

## B-137 Use of rock wool *in vitro* propagation of potato (*Solanum tuberosum* L.)

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The planting material for conventional propagation of potato is by seed tubers which may be infected with viruses. Rapid Multiplication Technology provides disease free high quality planting material through tissue culture. Since agar is the most expensive in tissue culture media, possibility of using rock wool was investigated. The potato cultivars Desiree, Delcora, Sita and Sante grown *in vitro* were used as experimental material. MS medium supplemented with 0.5 mg/l BAP semi-solidified with agar (6g/l) was compared with the medium of the same composition, but with rock wool as the supporting material, to test as multiplication medium. For *in vitro* tuberization, *in vitro* plantlets of the above cultivars were subcultured on MS medium supplemented with 0.5 mg/l BAP in liquid and rock wool supporting media and arranged in the same design. After 4 weeks in culture the growing shoots were treated with micro-tuber induction medium and incubated in the dark at room temperature.

An average of 16 - 17 shoots were produced by the 4 cultivars in rock wool medium while the agar solidified medium produced an average of 12-13 shoots, showing an increased number of shoots in rock wool medium. The multiplication rate was higher in rock wool (6.5 shoots/explant) compared to (4.9 shoots /explant) agar medium. Average plant height in rock wool medium was 5.3 cm. Average number of leaves of rock wool medium was 4.8/plant as opposed to 5.1 leaves in the agar medium. The rock wool media produced higher number of micro tubers ranging between 5 - 10 mm in size compared to the liquid medium which produced higher number of micro-tubers >10mm in all genotypes. The differences in weight of micro tubers and average weight per tuber in different media was not observed, although genotypic differences were significant. Since agar is expensive, rock wool can be utilized in media for *in vitro* multiplication, *in vitro* tuberization and *in vitro* conservation of potato.