

INTISARI

Perombakan cadangan makanan karbohidrat, protein dan lemak terjadi pada proses perkecambahan benih untuk menghasilkan energi yang akan digunakan untuk berkecambah dan pertumbuhan kecambah. Penelitian ini bertujuan untuk mengetahui dinamika kandungan lemak, protein dan karbohidrat pada kotiledon klon kakao Scavina 06, RCC 70, RCC 71 dan KKM 22 selama perkecambahan. Penelitian dilaksanakan pada bulan Januari-Juni 2017 di Rumah Kaca, Fakultas pertanian. Selanjutnya, di Laboratorium Ilmu Tanaman Fakultas Pertanian dan analisis kimia dilakukan di Laboratorium pangan dan gizi di Fakultas Teknologi Pertanian UGM. Penelitian disusun dalam Rancangan Acak Lengkap faktor tunggal. Perlakuan yang diuji adalah 4 klon yaitu klon yang menggambarkan ukuran benih dengan berat biji <1 g (Scavina 06) dan berat biji >1 g (KKM 22, RCC 70 dan RCC 71) yang di ulang 4 kali. Pengamatan dilakukan terhadap variabel cadangan makanan pada fase kecambah dan pertumbuhan kecambah. Hasil penelitian menunjukkan bahwa selama perkecambahan terjadi kenaikan kadar air kotiledon dari fase pancing sampai keluar daun dan menurun lagi pada fase lepasnya kotiledon. Kadar air tertinggi pada fase keluarnya daun yaitu 69,42%. Kadar abu, protein terlarut dan protein total kotiledon selalu berubah-ubah selama fase pancing sampai keluar daun dan meningkat lagi pada fase lepasnya kotiledon, kadar lemak mengalami penurunan dari fase pancing sampai lepasnya kotiledon. Kadar karbohidrat mengalami peningkatan dari fase pancing sampai lepasnya kotiledon

Kata kunci : Kakao, karbohidrat, lemak, perkecambahan, protein,

ABSTRACT

Degradation of carbohydrate, protein and lipid food reserves occurs in the seed germination process to produce energy for germination and further growing. This study aimed to determine the dynamics content of lipid, protein and carbohydrates in cotyledon of seed clone i.e. Scavina 06, RCC 70, RCC 71 and KKM 22 during germination. The research was conducted in January-June 2017 in the Greenhouse, faculty of Agriculture. then continued on food and nutrition laboratory Faculty of Agricultural Technology UGM. The experiment used a single factor completely randomized design. The treatments were 4 clones depicting the seed size of seed weight <1 g (Scavina 06) and seed weight >1 g (KKM 22, RCC 70 and RCC 71) with 4 replications. Observations were made on food reserve variables in the germination phase and further growing. The results this experiment showed that during germination, there was an increase of water content in cotyledon from the bend phase to the leaf emergence and decrease in the phase of fall of cotyledon. The highest water content was observed in the leaf emergence phase as high as 69.42%. The content of ash content, soluble protein and total protein in cotyledon fluctuated during the bend phase until the leaf emergence and increased in the phase of fall of cotyledon, while the lipid content decreased in the phase of fall of cotyledon. Carbohydrate content increased from bend phase until fall of cotyledon. However, seed size did not significantly affect the content of the stored material in the cotyledons.

Keyword: cocoa, carbohydrate, lipid, germination, protein,