

RINGKASAN

Padi merupakan salah satu tanaman pangan utama untuk memenuhi kebutuhan pangan masyarakat Indonesia. Pada pertengahan 2022, jumlah penduduk di Indonesia sebanyak 275,77 juta jiwa. Jumlah penduduk di Indonesia yang besar mengakibatkan kebutuhan pangan juga semakin besar. Upaya produktivitas padi dapat ditingkatkan dengan menggunakan varietas unggul dan pemberian zat pengatur tumbuh (ZPT). Penggunaan ZPT jenis giberelat atau disebut Gibberellic Acid (GA3) dapat meningkatkan daya berkecambah benih padi. Penelitian ini bertujuan untuk mengetahui: (1) mengetahui pengaruh aplikasi ZPT giberelat (GA3) dengan berbagai konsentrasi terhadap pertumbuhan tanaman padi, (2) mengetahui konsentrasi giberelat (GA3) yang efektif untuk meningkatkan hasil padi, (3) mengetahui pertumbuhan dan hasil produksi padi.

Penelitian dilaksanakan di lahan sawah Desa Datar, Kecamatan Sumbang, Kabupaten Banyumas dengan luas lahan 500 m². Kegiatan penelitian dilaksanakan mulai bulan Februari sampai Mei tahun 2024. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) terdiri dari satu faktor yaitu konsentrasi GA3 dengan lima perlakuan konsentrasi yang berbeda, masing-masing terdiri dari 0,500 ppm (A), 0,375 ppm (B), 0,250 ppm (C), 0,125 ppm (D), dan 0 ppm (E) yang diulang sebanyak lima kali. Data yang diperoleh dari hasil penelitian dianalisis menggunakan analisis ragam, dilanjutkan dengan uji DMRT pada taraf kesalahan 5%.

Hasil penelitian menunjukkan bahwa aplikasi GA3 sangat nyata berpengaruh terhadap tinggi tanaman, jumlah anakan tanaman, jumlah anakan produktif, jumlah malai hasil per rumpun dan hasil per petak serta berpengaruh nyata terhadap jumlah daun, jumlah gabah per rumpun, bobot 1000 bulir. Konsentrasi yang paling baik adalah 0,375 ppm.

SUMMARY

Rice is one of the main food crops to meet the food needs of the Indonesian people. By mid-2022, the population in Indonesia will be 275.77 million people. The large population in Indonesia means that food needs are also increasing. Rice productivity efforts can be increased by using superior varieties and providing growth regulators (ZPT). The use of gibberellate ZPT or called Gibberellic Acid (GA3) can increase the germination capacity of rice seeds. This research aims to determine: (1) determine the effect of the application of ZPT gibberalate (GA3) with various concentrations on the growth of rice plants, (2) determine the effective concentration of gibberalate (GA3) for increasing rice yields, (3) determine the growth and yield of rice production .

The research was carried out in the rice fields of Datar Village, Sumbang District, Banyumas Regency with a land area of 500 m². Research activities were carried out from February to May 2024. This research used a Randomized Block Design (RAK) consisting of one factor, namely GA3 concentration with five different concentration treatments, each consisting of 0.500 ppm (A), 0.375 ppm (B) , 0.250 ppm (C), 0.125 ppm (D), and 0 ppm (E) which were repeated five times. Data obtained from the research results were analyzed using analysis of variance, followed by the DMRT test at an error level of 5%. The variables observed in this study consisted of plant height, number of leaves, number of plant tillers, number of productive tillers, number of panicles, panicle length, number of grains per panicle, weight of 1000 grains, yield per hill, yield per plot, yield per hectare, and leaf biomass.

The results of the research showed that the application of GA3 had a very significant effect on plant height, number of plant tillers, number of productive tillers, number of panicles per hill and yield per plot and had a significant effect on the number of leaves, number of grains per hill, weight of 1000 grains. The best concentration is. The results of the research show that the application of GA3 has a very significant effect on plant height, number of plant tillers, number of productive tillers, number of panicles per cluster and yield per plot and has a significant effect on the number of leaves, number of grains per cluster, weight of 1000 grains.. The best concentration is 0.375 ppm.