

**Pengaruh Perendaman Eksplan Menggunakan Vitamin C Terhadap
Pertumbuhan Kalus Tebu Varietas Bululawang dan Mojo-0,1.** Pembimbing :
Ir. M. Bintoro, MP dan Alfarina Kardiana Sari, SP

Raihan Zola Rabbani
Study Program of Seed Production Technique
Departement of Agriculture
Program Studi Teknik Produksi Benih
Jurusan Produksi Pertanian

ABSTRACT

Propagation of sugarcane plants by tissue culture methods can produce plants in large quantities with a relatively short time. However, there is a problem at the callus induction stage which can reduce seed productivity, namely browning explants. Browning can be prevented by using vitamin C which can break the oxidation chain so that explant growth will be optimal. The purpose of this study was to determine the effect of soaking of explants using vitamin C on the callus growth of two varieties of sugar cane. This research was conducted at the Tissue Culture Laboratory of PT. Perkebunan Nusantara X, Sugar Research Center, Plosoklaten District, Kediri Regency. The design used was a Factorial Complete Randomized Design (CRD) with each treatment combination repeated three times. The first factor is two cane varieties, namely Bululawang Variety (V1) and Mojo-01 Variety (V2). The second factor is soaking of explants with vitamin C which consists of four levels, namely not soaking with vitamin C or explant soaked in the sterile aquadest (K0), soaking explants with vitamin C 10 mg / L (K1) and soaking explants with vitamin C 15 mg / l (K2). The results showed that the interaction between varieties and concentration of vitamin C had a very significantly on the percentage of browning explant parameters. Callus from Bululawang varieties that were not soaked with vitamin C had a higher percentage of browning explants than those soaked in vitamin C. However, not for the Mojo-01 variety. Both Bululawang and Mojo-01 varieties callus soaking with 15 ml of Vitamin C gives the best effect in terms of suppressing callus browning, which was 6.67%. However, the time parameters appear of callus, callus weight, callus color, and callus texture do not significantly effect.

Keywords : *varieties, vitamin C, and callus*