INITIATION OF CALLOGENESIS FROM UNFERTILIZED OVARY EXPLANTS OF OIL PALM (*Elaeis guineensis* Jacq.).

A dissertation submitted to the

Faculty of Animal Science and Export Agriculture

Uva Wellassa University

In partial fulfillment of the requirements for the award of the

Degree of Bachelor of Science in Palm & Latex Technology and Value Addition

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2013

ABSTRACT

Oil palm is an efficient oil producing crop which has high economic value. Due to lack of vegetative propagation method, tissue culture remains the only approach to produce clonal plantlets for oil palm. Unfertilized ovaries obtained from immature female inflorescences of oil palm (*Elaeis guineensis* Jacq.) were tested as a source of explants for callogenesis. The callus induction possibility was examined through maturity stages of inflorescence, different culture media and 2,4-D concentrations. Callus multiplication possibility using the same callusing media was tested. Inflorescence maturity stages of -2, -3 and -4 were cultured on Y3, CRI 72 and OPC3 media supplemented with 2,4-D levels of 160 µM, 180 µM and 200 µM. Development of callus was visible during the seven weeks after culture. Callus proliferation occurred when subcultured in to the same medium. It was found that there was no significant difference and interactive effect among treatments tested. The results achieved suggest that unfertilized ovaries of immature female flowers of oil palm (*Elaeis guineensis* Jacq.) can be used as alternative sources of explants for the induction of callogenesis. Callus tissues of oil palm ovaries can be established and grown in culture. Callus can be subcultured in the same callusing medium and it is possible to multiply the callus.

Key Words: Oil palm, Callogenesis, Ovary explants, *in vitro* culture, Culture medium