1.1 Meta-analysis

It was demonstrated for *S. caripense* genotypes that the number of leaves (mean ± S.E.) in proliferation stage is statistically different between treatments among biotechnological (Morales y Vaca 2016), and other methods; the experimental point TM1 = 16.13 ± 1.35 (D) is statistically different from GPa1c1w = 8.92 ± 1.10 (ABC), and from GPa.5c2wo = 7.47 ± 0.64 (A); the higher number of leaves obtained through *in vitro* technics was using 0.5 mg·L^{-1} BAP, through physiology *in vitro* was with 1.0 mg·L^{-1} AIA and 1.0 mg·L^{-1} BAP, and finally without plastic seal (Figure 5), with p-value < 0.0001 (Table 5), and C.V. = 35.20%. Additionally, GPa0c0w (AB) is different from TM0 (ABCD) in two letters. Homogeneity of variances exists in the improved genotypes.

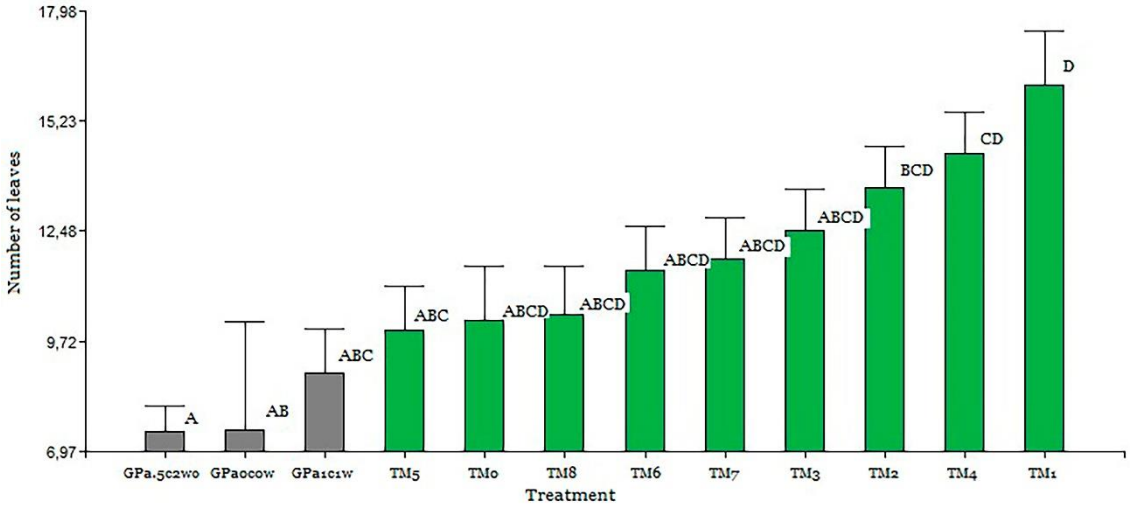

Figure 5. Number of leaves (mean ± S.E.) in GP (double hybrid) and tzímbalo genotypes treated with different phytohormonal concentrations in proliferation stage. Different letters demonstrate significant differences using Tukey's test (p-value < 0.05).

Table 5. ANOVA of steam height in in GP (double hybrid) and tzimbalo genotypes.

Source of variation	D.F.	M.S.	F-value	p-value
Treatment	11	95.69	6.53	< 0.0001
Residuals	144	14.64		

The plantlet height (mean ± S.E.) in climatization stage was statistically different between treatments among biotechnological (Morales y Vaca 2016), and other methods; the experimental point TE3 = 34.17 cm ± 1.49 (C) is statistically different from GPa1c1w = 12.12 cm ± 1.72 (A), and from GPa.5c2wo = 9.37 cm ± 0.99 (A); the largest plantlets through *ex vitro* rooting were obtained using 2.0 mg·L^{-1} IBA, through physiology *in vitro* with 2.0 mg·L^{-1} IBA, and finally without plastic seal (Figure 6), with p-value < 0.0001 (Table 6), and C.V. = 26.54%. In addition, GPa0c0w (A) is different from TE0 (B).

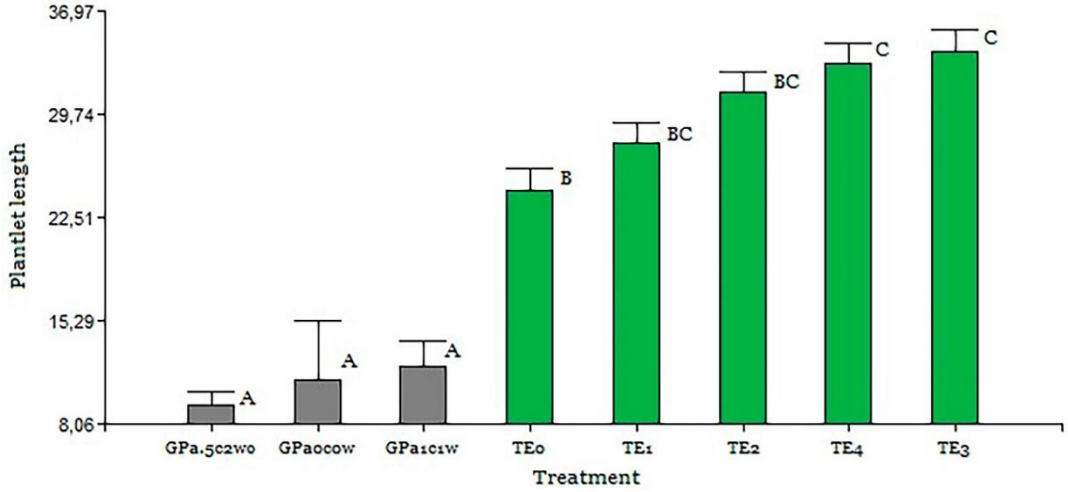

Figure 6. Plantlet height (mean ± S.E.) in GP (double hybrid) and tzimbalo genotypes treated with different phytohormonal concentrations in climatization stage. Different letters demonstrate significant differences using Tukey's test (p-value < 0.05).

Table 6. ANOVA of plantlet height in GP (double hybrid) and tzimbalo genotypes.

Source of variation	D.F.	M.S.	F-value	p-value
Treatment	7	1929.08	54.54	< 0.0001
Residuals	120	35.37		

Finally, through this method based on interspecific and intraspecific crosses, integrated to biotechnological procedures (Blas et al. 2010; Camarena et al. 2014; Morales and Chiluisa-Utreras 2022; Morales and Andrade 2023), the fruit weight of triple hybrid with *S. muricatum* x *S. caripense* (NG = 8.55-53.55 g; > 20 t/ha) is comparatively higher than that of their wild parents (FG = 5.58-6.60 g), as mentioned before with this species and *S. muricatum* x *S. tabanoense* (40-60 g; 30-40 t/ha) (Rodríguez-Burruezo et al. 2003; 2011); and this triple hybrid with *S. muricatum* x *S. caripense* have high soluble solids (SSC) content (6.5-10.0%), at least 8 ºBrix to be acceptable (Prohens et al. 2003; Rodríguez-Burruezo et al. 2003; 2011), this suggest that these varieties are also distinct from other exotic fruits in the Andean region, as example, uchuva (*Physalis peruviana* L.) with fruit weights (± S.D.) of 5.62 g ± 0.92 (heterogeneous collection), 4.8 g (Regional Nariño), 2.77 g ± 0.67 (golden berry), 6.79 g (Colombia), and 6.95 g ± 1.49 (American Southern) (Morales and Andrade 2023).