

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on the research that has been carried out, it can be concluded as follows:

1. The application of varying MS concentrations (Full MS and $\frac{1}{2}$ MS) did not result in significant differences across all treatments.
2. The application of varying NAA concentrations produced statistically significant differences in root and leaf number. Optimal root number was observed at concentrations between 0.25-1.0 mg L⁻¹, while leaf number at 0.25 mg L⁻¹.
3. The interaction between varying concentrations of MS and NAA showed a tendency toward improved root length. The combination of full-strength MS with 0.25 mg L⁻¹ NAA and half-strength MS without the addition of NAA tended to produce the longest roots.
4. The highest survival rate after acclimatization stage (100%) was achieved at NAA concentrations of 0 and 0.25 mg L⁻¹ across both half-strength and full-strength MS media. Furthermore, a similar survival rate was observed with the application of 1 mg L⁻¹ NAA in full-strength MS medium.

5.2 Suggestion

Future studies should investigate the synergistic effects of combining auxins or incorporating activated charcoal to optimize in vitro root induction. After 180 days of indoor acclimatization without direct sunlight, *C. sumatrana* showed excellent growth, warranting further evaluation of its cultivation potential under natural conditions.