

ABSTRACT

THE EFFECT OF GROWING MEDIA COMPOSITION ON THE GROWTH AND PRODUCTION OF BIRD' S EYE CHILI PLANTS

*Bird' s eye chili (*Capsicum frutescens* L.) is an important horticultural commodity with high demand in Indonesia. However, its productivity is often constrained by limited land availability and suboptimal growing media. This study aims to determine the effect of growing media composition on the growth and production of bird' s eye chili and to identify the best composition. The research was conducted at the Agricultural Mechanization Workshop, Artha Wacana Christian University, Kupang, from May to September 2025, using a completely randomized design (CRD) with five growing media treatments (ratios of soil, sand, and burned rice husk) and five replications, resulting in 25 experimental units. Observed variables included plant height, number of leaves, number of fruits, and fruit weight. Data were analyzed using ANOVA followed by Duncan' s test at 5%. The results showed that the composition of the growing media had a significant effect on all growth and production parameters. The best treatment was the composition of 60% soil, 30% sand, and 10% burned rice husk, which produced the highest number of fruits (34 fruits) and the greatest fruit weight (62.20 g). Conversely, the composition of 40% soil, 10% sand, and 50% burned rice husk resulted in the lowest growth and production. These findings indicate that nutrient availability and the physical properties of the media greatly influence both vegetative and generative growth of bird' s eye chili. Therefore, the use of 60% soil, 30% sand, and 10% burned rice husk is recommended to increase chili production in limited spaces using polybags. This study provides practical insights for farmers and serves as a reference for future research on optimal growing media formulations.*

Keywords: bird' s eye chili, growing media, polybag, growth, production

ABSTRAK

PENGARUH KOMPOSISI MEDIA TANAM TERHADAP PERTUMBUHAN DAN PRODUKSI TANAMAN CABAI RAWIT

Lende. P. A. *)

Makaborang. M. **)

Lano. M. L. **)

Cabai rawit (*Capsicum Frutescens* L) merupakan komoditas horticultura penting dengan permintaan tinggi di Indonesia. Namun, produktivitasnya sering terkendala oleh keterbatasan lahan dan kurang optimalnya media tanam. Penelitian ini bertujuan untuk mengetahui pengaruh komposisi media tanam terhadap pertumbuhan dan produksi cabai rawit serta menentukan komposisi terbaik. Penelitian ini dilaksanakan di Bengkel Mekanisasi pertanian Universitas Kristen Artha Wacana Kupang selama Mei sampai September 2025 menggunakan rancangan acak lengkap (RAL) dengan lima perlakuan media tanam (perbandingan tanah, pasir, sekam padi bakar) dan lima ulangan, sehingga terdapat 25 percobaan. Variabel yang diamati meliputi tinggi tanaman, jumlah daun, jumlah buah, dan berat buah. Data dianalisis dengan ANOVA dan uji lanjut Duncan 5%. Hasil penelitian menunjukkan bahwa komposisi media tanam berpengaruh nyata terhadap semua parameter pertumbuhan dan produksi. Perlakuan terbaik pada komposisi tanah 60%, pasir 30%, sekam padi 10% yang menghasilkan jumlah buah tertinggi (34 buah) dan berat buah terbesar (62,20 g). sebaliknya, komposisi tanah 40% persen, pasir 10%, sekam padi 50% menghasilkan pertumbuhan dan produksi terendah. Hal ini menunjukkan bahwa ketersediaan unsur hara dan sifat fisik media sangat mempengaruhi pertumbuhan vegetatif maupun generatif cabai rawit. Dengan demikian, penggunaan media tanam tanah 60%, pasir 30%, sekam padi 10% direkomendasikan untuk meningkatkan produksi cabai rawit di lahan terbatas menggunakan polybag. Penelitian ini menjadi acuan praktis bagi petani maupun penelitian lanjutan terkait formulasi media tanam optimal.

Kata kunci: cabai rawit, media tanam, polybag, pertumbuhan, produksi

*) Peneliti

**) Pembimbing I

**) Pembimbing II