

ABSTRAK

PENGARUH PENAMBAHAN KOMBINASI EKSTRAK UMBI BAWANG MERAH DAN HORMON NAA DENGAN KONSENTRASI YANG BERBEDA PADA MEDIA KULTUR *IN VITRO* TERHADAP PERTUMBUHAN BIJI ANGGEK *Dendrobium sp*

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Biji anggek merupakan biji yang berukuran sangat kecil diantara biji tanaman pada umumnya, biji anggek tidak memiliki endosperm (cadangan makanan), sehingga perkembangbiakan anggek di alam sulit terjadi. Penanaman secara *in vitro* pada media kultur dengan penambahan hormon yang sesuai untuk pertumbuhan biji anggek. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan kombinasi ekstrak umbi bawang merah dan hormon NAA terhadap pertumbuhan biji anggek *Dendrobium sp*. Penelitian ini dilaksanakan pada bulan Agustus hingga bulan November 2023, bertempat di Laboratorium Bioteknologi Fakultas Pertanian, Universitas Siliwangi. Penelitian ini menggunakan metode eksperimental dengan Rancangan Acak Lengkap (RAL) enam perlakuan dan lima kali ulangan sehingga didapat 30 unit percobaan dan setiap percobaan menggunakan 2 botol kultur. Perlakuan yang diuji yaitu: A=media tanpa perlakuan (kontrol), B=Ekstrak umbi bawang merah 50 g/L + hormon NAA 1,25 ppm, C=Ekstrak umbi bawang merah 100 g/L + hormon NAA 1 ppm, D=Ekstrak umbi bawang merah 150 g/L + hormon NAA 0,75 ppm, E=Ekstrak umbi bawang merah 200 g/L + hormon NAA 0,50 ppm, F=Ekstrak umbi bawang merah 250 g/L + 0,25 ppm. Parameter yang diuji F adalah fase pertumbuhan biji, fase perkembangan embrio, dan persentase *Protocorm like bodiess* (Plb) yang tumbuh. Hasil penelitian menunjukkan bahwa perlakuan penambahan ekstrak umbi bawang merah 50 g/L + hormon NAA 1,25 ppm berpengaruh baik terhadap persentase biji berkecambah, fase perkembangan embrio dan persentase *Protocorm like bodiess* (Plb) yang tumbuh.

Kata kunci: Biji anggek *Dendrobium sp.*, ekstrak umbi bawang merah, hormon NAA, Kultur *in vitro*.

ABSTRACT

THE EFFECT OF ADDITIONING A COMBINATION OF SHALLOT EXTRACT AND NAA HORMONES WITH DIFFERENT CONCENTRATIONS TO IN VITRO CULTURE MEDIA ON THE GOWTH OF *Dendrobium* sp SEEDS

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Orchid seeds are seeds that are very small compared to plant seeds in general, orchid seeds do not have endosperm (food reserves). So orchid breeding in nature is difficult. For this reason, it is necessary to plant in vitro in culture media with the addition of hormones suitable for the growth of orchid seeds. This research aims to determine the effect of the combination of adding shallot bulb extract and the NAA hormone on the growth of *Dendrobium* sp orchid seeds. This research was carried out from August to November 2023, at the Biotechnology Laboratory, Faculty of Agriculture, Siliwangi University. This research method used an experimental method with Completely Randomized Design (CRD) with six treatments and five replications so that 30 experimental units are obtained and each experiment unit used 2 culture bottles. The treatments given were: A= without treatment (control), B=Shallot extract 50 g/L + NAA hormone 1.25 ppm, C=Shallot extract 100 g/L + NAA hormone 1 ppm, D= Shallot extract 150 g/L + NAA hormone 0.75 ppm, E=Shallot extract 200 g/L + NAA hormone 0.50 ppm, F=Shallot extract 250 g/L + 0.25 ppm. The parameters tested F were seed growth phase, embryo development phase, and percentage of gowing Protocorm like bodies (Plb). The results of the research showed that the treatment with the addition of 50 g/L shallot extract + 1.25 ppm NAA hormone had a good effect on percentage of germinated seeds, embryo development phase, and percentage of gowing Protocorm like bodies (Plb).

Keywords : Orchid seed, Shallot extract, NAA hormone, Culture In vitro.