

**B-33: Use of Pluronic F-68 in immature embryo culture of coconut
(*Cocos nucifera* L)**

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The non-ionic, co-polymer surfactant, Pluronic F-68 (Pluronic) has been used as a growth promoting culture media supplement in tissue culture systems of several crop species. The objective of the present study was to assess the possibility of using Pluronic for improving tissue culture response of the recalcitrant crop species, coconut (*Cocos nucifera* L.). Immature zygotic embryos of coconut were cultured in the medium 72 supplemented with 24 μ M 2, 4-D, 0.8% (w/v) agar and 0.25% (w/v) activated charcoal for induction of callus. Effect of Pluronic on callusing was assessed by incorporating 0.001-0.1% Pluronic into the culture medium.

20-77% embryos initiated callus in media devoid of Pluronic and the frequency of callusing depended on the type of charcoal used. Higher percentage of callus production (44-91%) was observed when Pluronic (0.001%) was incorporated into the callus induction medium. The positive effect of Pluronic on callusing was more prominent when less responsive types of charcoal were incorporated into the culture medium. Concentration and the mode of sterilization of Pluronic were among the other factors which determined the effect of Pluronic on callogenesis. Charcoal is a critical factor which determines the success in callusing from embryo explants of coconut.

The positive influence of Pluronic on callogenesis may be due to improved permeability of plasma membrane to auxin, the concentration of which is decided by the type of charcoal in the medium.