ABSTRAK

OPTIMALISASI PERTUMBUHAN DAN HASIL PAKCOY (*Brassica rapa* L.) BERDASARKAN UKURAN *POLYBAG* DAN JUMLAH TANAMAN DALAM *POLYBAG* SERTA JENIS BAHAN ORGANIK

Oleh

Silviani

Tingginya kebutuhan pangan di wilayah perkotaan serta keterbatasan lahan menjadi tantangan dalam pengembangan budidaya tanaman hortikultura. Urban farming merupakan salah satu upaya untuk melakukan budidaya dilahan sempit perkotaan, keterbatasan lahan dapat diatasi dengan penggunaan *polybag* sebagai wadah tanam dengan memperhatikan jumlah tanaman yang optimal serta penggunaan jenis bahan organik yang membantu memenuhi kebutuhan unsur hara tanaman. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan ukuran *polybag*, jumlah tanaman, dan jenis bahan organik terhadap pertumbuhan dan hasil tanaman pakcoy (*Brassica rapa* L.). Penelitian dilaksanakan pada Oktober hingga Desember 2024 di Lahan Edufarmers, Kelurahan Mlese, Kecamatan Ceper, Kabupaten Klaten, Jawa Tengah. Perlakuan disusun dengan Rancangan Split-Split Plot dengan 3 ulangan. Perlakuan terdiri atas ukuran *polybag* (20×20 cm, 25×25 cm, dan 30×30 cm), jumlah tanaman per *polybag* (1, 3, dan 5 tanaman), serta jenis bahan organik (pupuk kandang kambing dan pupuk kandang sapi). Data dianalisis menggunakan analisis ragam (ANOVA) dengan uji Beda Nyata Jujur (BNJ) pada taraf 5%. Hasil penelitian menunjukkan bahwa penggunaan ukuran *polybag* 25x25 cm dengan satu tanaman memberikan hasil signifikan per satu tanaman, namun pada hasil per *polybag* ukuran *polybag* 25x25 dengan jumlah tanaman tiga mampu menghasilkan hasil yang cukup baik sehingga dapat menjadi upaya optimalsisasi hasil pakcoy di lahan sempit perkotaan.

Kata kunci: *pakcoy, ukuran polybag, jumlah tanaman, pupuk kandang, pertanian perkotaan.*

ABSTRACT

OPTIMIZATION OF GROWTH AND YIELD OF PAKCOY MUSTARD (Brassica rapa L.) BASED ON *POLYBAG* SIZE AND NUMBER OF PLANTS IN *POLYBAG* AND TYPE OF ORGANIC MATERIAL

By

Silviani

The increasing demand for food in urban areas, along with limited land availability, presents challenges in the development of horticultural crop cultivation. Urban farming is one of the efforts to cultivate crops in limited urban spaces. These land limitations can be addressed through the use of *polybag*s as planting containers, with attention to the optimal number of plants and the use of organic materials that help meet the nutritional needs of crops. This study aimed to determine the effects of *polybag* size, plant density, and types of organic material on the growth and yield of pakcoy mustard (*Brassica rapa* L.). The research was conducted from October to December 2024 at the Edufarmers Research Field in Mlese Village, Ceper Subdistrict, Klaten Regency, Central Java. Treatments were arranged in a Split-Split Plot Design with three replications. The treatments consisted of three *polybag* sizes (20×20 cm, 25×25 cm, and 30×30 cm), three planting densities (1, 3, and 5 plants per *polybag*), and two types of organic materials (goat manure and cow manure). Data were analyzed using analysis of variance (ANOVA) followed by Tukey's Honest Significant Difference (HSD) test. The results showed that the use of 25×25 cm *polybag*s with one plant produced the highest values per individual plant, while *polybag*s of the same size with three plants yielded a relatively high total yield per *polybag*. These findings indicate that optimizing *polybag* size, plant density, and organic fertilizer use can enhance the efficiency and productivity of pakcoy cultivation in limited urban spaces.

Key words: pakcoy mustard, *polybag* size, plant density, manure, urban farming.