ABSTRACT

RESPONSE OF VEGETATIVE GROWTH OF WATERMELON (Citrullus lanatus) TO APPLICATION OF PELLET COMPOST FERTILIZER

By

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Watermelon is a fruit commodity that has prospects for development. Watermelon plants have several varieties such as red or yellow watermelons and seed watermelons or seedless watermelons. Fulfillment of nutrients in plants can utilize empty palm oil bunches used for straw mushrooms which have been processed into compost pellets. This study aims to determine the vegetative growth response of watermelon plants (Citrullus vulgaris schard) due to the application of brittle, medium and strong compost pellets enriched with NPK fertilizer. This study used a completely randomized design (CRD) with 6 treatments, namely the application of a mixture of pelleted compost enriched with brittle, medium, and strong NPK (P1), pelleted compost enriched with brittle NPK (P2), pelleted compost enriched with moderate NPK (P3), pellet compost enriched with strong NPK (P4), a mixture of treatments P1 and 10% NPK (P1N), a mixture of treatments P1, 10% NPK and crumb compost (P1KN) and repeated 3 times for each treatment so that there were 18

experimental units . Observation parameters consisted of plant tendril length (cm), number of leaves (strands), stem diameter (cm), leaf length (cm), leaf width (cm), and water consumption (ml). The results of this study are not significantly different from all observation parameters. Based on the growth of watermelon plants per treatment, the best results were obtained in the P4 treatment, namely the length of the plant tendrils was 123.6 cm, the number of leaves was 31.6 strands, the length of the leaves was 9.73 cm and the water consumption was 50,650 ml. While the highest leaf width was found in P1 of 8.9 cm and the highest stem diameter was in P1 and P1KN of 0.3 cm. Based on the results of this study, the application of NPK-enriched strong pelleted compost had better production value than the application of NPK-enriched brittle and medium pelleted compost.

Keywords: watermelon, pellets, NPK.

ABSTRAK

RESPON PERTUMBUHAN VEGETATIF TANAMAN SEMANGKA (*Citrullus lanatus*) TERHADAP PEMBERIAN PUPUK KOMPOS PELET

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Semangka merupakan salah satu komoditas buah yang mempunyai prospek untuk dikembangkan. Tanaman semangka memiliki beberapa kenanekaragama seperti semangka merah atau kuning dan semangka berbiji atau semangka non biji. Pemenuhan unsur hara pada tanaman dapat memanfaatkan tandan kosong kelapa sawit bekas jamur merang yang sudah diolah menjadi pupuk kompos pellet. Penelitian in bertujuan untuk mengetahui respon pertumbuhan vegetatif tanaman semangka (*Citrullus vulgaris* schard) akibat pemberian pupuk kompos pelet rapuh, sedang dan kuat yang diperkaya dengan pupuk NPK. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 6 perlakuan yaitu pemberian campuran pupuk kompos pellet yang diperkaya NPK rapuh, sedang, dan kuat (P1), pupuk kompos pellet yang diperkaya NPK rapuh (P2), pupuk kompos pellet yang diperkaya NPK sedang (P3), pupuk kompos pellet yang diperkaya NPK kuat (P4), campuran perlakuan P1 dan NPK 10% (P1N), campuran perlakuan P1, NPK 10% dan kompos remah (P1KN) dan diulang sebanyak 3 kali setiap perlakuan sehingga terdapat 18 unit percobaan. Parameter pengamatan terdiri dari panjang sulur tanaman (cm), jumlah daun (helai), diameter batang (cm), panjang daun (cm), lebar daun (cm), dan konsumsi air (ml). Hasil penelitian ini yaitu menunjukkan tidak berbeda nyata terhadap seluruh parameter pengamatan. Berdasarkan pertumbuhan tanaman semangka per perlakuan diperoleh hasil terbaik terletak pada perlakuan P4 yaitu panjang sulur tanaman sebesar 123,6 cm, jumlah daun sebanyak 31,6 helai, panjang

daun sebesar 9,73cm dan konsumsi air sebesar 50.650 ml. Sedangkan lebar daun tertinggi terdapat pada P1 sebesar 8,9 cm dan diameter batang tertinggi terdapat pada P1 dan P1KN sebesar 0,3 cm. Berdasarkan hasil penelitian ini pemberian pupuk kompos pellet kuat yang diperkaya NPK memiliki nilai produksi yang lebih baik dibandingkan pemberian pupuk kompos pellet rapuh dan sedang yang diperkaya NPK.

Kata kunci: semangka, pelet, NPK.