EFFECT OF ADS (6-Aminopurine hemisulphate salt) AND GSH (glutathione) ON CALLUS FORMATION OF UNFERTILIZED COCONUT (*Cocos nucifera L)* OVARY CULTURE PROTOCOL.

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ABSTRACT

This study investigated the effects of ADS (6-aminopurine hemisulphate salt) and GSH (glutathione) on callus formation and tissue browning in unfertilized ovary cultures of coconut (*Cocos nucifera L.*). The primary objective was to enhance the efficiency and success of the ovary culture protocol by addressing issues related to tissue browning and low callus initiation rates.

For ADS, a concentration of 70 mg/l resulted in the highest number of callus formations but exhibited similar browning to the control. After thorough analysis, concentrations of 60 mg/l and 65 mg/l were deemed suitable for achieving low browning and high callus formation. Higher concentrations led to increased browning, suggesting that further research with lower concentrations may enhance callus formation while reducing browning.

In the case of GSH, a concentration of 95 mg/l was found to be optimal for callus formation with low browning. Increasing the concentration of GSH further reduced browning. Therefore, higher concentrations of glutathione warrant further investigation.

However, according to the mean rank, glutathione was not as effective as the control due to a higher browning index compared to the control.

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