

BEGINNING OF CITRUS SANITATION IN CROATIA

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The development of the modern citrus industry in Croatia started about 40 years ago, but the complete citrus foundation block was lost at the time of war (1991-1995) in ex-Yugoslavia. Hence, a suitable cultivar program and the rebuilding of the citrus foundation stock are indispensable for further development of the citrus industry. Commercial citriculture is located in the southern part of the country and this area represents one of the northernmost citrus growing areas in the world. The main commercially grown citrus crop is the most frost-tolerant Satsuma mandarin (*Citrus unshiu* Marc.). The preliminary surveys have shown widespread occurrence of the most devastating citrus pathogen, *Citrus tristeza virus* (CTV), some citrus viroids and possibly the presence of other virus and virus-like diseases of citrus in Croatia. The phytosanitary status of citrus and other fruit tree crops is unsatisfactory, mostly because the implementation of the law for horticultural crops sanitary status improvement is very slow and the national certification program scheme is still missing. First serious systematic actions toward production of mother plants of "basic" category and implementation of an increase method are being undertaken. Selected stocks, primarily of Satsuma mandarin, undergo sanitation treatments which consist of thermotherapy and *in vitro* shoot-tip grafting. Following mentioned procedures CTV, CPsV and CIVV were eliminated from three tested clones of 'Zorica Rana' mandarin (Croatian selection). The assessment of their sanitary status, before and after sanitation treatments are based on different types of assays; biological (DTBIA and DAS-ELISA test) as well as molecular (IC/RT-PCR test). In addition CTV, CPsV and CIVV strains from infected Satsuma mandarin were biologically tested on different citrus bioindicators. Tristeza symptoms in citrus indicators strongly suggest the existence of potentially devastating CTV strains in a investigated mandarin clones. Completion of the above mentioned procedures is expected to result in the establishment of citrus certification program in Croatia which would ensure the production of high-quality citrus propagating material in both sanitary and pomological aspects.

Key words: Satsuma mandarin, micrografting, biotest, certification

