

Biodiversity in tomato and pepper – a challenge for new trends in plant breeding

Joint initiative of the PlantaSYST partners Maritsa Vegetable Crops Research Institute (MVCRI) and the Center of Plant System Biology and Biotechnology (CPSBB)

Scientists, breeders, seed producers, and farmers met in MVCRI Plovdiv on 7 August 2020 to present the PlantaSYST tomato and pepper core-collections to different stakeholders, in order to make them familiar with the existing biodiversity and to exchange information and discuss current issues and new perspectives in plant breeding.

The event was attended by representatives of companies, research institutes, universities, farmer associations, and vegetable producers in the region: Agrobiovet Ltd., Florian Ltd., Geosem Select Ltd., the Institute of Genetic Resources, the Agricultural University of Plovdiv, the Bulgarian Pepper Association, MVCRI, and CPSBB.

Assoc. Prof. Dr. Daniela Ganeva, MVCRI Director, welcomed the participants, emphasizing on the importance to preserve and protect the biodiversity in vegetable crops. Assoc. Prof. Dr. Tsanko Gechev, CPSBB Director, accentuated on one of the main CPSBB goals- to connect the fundamental research with applied science. The state of phenotyping and genotyping knowledge on tomato and pepper collections until now was presented by Assoc. Prof. Dr. Dimitrina Kostova, Head of Department Vegetable Breeding at CPSBB and PI of MVCRI.

After the lectures, attendees visited the open fields where more than 300 accessions of pepper and tomato are being grown for phenotype and molecular evaluation. Current issues of tomato and pepper production and new perspectives in plant breeding were discussed.



Assoc. Prof. Dr. Daniela Ganeva, Director of MVCRI, opens the meeting.



Assoc. Prof. Dr. Tsanko Gechev, Director of CPSBB, presents the PlantaSYST project.



Assoc. Prof. Dr. Dimitrina Kostova, PI of MVCRI and Head of Department Vegetable Breeding, presents the research activities of her group.



Assoc. Prof. Dr. Velichka Todorova demonstrates the pepper accessions grown in the MVCRI fields.

The discussion started when the people gather together back in conference hall. Pepper production especially “kapia” type is increasingly becoming one of the most important and profitable sector in Bulgarian horticulture. This was declared by Dr. Chavdarov, head of Plant Pathology, Institute of plant genetic resources, who is working also as farmer’s consultant. The most advantageous are the bigger farms with more than 3000 ha land. The processing industry and the fresh markets are open to accept the whole production. Mr. Georgiev, CEO of Geosemselect Ltd., private seed company, expressed his satisfaction of what he has seen as biodiversity and stated that they are ready to work close with scientists on unique traits observed in these collections. Mr. Vasilev, the Chairman of the Bulgarian Pepper Association, emphasized that a commercial production of local pepper cultivars specific for the Bulgarian cuisine could be a successful potential niche in our market. This market could be extended also to other European countries due to the unique aroma and taste of the Bulgarian vegetables.

The crowning event at the end of the meeting was degustation of sampling selection of tomato and pepper accessions. Participants estimated the fruits for different sensory characteristics and marked their preferences in evaluation sheets.

Video clip of this event can be found here: [Biodiversity in tomato and pepper: joint initiative of MVCRI and CPSBB](#)