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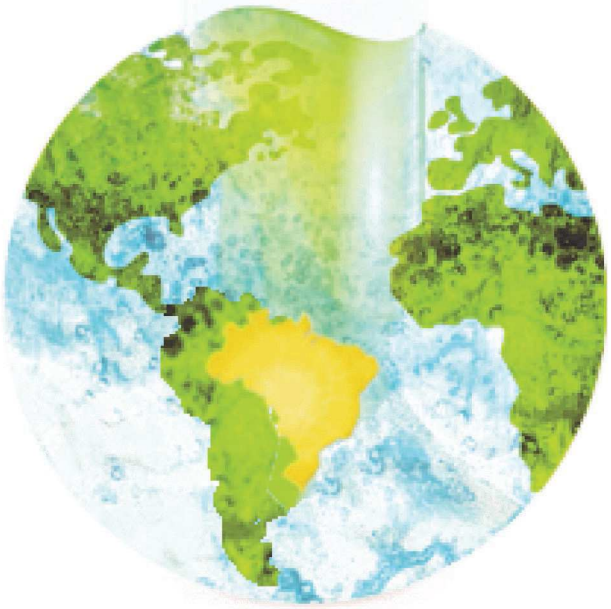

Book of Abstracts

April 24 - 28th | 2017

Lavras, BRAZIL

UFLA
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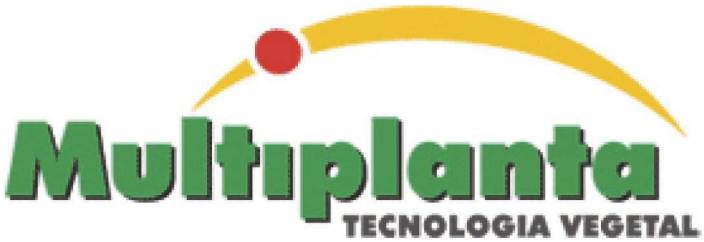
ISHS
International Society for Horticultural Science

7th International Symposium on Production and Establishment of Micropropagated Plants



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	ORAL PRESENTATION SESSION 6 (10 min+5min)
9.45-10.00	*In vitro* **propagation system for induction of high ploidy levels in Actinidia for breeding of novel kiwifruit** Jin-Hu Wu (New Zealand)
10.00-10.15	**Biotechnology tools to improve tamarillo (*Solanum betaceum*) micropropagation and breeding systems** Sandra Correia (Portugal)
10.15-10.45	**COFFEE/TEA BREAK**
	ORAL PRESENTATION SESSION 7 (10 min+5min)
10.45-11.00	**Mycorrhizal synthesis between *Tuber borchii* and *Arbutus unedo* L. using seedlings and *in vitro* plants** Filomena Gomes (Portugal)
11.00-11.15	**Capacity to *in vitro* plant development in some Crimean essential oil cultures** Irina Mitrofanova (Russia)
11.15-11.30	**Study on adventitious root cultures of Giao co lam *(Gynostemma pentaphyllum)* *in vitro* and saponin accumulation** Tran Van Minh (Vietnan)
11.30-11.45	*In vitro* **establishment and anatomical analysis of *Bauhinia holophylla* (Bong.)** Vanessa Stein (Brazil)
11.45-14.00	**LUNCH**
	SESSION 4 – CHALLENGES OF LARGE-SCALE PRODUCTION Chair: Wagner Campos Otoni
14.00-14.45	**Commercial micropropagation of fruit varieties and rootstocks between tradition and innovation** **Maurizio Lambardi** CNR, Italy
	INDUSTRY PRESENTATION SESSION
14.45-15.00	**BIOCELL - Clonagem e Diagnose Vegetal** Ênali de Paula Paiva (Brazil)
15.00-15.15	**C4 Científica** Caio Roberto Bolonha (Brazil)
	ORAL PRESENTATION SESSION 8 (10 min+5min)
15.15-15.30	**Establishment of photomixotrophic cultures for high-scale micropropagation by Temporary Immersion Bioreactors of commercial plant species** Ariel D. Arencibia (Chile)
15.30-15.45	**Culture medium, LEDs and bioreactor to improve *in vitro* propagation of red currant** Juho Hautsalo (Finland)

Mycorrhizal synthesis between Tuber borchii and *Arbutus unedo* L. using seedlings and *in vitro* plants

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Arbutus unedo L., known as strawberry tree, is a Mediterranean autochthonous species which became important for forest programs, due to its drought tolerance and regeneration capacity following fires. The interest for high-quality plant material for field planting is increasing. Selected adult plants for fruit production and quality have been micropropagated and clonal trials have been established for clonal evaluation. New orchards have been established with adult selected clones propagated by micropropagation and seedlings (half sibs). Mycorrhizal fungi allows the establishment of more productive orchards benefiting from particular advantages conferred by the production of edible mushrooms as, in this case Tuber borchii. Seedlings and micropropagated plants (during *ex vitro* rooting and acclimatization), were used to test mycorrhization with spores of *T. borchii*. Perlite was used as substrate for inoculation. The mycorrhized plants rate was superior to 80%, after 3 months, when micropropagated plants were tested. However, a mycorrhization rate of 70% was observed after 8 months, when seedlings were tested, probably due to an inferior root development, inducing a lower number of secondary roots compared to micropropagated plants. The multiple regression analysis indicated that the dependent variable, number (Nº) of mycorrhiza branches increased with the concomitant increase of the number of mycorrhized secondary roots ($P < 0.01$; $R2 = 0.77$). The PCA analysis shows that the one factor accounts for 52% of the total variance showing as significant variables (factor loadings higher than 0.70) the Nº of mycorrhiza branches, the Nº of mycorrhized secondary roots, the Nº primary and secondary roots. Further, the Nº of mycorrhiza branches varied inversely to the biggest primary root length. The mycorrhizal plants were established in a field trial and will be monitored during several years, to confirm long term persistence of mycorrhizae and evaluate the fungal colonization level required to guarantee mushroom production.

Keywords: Arbutoid mycorrhizae, *ex vitro* rooting inoculation, nursery persistence, strawberry tree