

## RINGKASAN

*Baby kailan* (*Brassica oleraceae* var *achepala*) adalah tanaman asli daratan Cina, di Indonesia tanaman ini disebut juga Kale Cina. Tanaman ini termasuk kedalam jenis sayuran yang mempunyai prospek pemasaran yang cukup baik dan digemari oleh masyarakat. Untuk memenuhi kebutuhan pasar, maka perlu dilakukan usaha untuk membudidayakan *baby kailan* secara intensif dan komersial, sehingga kualitas dan kuantitas produksinya dapat memenuhi standar permintaan konsumen (pasar). Salah satu cara untuk meningkatkannya dapat dengan menggunakan pupuk organik cair berbasis azolla. Penelitian ini bertujuan untuk (1) mengetahui pengaruh konsentrasi POC berbasis *Azolla* sp. terhadap pertumbuhan dan hasil tanaman *baby kailan* dan, (2) mengetahui interval waktu pemberian POC berbasis *Azolla* sp. terhadap pertumbuhan dan hasil tanaman *baby kailan*. (3) mengetahui pengaruh interaksi antara konsentrasi dan interval waktu pemberian POC *Azolla* terhadap pertumbuhan dan hasil tanaman *baby kailan*.

Penelitian dilaksanakan pada bulan November sampai Desember 2018 di *screen house* Fakultas Pertanian, Universitas Jenderal Soedirman. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok Lengkap faktorial dengan 2 faktor dan 3 kali ulangan. Faktor pertama adalah konsentrasi pemupukan, yaitu D0= 0, D1= 50 ml/L, D2= 100 ml/L, D3=150 ml/L, D4=200 ml/L Faktor kedua adalah variasi Interval waktu pemberian POC *Azolla*, yaitu W1 = 7 hari sekali, W2 = 9 hari sekali dan W3 = 11 hari sekali masing-masing kombinasi perlakuan diulang sebanyak 3 kali. Variabel yang diamati adalah tinggi tanaman (cm), jumlah daun (helai), luas daun (cm<sup>2</sup>), bobot tajuk segar (g), bobot tanaman segar (g), bobot tanaman kering (g). Data yang diperoleh dianalisis dengan analisis varian. Apabila perlakuan berbeda nyata diuji lanjut dengan menggunakan DMRT pada taraf 5%.

Hasil penelitian menunjukkan bahwa dengan pemberian POC *Azolla* pada konsentrasi 50ml/L, 100ml/L, 150ml/L dan 200ml/L dengan waktu pemupukan 7 hari sekali, 9 hari sekali dan 11 hari sekali belum mampu meningkatkan pertumbuhan dan hasil tanaman *baby kailan*. Begitu pula dengan interaksi antara konsentrasi dan interval waktu pemberian POC *Azolla* tidak saling mempengaruhi terhadap pertumbuhan dan hasil tanaman *baby kailan*.

## SUMMARY

*Baby kailan (Brassica oleraceae var achepala) is a plant native to China, in Indonesia this plant is also called Kale China. This plant is included in the type of vegetables that have a good marketing prospects and are popular with the community. To meet market needs, it is necessary to make an efforts to cultivate baby kailan intensively and commercially, so that the quality and quantity of the production can meet consumer (market) standards. Another way to increase it, can be done by using azolla liquid organic fertilizer. This research aims to (1) determine the effect of Azolla liquid organic fertilizer concentration on the growth and yield of baby kailan, (2) determine the effect of Azolla liquid organic fertilizer application interval on the growth and yield of baby kailan, (3) determine the effect of interaction between combination of Azolla liquid organic fertilizer concentration and application interval on the growth and yield of baby kailan.*

*The research was conducted at screen house of the Agriculture Faculty, Jenderal Soedirman University from November 2018 until December 2018. The experiment design used was Completely Randomized Block Design with treatments of 2 factors and 3 replications. The first factor was the of Azolla liquid organic fertilizer concentration which consisted of 5 levels, were 0 ml/L (D0), 50 ml/L (D1), 100 ml/L (D2), 150 ml/L (D3) and 200ml/L (D4). Second factor was the application interval of Azolla liquid organic fertilizer which consisted of 3 levels, are 7 days (W1) 9 days (W2), 11 days (W3) once each treatment combination was repeated thrice. Variables observed included the plant height (cm), the number of leaves (sheet), the width of leaves (cm<sup>2</sup>), the weight of fresh canopy (g), the weight of fresh plant (g), the weight of dry plant (g). The data obtained were analyzed by analysis of variance. f the treatment differs significantly , it will require further testing by means of DMRT at the level of 5%.*

*The result showed that Azolla liquid organic fertilizer with a concentration of 50 ml/L (D1), 100 ml/L (D2), 150 ml/L (D3) and 200ml/L (D4) with application interval 7 days, 9 days and 11 days was not able to increase the growth and yield of baby kailan. Similarly, the interaction between the concentration and application interval of Azolla liquid organic fertilizer was not affect each other on the growth and yield of baby kailan plants.*