushroom cultivation - András Geösel
- Oyster mushroom cultivation - Anna Szabó
- Shiitake cultivation - András Geösel
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- Mycorrhizal fungi - András Geösel
- Picking and packing of cultivated mushrooms and mushroom products - András Geösel

Modern systems in production and commerce in ornamentals

- Past, present and tendencies of the Hungarian ornamental plant production - Péter Honfi, Márk Steiner
- Advocacy system of ornamental plant production and trade in Hungary and in the European Union - Andrea Tilly-Mándy, Márk Steiner
- Growth regulation of ornamental plants - István Dániel Mosonyi, Márk Steiner
- Cultivation and trade of cut flowers - Péter Honfi, Márk Steiner
- Cultivation of potted ornamental plants Andrea Tilly-Mándy, Márk Steiner
- Cultivation, growth regulation and trade of bedding and balcony plants Andrea Tilly-Mándy, Márk Steiner
- Hydroculture of ornamental plants - Máté Ördögh, Márk Steiner
- Technical conditions of modern ornamental plant cultivation - Péter Honfi, Márk Steiner
- Modern system in cultivation, trade and application of perennials - Ildikó Kohut, Márk Steiner

- Modern growth regulation systems in ornamental tree nursery - Magdolna Sütöri-Diószegi, Márk Steiner

Botany

- Plant cell (Citology) - Zsolt Erős-Honti
- Plant tissues (Histology) - Zsolt Erős-Honti
- Plant organs (Organography) - Zsolt Erős-Honti
- Plant reproduction - Zsolt Erős-Honti
- Plant diversity, plant species and populations - Mária Höhn
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- Natural and artificial ecosystems - Mária Höhn
- Formations and biomes - Mária Höhn
- General and applied plant geography - Mária Höhn