

## Pengaruh pollen substitute yang mengandung biomassa khamir candida hawaiiiana CR014 terhadap jumlah larva dan pupa lebah pekerja Apis mellifera L = Effect of feeding a pollen substitute containing candida hawaiiiana CR014 on Apis mellifera L larvae and pupae

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### Abstrak

Penelitian bertujuan untuk mengetahui pengaruh pemberian pollen substitute (PS) mengandung biomassa *C. hawaiiiana* CR014 terhadap jumlah larva dan pupa lebah pekerja *A. mellifera*. Sebagai kontrol positif koloni lebah madu diberi pakan tambahan pollen jagung. Pemberian pakan dilakukan sekali seminggu selama enam minggu pada musim kemarau. Hasil uji ANOVA satu faktor menunjukkan bahwa rerata jumlah larva yang dihasilkan per minggu pada koloni perlakuan dan koloni kontrol positif tidak berbeda nyata ( $P > 0,05$ ). Begitu pula dengan rerata jumlah pupa pada koloni perlakuan dan kontrol positif per minggu tidak berbeda nyata ( $P > 0,05$ ).

Hasil uji T juga menunjukkan bahwa rerata jumlah larva dan pupa per minggu antara koloni perlakuan dan koloni kontrol positif tidak berbeda nyata ( $P > 0,05$ ). Pemberian PS pada *A. mellifera* memberikan pengaruh yang hampir sama baiknya dengan pemberian pollen jagung terhadap jumlah larva dan pupa lebah pekerja *A. mellifera* selama periode pengamatan tujuh minggu. Hasil penelitian memperlihatkan bahwa PS yang mengandung biomassa *C. hawaiiiana* CR014 dapat menggantikan peran pollen alami sebagai sumber protein *A. mellifera* untuk mempertahankan produktivitas koloninya pada musim kemarau.

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The research aimed to examine the effect of pollen substitute (PS) containing *Candida hawaiiiana* CR014 on the number of larvae and pupae of worker bees *Apis mellifera*. Colonies of a positive control were fed with maize's pollen. The colonies were fed once a week for six weeks in the dry season. The one-way Anova test showed that the mean number of larvae produced per week in the treated group were not significantly difference from the positive control ( $P > 0,05$ ). Similarly, the mean number of pupae produced per week in treated group and the positive control were not significantly difference ( $P > 0,05$ ).

The T-test showed that the mean number of larvae and pupae per week between the treated group and the positive control were not significantly difference ( $P > 0,05$ ). The study indicated that PS and the maize's pollen has an almost similar effect on the number of larvae and the number of pupae of worker bees produced by the colonies during the experiment. It is concluded that PS containing *C. hawaiiiana* CR014 might be used to replace natural pollens as a protein source to maintain productivity of *A. mellifera* during the dry season.