

INTISARI

Rosella (*Hibiscus sabdariffa* L.) berpotensi sebagai sumber vitamin C alami, tetapi produktivitas dan kualitas bunga rosella dipengaruhi oleh ketersediaan hara, terutama fosfor, yang umumnya memiliki mobilitas rendah di dalam tanah. Aplikasi jamur mikoriza arbuskula (JMA) merupakan salah satu strategi budidaya ramah lingkungan dan berkelanjutan untuk meningkatkan efisiensi penyerapan hara sehingga diharapkan mampu meningkatkan kandungan vitamin C pada bunga rosella. Penelitian ini dilaksanakan di Rumah Kaca Fakultas Pertanian UGM, Kebun Tridharma Banguntapan Fakultas Pertanian UGM, dan Laboratorium Manajemen dan Produksi Tanaman Fakultas Pertanian UGM, pada Desember 2025-Juni 2026. Rancangan percobaan yang digunakan adalah rancangan petak terbagi. Faktor utama dengan mikoriza dan tanpa, faktor anak petak yaitu aksesori bunga rosella. Analisis sidik ragam ANOVA dan uji lanjut HSD Tukey. Hasil penelitian menunjukkan bahwa inokulasi JMA meningkatkan kolonisasi pada akar rosella ditandai dengan diduplikasinya struktur arbuskula dan vesikula, serta berpengaruh nyata terhadap peningkatan kandungan vitamin C pada ketiga aksesori bunga rosella, didukung oleh perbaikan pertumbuhan dan komponen hasil tanaman. Terdapat interaksi nyata antara mikoriza dengan aksesori terhadap kandungan vitamin C, dengan peningkatan pada aksesori merah dan varigata sebesar 30%, diikuti aksesori merah ungu sebesar 6%.

Kata kunci: jamur mikoriza arbuskula, rosella, vitamin C

ABSTRACT

Rosella (*Hibiscus sabdariffa* L.) have the potential to serve as a natural source of vitamin C, but their productivity and quality are influenced by nutrient availability, particularly phosphorus, which generally has low mobility in the soil. The application of arbuscular mycorrhizal fungi (AMF) is an environmentally friendly and sustainable cultivation strategy to improve nutrient uptake efficiency, which is expected to increase the vitamin C content in rosella flowers. This study was conducted at the UGM Faculty of Agriculture Greenhouse, the UGM Faculty of Agriculture Tridharma Banguntapan research field, and the UGM Faculty of Agriculture Plant Management and Production Laboratory, from December 2025 to June 2026. A split-plot design was used, with the main factor being the presence or absence of mycorrhizae and the subplot factor being rosella flower accessions. Analysis of variance (ANOVA) and Tukey's HSD post-hoc test were performed. The results showed that JMA inoculation increased colonization of rosella roots, as indicated by the presence of arbuscules and vesicles, and had a significant effect on increasing vitamin C content in all three rosella flower accessions, supported by improvements in plant growth and yield components. There was a significant interaction between mycorrhiza and accession regarding vitamin C content, with a 30% increase in the red and variegated accessions, followed by a 6% increase in the red-purple accession.

Keywords: arbuscular mycorrhizal fungi, rosella, vitamin C