Topics for the exam
2017

Biologically active substances in horticultural crops

Attention! Exam is valid only after preparing the presenting the homework at the last lecture.

1. Grouping of biologically active plant originated compounds from human dietary aspects and factors influencing their utilization in the human organism.

2. List the groups of compounds belonging to the “flavonoids”, give examples for each (compound, plant species)!

3. What are the biological roles of the fenolic type compounds in plant life and what kind of effects they have in the human organismus? May they have any adverse effects, too?

4. How azotoid compounds are synthesized, what are their main chemical groups with examples (compound, plant species).

5. Which are the significant plant species of stimulant effect, what are their responsible chemical compounds?

6. Major groups of lipids, their role in plants and in humans.

7. Give 3 plant species accumulating unsaturated fatty acids and characterise their active compounds, biological activities and utilisation areas.

8. Describe the terpenoids, what may be their role in the plant, chemical structure, grouping, compartmentisation in the cell and possible human uses.

9. How can we group the monoterpenes according to their chemical structure? Give compound examples for each!

10. Definition of essential oils. What compounds do they include? Describe shortly the methods of essential oil production.

11. Chemical characterisation of phytosterols, their effects, utilizations, plant examples.

12. Definition of bitter substances, main groups, effects, uses and plant examples.

13. Development of scizogen and lizigen ducts, type of excretion, characteristic plant families where they can be found with the chemical compounds their contain.

14. Development of meristemoids, characteristics of secretory glands, characteristic plant families, species examples.

15. Role of sugars in biological processes. Characteristic grouping of saccharides and their features.

16. Biosynthesis of polysaccharides, their roles in life of the plants and humans, and other application possibilities..

16. Essential macro- and microelements in human diet, their roles and 1-1 examples focusing on the specific forms of uptake from horticultural products!

17. Characterisation of most important vitamins, their human physiological effects and their sources in horticultural crops.