

**PENGARUH PUPUK ORGANIK CAIR *Azolla pinnata*
TERHADAP PERTUMBUHAN BIBIT
KAKAO (*Theobroma cacao* L.)**



**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
DHARMASRAYA
2021**

PENGARUH PUPUK ORGANIK CAIR *Azolla pinnata* TERHADAP PERTUMBUHAN BIBIT KAKAO (*Theobroma cacao* L.)

ABSTRAK

Azolla pinnata merupakan jenis tumbuhan paku air yang hidup mengapung di lingkungan perairan yang mampu menambat Nitrogen (N) dari udara sebagai sumber hara yang dapat mendukung pertumbuhan bibit kakao. Penelitian ini telah dilakukan di kebun percobaan Kampus III Unand Dharmasraya, dari bulan Maret sampai Juli 2020. Penelitian ini bertujuan untuk mempelajari pengaruh pemberian pupuk organik cair (POC) *A. pinnata* terhadap pertumbuhan tanaman kakao di pembibitan dan mendapatkan dosis terbaik pupuk organik cair *A. pinnata* untuk pertumbuhan tanaman kakao di pembibitan. Penelitian ini dirancang menurut Rancangan Acak Lengkap (RAL) yang terdiri dari 5 perlakuan dan 5 ulangan sehingga diperoleh 25 satuan percobaan, yang pada satu satuan percobaan terdiri dari dua tanaman sehingga totalnya menjadi 50 tanaman. Perlakuan yang digunakan yaitu POC *A. pinnata* dengan takaran 0, 100, 200, 300, dan 400 ml/polybag Variabel yang diamati adalah tinggi tanaman, panjang daun, lebar daun, jumlah daun, diameter batang, bobot segar akar, bobot kering akar, panjang akar, dan rasio tajuk akar bibit tanaman kakao. Hasil penelitian menunjukkan bahwa pemberian pupuk organik cair *A. pinnata* memberikan pengaruh yang baik terhadap variable pertumbuhan bibit kakao terutama pada variabel tinggi tanaman dengan dosis terbaik yaitu 200 ml/polybag.

Kata kunci : klon BL-50, fiksasi nitrogen, paku air



THE EFFECT OF LIQUID ORGANIC FERTILIZER *Azolla pinnata* ON THE GROWTH OF CACAO (*Theobroma cacao* L.) SEEDLINGS

ABSTRACT

Azolla pinnata is a type of water fern that lives floating in the aquatic environment that is able to fix Nitrogen (N) from the air as a source of nutrients that can support the growth of cacao seedlings. This research was conducted in the experimental field of the 3rd Campus of Unand in Dharmasraya, from March until July 2020. The objectives of this research were to study the effect of applying liquid organic fertilizer (LOF) *A. pinnata* on the growth of cacao in nurseries and to obtain the best dose of it to support growth of cacao seedlings. The present research was designed according to a completely randomized design (CRD) consisted of 5 treatments and 5 replications in order to obtain 25 experimental units and each of it consisted of two plants so that the total was 50 plants. The treatments used were LOF *A. pinnata* with doses of 0, 100, 200, 300, and 400 ml/polybag. The observed variables were plant height, leaf length, leaf width, number of leaves, stem diameter, root fresh weight, root dry weight, root length, and shoot root ratio of cacao seedlings. The results showed that the application of liquid organic fertilizer *A. pinnata* gave a good effect on the growth variables of cacao seedlings, especially on the plant height variable with the best dose of 200 ml/polybag.

Keywords: BL-50 clone, nitrogen fixation, aquatic fern

