Pemecahan dormansi benih kelapa sawit dengan metode dry heat treatment dan pemberian giberelin

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Abstrak

Oil palm is a plant that has a long seed dormancy period. The existence of barrier on the seed coat causes disturbance on imbibition so the process of germination of oil palm seed is hampered. This study aimed to determine the effect of interaction between the heat treatment by dry-heat treatment method and the submersion
of growth regulator gibberellin on oil palm dormancy breaking. The experiment was conducted using a factorial
randomized block design with 2 factors, i.e. 3 levels of dry-heat treatment duration (40 days, 50 days, 60 days)
and 3 levels of gibberellin concentration (0 ppm, 100 ppm, 200 ppm) and repeated 3 times. The result showed that
no interaction between the duration of dry heat treatment and concentration of gibberellin on breaking the oil
palm dormancy. Treatment of dry heat treatment of 50 and 60 days had a good effect on percentage of germination,
vigor index, radicle length and plumule length. Concentration of 100 and 200 ppm gibberellin had a good effect
on percentage of germination, vigor index, radicle length and plumule length. Fifty days-period of dry heat treatment and concentration of 100 ppm gibberellin gave more effective effect than other treatment.

Kelapa sawit merupakan tanaman yang memiliki masa dormansi benih yang panjang. Adanya penghalang kulit benih menyebabkan proses imbibisi menjadi terganggu sehingga proses perkecambahan benih kelapa sawit
terhambat. Penelitian ini bertujuan untuk mengetahui pengaruh interaksi antara perlakuan pemanasan dengan
metode dry heat treatment dan pemberian zat pengatur tumbuh giberelin terhadap pemecahan dormansi kelapa
sawit. Percobaan dilakukan menggunakan rancangan acak kelompok faktorial dengan 2 faktor, yaitu 3 taraf lama
dry heat treatment (40 hari, 50 hari, 60 hari) dan 3 taraf konsentrasi giberelin (0 ppm, 100 ppm, 200 ppm) yang
diulang sebanyak 3 kali. Hasil penelitian menunjukkan tidak terdapat pengaruh interaksi antara lama dry heat
treatment dan konsentrasi giberelin terhadap pemecahan dormansi kelapa sawit. Perlakuan lama dry heat treatment

50 dan 60 hari berpengaruh baik pada variabel persentase perkecambahan dan indeks vigor serta panjang radikula
dan panjang plumula. Konsentrasi giberelin 100 dan 200 ppm berpengaruh baik pada variabel persentase perkecambahan, indeks vigor, panjang radikula dan panjang plumula. Lama dry-heat treatment 50 hari dan konsentrasi giberelin 100 ppm memberikan pengaruh paling efektif daripada kombinasi perlakuan lain.