B36 EMBRYO CULTURE OF GROUNDNUT *(Arachis hypogaea)*

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In vitro culture of embryos is generally used to establish plants from incompatible crosses. Intergeneric and interspecific crosses sometimes are unsuccessful because of the degeneration of hybrid embryos. Absence of normal endosperm often causes the abortion of the hybrid embryo. This is often true with the genus Arachis which includes a number of species and cultivars with different desirable charactors. The scope for improvement of groundnut *(Arachis hypogaea)* using wild types has been limited due to nongermination or poor germination of mature hybrid embryos *in vivo*.

The excised embryos of groundnut (variety MI-1) were inoculated with the modified Eewens medium (10ml) supplemented with sucrose (4%w/v), gibberellic acid (0.1mg/1), kinetin (0-1.5mg/1) and an auxin (0-0.1mg/1) which was NAA or IBA or IAA or 2,4-D. The medium was adjusted to pH 5.7 before it was solidified with agar (1%w/v). The cultures were maintained at 26°C : 1 under fluorescence light (2000 lux).

Elongation and growth of embryo was observed within the first few days of inoculation. The development was better in the presence of kinetin (0.2-0.8mg/1) with 2,4-D (0.02mg/1). Well developed plants could be observed within three weeks. At higher concentrations of Kinetin elongation and growth of the shoot and foot was suppressed and flowering was induced; but seed formation was not observed. The plants formed could be established in the soil.