

COST ACTION FA1204
2nd WORKING GROUPS MEETING AND
STEERING MANAGEMENT COMMITTEE

ROOTSTOCK-MEDIATED IMPROVEMENT OF FRUIT
QUALITY AND UNDERLYING
BIOLOGICAL MECHANISMS

2nd to 4th MARCH 2015 ANTALYA, TURKEY,

REPORT



Report of the COST ACTION FA1204 2nd Working Groups Meeting - Rootstock-Mediated Improvement of Fruit Quality and Underlying Biological Mechanisms

The 2nd Working Groups Meeting “Rootstock-Mediated Improvement of Fruit Quality and Underlying Biological Mechanisms” took place on March 02-04, 2015, in Antalya, Turkey, and follows the previous COST ACTION’0s Meetings: 1st Meeting in Athens in March 2013, the 1st Annual Conference in Murcia in November 2013, the 1st Working Groups Meeting in Jerusalem in February 2014 and 2nd Annual Conference in Carcavelos-Portugal in October 2014.

Forty five researchers, teachers and professionals from 9 different countries (Table 1) participated to update and share their knowledge about vegetable grafting and to meet and build future collaboration on improvement of fruit quality and underlying biological mechanisms.

The meeting was organized with collaboration of University of Eciyes, Faculty of Agriculture (ERU, FA), University of Cukurova, Faculty of Agriculture (CU,FA) and Republic of Turkey Ministry of Food, Agriculture and Livestock (TC. MFAL) in Antalya on 2nd-4th of March 2015.

Table 1 – Number of participants per country

Country	Number	Country	Number	Country	Number
England	1	Italy	4	The Netherland	2
Greece	3	Portugal	1	Turkey	29
Germany	2	Spain	3		

The COST ACTION FA1204 2nd Working Groups Meeting started with the official opening followed by the invited presentation on “General status of vegetable sector in Turkey” by Dr. Kazım ABAK. Another invited presentation called “Cucurbit germplasm in Turkey and their rootstock potential” was given by Dr. Nebahat Sari. One presentation on Solanaceae germplasm of Turkey was presented by Dr. Abdullah Unlu and three presentations about rootstocks effect on quality parameters of watermelon were presented by working group members. First day afternoon,



parallel working group meetings were conducted from 14:30 to 17:00. After parallel working group meeting old city of Antalya was visited as a group.

The second day started with the presentation presented by Dr. Elif Candir on effect of rootstocks on shelf life of grafted watermelon followed by other 4 presentations related with quality in grafted solanaceous crops. In addition to studies done in grafted vegetables, presentations on organic seedling production, rootstock effect on rose quality and effect of mineral nutrition on fruit bearing vegetables were presented in second session of the second day. Current situation of grafted seedling sector in Turkey was discussed with participation of nursery house owners in a two hours round table meeting. After round table session, the Members of the Steering Management of Cost Action FA1204 came together and addressed the agenda Meeting items up to 19 hours.

The third day the LOS organized a technical visits to North West region of Antalya where nursery houses and protected vegetable cultivation are concentrated. Antalya Tarim and Bereket Fide (grafted seedling producers) and Proto Seed (Vegetable and potato breeding company) were visited before noon.

The social evening program in the old city tour in Antalya, the touristic tour to Aspendos historical theater and social dinner at the Hotel stimulated informal activity among participants for improving knowledge about ongoing research activity carried out in their country.

Scientific Program

The program of the meeting foreseen four invited communications, ten oral presentations and one round table meeting with Turkish grafted seedling producers, breeding companies and nursery house owners, focused on rootstock effect on fruit quality of grafted vegetables due to increase in plant vigor and disease resistance, tolerance to abiotic stress conditions such as temperature and salinity, flooding and drought.

The four sessions further contributed to the objectives of this COST ACTION FA 1204 - Vegetable grafting to improve yield and fruit quality under biotic and abiotic



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stress conditions. Focused on current status of vegetable sector in Turkey, Turkish Cucurbitaceous and Solanaceous germplasm and their rootstock potential and rootstock effect on fruit quality of grafted vegetables. Possible positive and negative effect of rootstocks/grafting on fruit bearing vegetables were discussed in detail after each presentation.

Session 1: Session 1 was chaired by Andrew J. Thompson and Halit Yetişir as rapporteur, with the main task of providing information about current status of vegetable sector in Turkey and rootstock potential of Turkish Solanaceous and Cucurbitaceous crops, emphasized general status of vegetable sector in Turkey, cucurbit germplasm in Turkey and their rootstock potential and Solanaceous germplasm in Turkey and their rootstock potential.

Session 2: Session 2 was chaired by Cherubino Leonardi and Youssef Roupael as rapporteur, and dealt with effect of rootstock on quality parameters of grafted watermelon. The three oral presentations highlighted the effect of different rootstock on sugar, carotenoid, organic acid, fruit juice pH, fruit flesh firmness, fruit ring thickness and volatile compounds in grafted watermelon. In last presentation of the second session called “Plant growth, yield and fruit quality parameters of grafted watermelons on *Citrullus lanatus* var. *citroides* genotypes”, alternative rootstock potential of *C. l. var citroides* was discussed as regarded to quality parameters of watermelon.

Session 3: Session 3 was chaired by Carmina Gisbert and Isabel Mourao, as rapporteur, focused on effect of rootstock on storage duration shelf life of grafted watermelon, rootstock/grafting effect on fruit quality of Solanaceous crops, characterization of Alata Horticultural Research Station Tomato Core Collection for quality parameters and rootstock effect on yield and quality of grafted tomato under drought stress conditions. Three of the presentations were experimental studies while one of the presentations was review presentation.

Session 4: Session four was chaired by Dimitrios Savvas and Dietmar Schwarz as rapporteur, and aimed to provide information on rootstock effects on commercial quality of eggplants grafted on some commercial rootstocks and two local eggplant



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landraces, to give detailed information about effect of mineral nutrition on fruit quality of fruit bearing vegetables. In this session, information and some bottle neck in organic seedling production in both grafted and ungrafted seedling sector were presented by Dr Yüksel Tüzel. In addition to presentation about quality grafted vegetables, one presentation about rootstocks effect on quality in rose was presented in this session by Dr. Mustafa Ercan Ozzambak.

The Steering Management Committee Meeting was held on the 3rd of March, where important subjects for the Action were discussed: status and budget of the Action, next Annual Meeting in Berlin, update about the 2nd Training School in Netherland (April 2016), the Final Dissemination Conference in Pula HR, September 2016, update about the STSMs, progress report of the four WG and scientific planning and activities (website, book, next Working Groups Meeting in the Netherland in April 2016).

A technical visit to the northwest region of Antalya where nursery houses are intensively established was organized on the third day of the meeting. The visit started from Antalya Tarim, first Turkish company started production of grafted vegetable seedling in 1998. Bereket fide was visited after Antalya Tarim. Bereket fide also produce grafted seedling in watermelon and tomato. They have some experimental studies on cucumber and melon. Both companies produce seedlings (grafted and ungrafted) for both local market and export. Generally they export seedling to Balkan countries, Russia and Middle Asian countries. They mentioned that diseases contamination during grafting and healing and seed borne diseases as their main problems. Proto Seed Company was visited after seedling companies. Proto Seed Company work on mainly tomato, pepper, cumber and potato. Proto seed focus on both producing seed of commercial cultivars and breeding of new cultivars. Proto seed have production greenhouses (seed production and breeding) and tissue culture facilities.

The Programme was distributed to the participants before the meeting and PDF format of the presentations were collected from participants in order to present them in web page of Cost Action FA1204.



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