


Research Article

Open Access

---

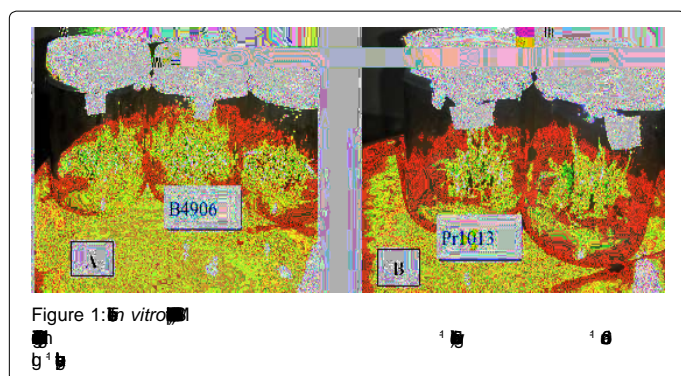
\*Corresponding author: 



Received 

Accepted





## Conclusion

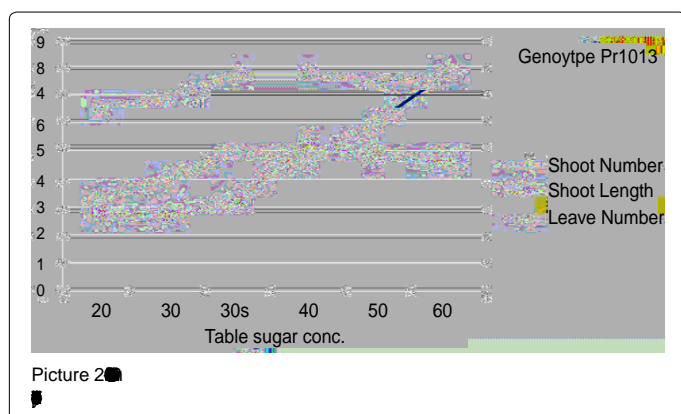
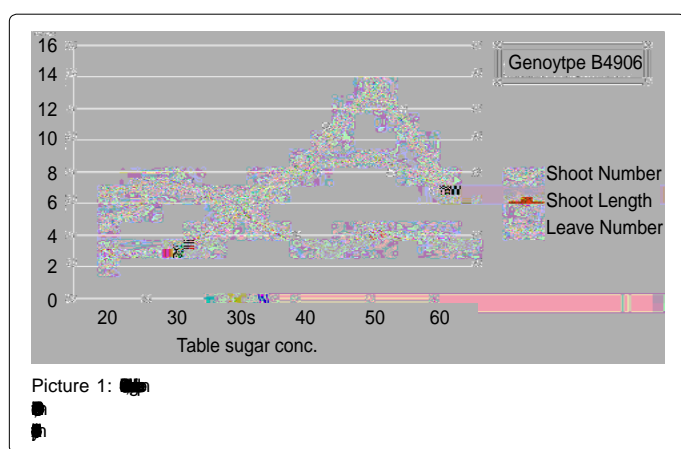
It was observed that on MS medium with 50 g<sup>-1</sup> table sugar, B4906 gave the highest shoot multiplication and number of leaves per shoot whereas Pr1013 produced maximum shoots on MS plus 60 g<sup>-1</sup>. However, 40 g<sup>-1</sup> table sugar supplemented medium was optimum to produce usable, morphologically good and separable shoots for successive subculture in both genotypes. Sucrose is the prime importance for cell growth but significant cost incurred by analytical sucrose brings economic obstacle in full exploitation of tissue culture for commercial propagation. The costs of media can be brought down by 94.89% using locally available and cheap table sugar without compromising the quality of plantlets.

## Acknowledgements

None

## References

1. Khan et al. [7]
2. Sorory and Hosien [16]



6% table sugar respectively. Whereas the result of Pr1013 is in line with Khan et al. [7] who reported  $12.00 \pm 0.81$  shoots in NIA-2004 at 6% table sugar, on which  $7.78 \pm 0.19$  average shoots were produced in the current study. However, they did not use 50 g<sup>-1</sup> rate in their experiment. Sorory and Hosien [16] also confirmed this that the use of 6% sucrose concentration enhanced shoot regeneration in sugarcane.

## Cost analysis

The cost of analytical grade sucrose and table sugar used in the analysis were the current price in the Ethiopian local market. The cost of analytical grade sucrose and table sugar required for one litre MS medium worked out to be \$0.94 and \$0.048 respectively (Table 2). When using 4% (w/v) table sugar as a carbon source, a cost reduction of 94.89% was achieved (Table 2).