

Mature zygotic embryos of oil palm (*Elaeis guineensis* Jacq.) variety *Tenera* were cultured on Eeuwens (1976, Y3) either on solid or liquid medium and supplemented with 1 mg/l benzyladenine (BA) and 0.05% activated charcoal (AC). Shoots with well-developed roots were produced on this medium. It was found that liquid medium in combination with AC improved growth of seedlings. Callus could be initiated from embryos but not from basal leaves, young leaves and roots. Cultured embryos produced better callus in liquid medium than on solid medium. However, in prolong culture callus initiated from solid medium grew more vigorously. The induced callus developed into fast growing calli when transferred to modified Y3 medium containing 10 μ M 2,4-dichlorophenoxyacetic acid (2,4-D) and 250 mg/l ascorbic acid. Embryoid differentiation occurred when these fast growing calli were subcultured to modified Y3 medium supplemented with 15 μ M α -naphthaleneacetic acid (NAA) and 2 μ M abscissic acid (ABA) after a period of 3 months in culture. Flow cytometric analysis revealed that there was no genetic variation occurred with any source of explants.