Post-harvest chain management

Post-harvest management (A. Zanella)

Learning outcomes The course will provide students with scientific and technical knowledge on the post-harvest management of the main horticultural crops. An understanding will be developed concerning the interactions between the biological crop system post-harvest, the surrounding environment and the influencing technical factors. This understanding will allow the students to manage future post-harvest challenges by adaptive knowledge.

Course contents

Basic knowledge of fruit histology, physiology, ripening processes and biochemistry is assumed and will be deepened during the course. The course itself is divided in two sections:

A) Understanding the inter-linkage of post-harvest principles:

Reasons and scope for the post-harvest management; single post-harvest handling principles and inter-linkage; quality and safety management; potential of non-destructive quality evaluation techniques; definition, sources, prevention of post-harvest losses; influencing post-harvest ripening; adaptive storage procedures; innovation in storage technologies

B) Post-harvest handling of the main horticultural crop categories:

Post-harvest handling of following horticultural crop categories: tropical-, subtropical fruits, small fruits, pome fruits, stone fruits, fruit vegetables, flower- leafy- stem-vegetables, underground vegetables

Teaching methods

Frontal lessons will alternate with elements of flipped classroom and team-work in order to enhance the degree of interaction and active knowledge acquisition, including lab-activities and visits.

Readings/Bibliography

Lecture notes made available after the lesson on the on-line platform of unibz; handouts and articles provided by the instructor through internet services managed by unibz.

Recommended supporting bibliography:

- R. Wills et al. (2007); Postharvest of fruit, vegetables & ornamentals; CAB International
- A. Kader et al. (2002); Postharvest technology of horticultural crops; University of California

Recommended supplementary bibliography:
Assessment methods

Written exam at the end of the course on the entire program (lectures, results of team-work and exercises/excursions).

Teaching tools

Frontal lessons aided by visual presentation. Flipped class room approach. Team work and team presentations. Lab demonstrations and exercises. Field visits.