

Invitation

**Soft fruit production within
a global context: Challenges
and constraints in the
cultivation of strawberry
and raspberry towards
enhanced yield efficiency**

Thursday
14 September 2023
18:30–20:30

Amphitheater 1,
Tassos Papadopoulos Building,
Cyprus University of Technology,
Themidos & Ifigeneias corner, Limassol



Cyprus
University of
Technology



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primesoft

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Program (Πρόγραμμα)

18:30–18:45 Registrations (Εγγραφές)

**18:45–19:00 Το ερευνητικό πρόγραμμα PRIMESOFT:
Ανάπτυξη καινοτόμων τεχνολογιών έναυσης
σε καλλιέργειες μαλακών καρπών**
Dr. George Manganaris,
Cyprus University of Technology

19:00–19:30 Constraints and challenges on raspberry production
Prof. Jasminka Milivojević,
University of Belgrade

**19:30–20:00 Η καλλιέργεια της φράουλας στην Ελλάδα:
Νέες προκλήσεις και προοπτικές μέσω
προγραμμάτων γενετικής βελτίωσης
για την ανάπτυξη νέων ποικιλιών**
Dr. Ευάγγελος Τσορμπατσίδης,
Berryplasma Worldwide

20:00–20:30 Discussion (Συζήτηση)

20:30–21:00 Reception (Δεξίωση)

Abstracts (Περίληψεις)

Constraints and challenges on raspberry production

The Republic of Serbia is one of the world's leading producers and exporters of raspberries, with an average annual production of 117,214 tons in the last five years. More than 90% of raspberries produced are exported frozen to foreign markets, while the export of fresh raspberries is almost negligible. Although the total area under raspberry cultivation has increased to 20,807 ha, the average yield per hectare has steadily decreased and in 2021 was 5.3 tons (FAOSTAT, 2023). Raspberry production is concentrated in the western and southwestern parts of Serbia mainly on small farms with an average area of 0.25 ha. 'Willamette' is still the predominant floricane fruiting cultivar in raspberry plantations, occupying more than 90% of the total area under cultivation. The main reason for the slow replacement of this cultivar by the new and better cultivars is the high demand of the Western European processing industry for its dark red and delicious fruits, which are mostly exported frozen to foreign markets. The floricane fruiting cultivars 'Meeker' and 'Fertödi Zamatós', suitable for both frozen and fresh consumption, are slowly spreading and currently account for 3-5% of the total cultivated area. Other cultivars, such as 'Tulameen' and 'Glen Ample', which are suitable for fresh consumption, are grown only on a small scale, as there is no organized export of fresh raspberries from Serbia. Recently, primocane fruiting cultivars 'Enrosadira' and 'Kwanza' have been spread in protected environments (greenhouses) to meet the growing needs of producers and consumers. These cultivars continually set fruit on the current season's canes from mid-July to fall and in early June on the previous season's canes, extending the harvest season and providing the total yield of the two crops to exceed 30 tons per hectare. In contrast, average yields of floricane fruiting raspberry cultivars vary and range from 5 to 20 tons per hectare, depending on the orchard management. The floricane fruiting cultivars are cultivated in the vertical trellis system consisted of pillars with two wires and an additional support for long fruiting branches, while the primocane fruiting cultivars are grown in the hedgerow system with additional trellises, depending on the vigor and yield potential of the cultivar. Main constraints in raspberry production include: the poor quality of planting material; the choice of unsuitable locations for establishment of new plantations; the adverse effects of climatic factors; the lack of field extension services and, accordingly, inadequate management of raspberry plantations. The challenges in raspberry production are related to the development of new cultivation techniques through the use of soilless systems, anti-hail nets, rain shelters, and plastic tunnels to avoid unfavorable climatic and soil conditions, and infestation with various fungal diseases.

Η καλλιέργεια της φράουλας στην Ελλάδα: Νέες προκλήσεις και προοπτικές μέσω προγραμμάτων γενετικής βελτίωσης για την ανάπτυξη νέων ποικιλιών

Η Ελλάδα είναι μια από τις πιο σημαντικές ζώνες για πρώιμη παραγωγή φράουλας στην Ε.Ε. Το 2022/2023 καλλιεργήθηκαν 20000 στρέμματα με αξία προϊόντος περισσότερο από 150 εκατ. €. Παρόλο που διαθέτει συγκριτικά πλεονεκτήματα, στερείται δικών της ποικιλιών φράουλας. Το υπάρχον μοντέλο παραγωγής βασίζεται σε διεθνείς ποικιλίες, τα χαρακτηριστικά των οποίων είναι προσαρμοσμένα στις απαιτήσεις των χωρών που αναπτύχθηκαν. Το πρόγραμμα ανάπτυξης ποικιλιών της Berryplasma στοχεύει στην δημιουργία γενοτύπων φράουλας οι οποίοι να συνδυάζουν βελτιωμένα παραγωγικά χαρακτηριστικά (πρωιμότητα, μέγεθος καρπού, συνολική παραγωγή) και ποιοτικά χαρακτηριστικά όπως μετασυλλεκτική διάρκεια ζωής του καρπού και υψηλό % εμπορευσιμότητας. Στα πλαίσια του προγράμματος έχουν αναπτυχθεί 4 ποικιλίες, 3 Short day (Kallisti, Elektra and Phaedra) και 1 Day neutral (Aethra) απόλυτα προσαρμοσμένων στις συνθήκες την Νοτίου Ευρώπης συνδυάζοντας ταυτόχρονα όλα τα επιθυμητά εμπορικά και ποιοτικά χαρακτηριστικά.

Speakers (Ομιλητές)



Dr. Jasminka Milivojević

Dr. Jasminka Milivojević is a Full Professor with 24 years of experience at the University of Belgrade, Faculty of Agriculture. She is a member of several faculties' councils, committees and boards. Currently, she is involved in teaching at the Faculty of Agriculture as a lecturer of six subjects at undergraduate, master and doctoral studies. Her teaching and research areas comprise of fruit science with a research focus on soft fruits, chemical fruit characterization, fruit storage, plant growth regulators,

training systems and nutrient management in fruit production. This enables her to have an inter-disciplinary approach to various topics in the field of fruit science. She has published about 150 scientific papers (over 50 peer-reviewed articles in international journals, Hirsh index of 13, source: Scopus) and 5 books in Serbian and 1 book in English language (monograph "The Blueberry"). Dr. Jasminka Milivojević also acts as a reviewer for number of international and national journals. She is the member of international scientific societies (ISHS) and scientific boards of international and national conferences. During her academic career, she participated in three international and ten national projects, which were financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia and the Republic of Slovenia, and several projects financed by USAID (American Agency for International Development). A special segment of her engagement is related to cooperation with fruit industry sector in order to bring inventions and scientific achievements closer to application in the commercial berry fruit production. Current studies are crucial to develop much more effective and sustainable solutions to help growers to maintain productivity and fruit quality in the face of climate change. Therefore, special focus is based on exploring some of the basis physiological responses of various soft fruits to modified climate conditions under protected environment and developing ways to produce high quality berries and to extend the harvest season.



Dr Evangelos Tsormpatsidis

Dr Evangelos Tsormpatsidis, Plant and Soft Fruit Physiologist, is Head of R&D Department at Berryplasma World LLC (Varda Ilias, Greece) responsible for applied research on soft crops. His research activity so far has been focusing on the physiology of small fruit crops (strawberry, raspberries, blackberries and blueberries). I am a graduate of Aristotle University of Thessaloniki with a Msc and PhD from the University of Reading, UK. During my academic career I lectured in the undergraduate and postgraduate programs of the University of Reading related to small fruit crops. During my professional career, I was responsible for the Research & Development Department of the University of Reading, Soft Fruit Technology Group conducting applied research on soft fruit crops.