INDUKSI KALUS DUA VARIETAS PADI GOGO ASAL KABUPATEN SIMALUNGUN MENGGGUNAKAN NAPHTHALENE ACETIC ACID (NAA) DAN BENZYL AMINO PURINE (BAP) MELALUI KULTUR *IN VITRO*

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ABSTRAK

Tujuan dilakukannya penelitian ini adalah untuk mengetahui pengaruh interaksi antara NAA dan BAP terhadap induksi kalus padi Gogo asal Kabupaten Simalungun. Sampel 2 jenis Padi Gogo atau padi darat, padi gogo ini diperoleh dari Desa Sindar Raya, Kabupaten Simalungun, Sumatera Utara. Penelitian ini dilaksanakan pada bulan Juni 2018 – November 2018 di Laboratorium Kultur Jaringan UPT . Benih Induk Hortikultura Gedung Johor Medan beralamat di Jl. Karya Jaya No. 22 Pangkalan Masyur, Kec. Medan Johor, Sumatera Utara. Penelitian ini mengguakan Racangan Acak Lengkap (RAL) factorial. Hasil Penelitian Pengaruh NAA terhadap induksi kalus padi terlihat jelas pada masa pertumbuhan kalus, pada perlakuan 0,5 ppm sampai 1,0 ppm kalus padi lebih cepat tumbuh dari pada pada perlakuan 1,5 ppm. Pengaruh BAP terhadap pertumbuhan kalus terlihat pada diameter kalus, semakin besar pemberian BAP pada eksplan maka diameter kalus semangkin besar, terlihat pada perlakuan NAA1,0 + BAP3,0. Interaksi NAA dan BAP berpengaruh pada diameter kalus pada perlakuan NAA1,0 + BAP3,0 mencapai 11,33 mm, ini dipengaruhi karena peningkatan zat pengatur tumbuh dalam jaringan tanaman dapat menyebabkan tanaman menjadi stress sehingga akan terjadi pembelahan sel secara terus menerus pada jaringan yang dapat menyebabkan ukuran kalus dapat bertambah luas atau besar.

Kata kunci : *kultur jaringan kalus , padi gogo, NAA dan BAP.*

CALLUS INDUCTION OF TWO UPLAND RICE VARIETIES GOGO ORIGIN OF SIMALUNGUN DISTRICT USING NAPHTHALENE ACETIC ACID (NAA) AND BENZYL AMINO PURINE (BAP) THROUGH VITRO IN CULTURE

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ABSTRACT

The purpose of this study was to determine the effect of the interaction between NAA and BAP on the induction of Gogo rice callus from Simalungun District. Samples of 2 types of Gogo Rice or terrestrial rice, upland rice was obtained from Sindar Raya Village, Simalungun District, North Sumatra. This research was conducted in June 2018 - November 2018 at the UPT Network Culture Laboratory. Benih Induk Horticulture Gedung Johor Medan is located at Jl. Karya Jaya No. 22 Pangkalan Masyur, Kec. Medan Johor, North Sumatra. Research Results The effect of NAA on rice callus induction was clearly seen during the callus growth period, in the treatment of 0.5 ppm to 1.0 ppm the rice callus grew faster than the 1.5 ppm treatment. The effect of BAP on callus growth was seen in callus diameter, most of which was given by BAP to explants, so that the callus diameter was even greater, as seen in the treatment of NAA1.0 + BAP3.0. The interaction of NAA and BAP has an effect on callus diameter in the treatment of NAA1.0 + BAP3.0 reaching 11.33 mm, this is influenced because the increase in growth regulating substances in plant tissue can cause plants to become stressed so that there will be continuous cell division in the able tissue cause the size of the callus can be broad or large.

Key words : *callus tissue culture, upland rice, NAA and BAP.*