

ABSTRAK

Cabai rawit (*Capsicum frutescens* L) merupakan tanaman yang memiliki nilai ekonomis dan peminat yang tinggi. Tingginya kebutuhan cabai rawit tidak sejalan dengan produksi yang dihasilkan saat ini. Produksi rendah dapat disebabkan karena kualitas dan kondisi benih yang menyebabkan benih tidak berkecambah dan tumbuh tidak seragam, budidaya kurang optimal, dan lamanya pertumbuhan tanaman. Tujuan penelitian ini untuk mengetahui konsentrasi giberelin (GA3) dan varietas terbaik serta respon konsentrasi terbaik bagi perkecambahan dan pertumbuhan cabai rawit. Penelitian dilakukan pada bulan Februari – Mei 2024 di Kebun Agroekoteknologi, Ruang Laboratorium Biologi, dan Laboratorium Bioteknologi Program Studi Agroekoteknologi, Universitas Trunojoyo Madura. Penelitian menggunakan Rancangan Acak Kelompok dengan faktor konsentrasi giberelin G0 (0 tetes), G1 (5 tetes), G2 (7 tetes), G3 (9 tetes), dan faktor varietas V1 (Bhaskara), V2 (Master), V3 (Viral). Parameter yang diamati yaitu daya dan laju perkecambahan, indeks vigor, keserempakan tumbuh, panjang radikula (calon akar), tinggi plumula (calon batang), tinggi tanaman, jumlah daun, bobot basah, dan bobot kering. Data dianalisis menggunakan ANNOVA taraf 5% dan apabila berpengaruh nyata dilakukan uji lanjut DMRT taraf 5%. Hasil penelitian menunjukkan G0 dan V1 memiliki respon terbaik bagi perkecambahan dan pertumbuhan cabai rawit. G0 memiliki pengaruh nyata terhadap panjang radikula dan tinggi plumula umur 7 HSS serta jumlah daun umur 14 dan 21 HST dengan hasil rata-rata tertinggi pada parameter daya perkecambahan umur 7 dan 14 HSS, indeks vigor, keserempakan tumbuh, panjang radikula umur 7 dan 14 HSS, tinggi plumula umur 7 HSS, tinggi tanaman umur 21 HST, serta jumlah daun umur 14 hingga 28 HST.

Kata Kunci: benih cabai rawit, giberelin (GA3), perkecambahan, pertumbuhan, varietas

ABSTRACT

Cayenne pepper (*Capsicum frutescens* L) is a plant that has economic value and high demand. The high demand for cayenne pepper is not in line with the current production. Low production can be caused by the quality and condition of seeds that cause seeds not to germinate and grow non-uniformly, less than optimal cultivation, and the length of plant growth. The purpose of this study was to determine the concentration of gibberellin (GA3) and the best varieties and the best concentration response to the germination and growth of cayenne pepper. The research was conducted from February to May 2024 in Agroecotechnology Garden, Biology Laboratory Room, and Biotechnology Laboratory of Agroecotechnology Study Program, Trunojoyo University Madura. The research used a Randomized Group Design with gibberellin concentration factors G0 (0 drops), G1 (5 drops), G2 (7 drops), G3 (9 drops), and variety factors V1 (Bhaskara), V2 (Master), V3 (Viral). The parameters observed were germination rate, vigor index, growth uniformity, radicle length (root candidates), plumula height (stem candidates), plant height, number of leaves, wet weight, and dry weight. Data were analyzed using ANNOVA at the 5% level and if there was a significant effect, DMRT further test at the 5% level was conducted. The results showed that G0 and V1 had the best response for the germination and growth of cayenne pepper. G0 has a real influence on radicle length and plumula height at 7 HSS and the number of leaves at 14 and 21 HST with the highest average results in the parameters of germination power at 7 and 14 HSS, vigor index, uniformity of growth, radicle length at 7 and 14 HSS, plumula height at 7 HSS, plant height at 21 HST, and the number of leaves at 14 to 28 HST.

Keywords: cayenne pepper seeds, germination, gibberellin (GA3), growth, varieties