

ABSTRACT

The Alternative use of Tomato and Carrot extract as Natural Vitamin in the growth media of Phalaenopsis orchid. Rihan Firdaus. A411062; 19 May 2015. 54 pages. Seed Production Engineering Program. Agricultural production. Polytechnic of Jember. Supervisor Netty Ermawati, SP. Ph.D

The demand of orchid increase in each year but the production development of the orchid in Indonesia is still going leisurely. One of the ways that we can use is increasing in vitro by using seed or plant tissues and gives more nutrition to the media that is sterile. This research was conducted from August 2013 to January 2014 in the Laboratory BIOSAIN Polytechnic of Jember. Research was conducted using completely randomized design (CRD) non factorial. Which comprises of nine treatments and repeated 4 times, the compositions that is used in the media are basic MS + vitamin synthetic, basic MS + tomato extract 25ml/L, basic MS + tomato extract 50ml/L, basic MS + tomato extract 75ml/L, basic MS+ tomato extract 100ml/L, basic MS + carrot extract 25ml/L, basic MS + carrot extract 50ml/L, basic MS + carrot extract 75ml/L, basic MS + carrot extract 100ml/L with the addition of 15% coconut water in all treatments. Based on the results of a further test BNT 5% on 4 parameters was observed that the number of roots, number of leaves, roots and rate of emerging leaves appear to have different results. On the parameter number of leaves and number of roots have significantly different results while the velocity parameters appear roots and emerging leaves showed no significant results (non-significant). Based on observations and discussions that have been obtained regarding the use of carrot and tomato extract as vitamins natural alternative to the culture medium in vitro moon orchid (Phalaenopsis), it can be concluded that the concentration of tomato and carrot extract significantly affect growth orchid plantlets in the parameter number of leaves and number roots but no real effect on the speed parameters appear roots and leaves.

Keywords: Alternative media, phalaenopsis, carrot, tomato extract and invitro