

## **PENGARUH VARIASI POHON INDUK DURIAN DARI PROVENANS CANDIMULYO TERHADAP PERFORMA PERTUMBUHAN SEMAI HINGGA UMUR 3 BULAN DI PERSEMAIAN**

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### **INTISARI**

Durian (*Durio zibethinus Murr.*) merupakan salah satu tanaman buah-buahan yang memiliki daya tarik tinggi di Indonesia. Dari berbagai jenis durian lokal di Indonesia, terdapat salah satu jenis yang cukup digemari oleh masyarakat khususnya di Jawa Tengah dan sekitarnya, yaitu durian Candimulyo. Pengembangan dan pemuliaan jenis durian yang dianggap baik perlu dilakukan guna memperoleh sumber bibit unggul yang baru. Penelitian ini bertujuan untuk mengetahui pengaruh pohon induk durian Candimulyo terhadap performa pertumbuhan semai hingga umur 3 bulan.

Penelitian ini dilakukan di Persemaian Klebengan Fakultas Kehutanan UGM, pada bulan Juni hingga Oktober 2024. Rancangan penelitian yang digunakan adalah metode *Completely Randomized Design* (CRD) dengan sumber variasi nomor pohon induk durian Candimulyo. Dari setiap nomor pohon induk tersebut, diambil 10 sampel semai untuk diamati, dengan ulangan sebanyak tiga kali. Jumlah unit pengamatan adalah = jumlah pohon induk (7) x jumlah semai (10) x jumlah ulangan (3) = 210 unit. Parameter yang diamati dan diukur adalah tinggi, diameter, daun, kekompakan media, kekokohan semai, top root ratio, indeks mutu semai, jumlah dan panjang akar primer, sekunder, dan tersier. Hasil pengamatan dianalisis menggunakan analisis of varian (ANOVA), selanjutnya jika terdapat beda nyata dilakukan uji lanjut DMRT.

Hasil penelitian menunjukkan tingkat keberhasilan hidup untuk seluruh semai pohon induk durian Candimulyo memiliki rentang 96 – 100%. Hasil analisis menunjukkan bahwa pohon induk durian Candimulyo memberikan pengaruh nyata terhadap parameter pertumbuhan semai yaitu tinggi, diameter, daun, kekompakan media, nilai kekokohan semai, *top root ratio*, indeks mutu semai, dan panjang akar tersier. Namun demikian, tidak terdapat pengaruh yang nyata variasi pohon induk terhadap parameter pengamatan pada jumlah dan panjang akar primer, jumlah dan panjang akar sekunder, serta jumlah akar tersier. Pohon induk durian Candimulyo 7 merupakan pohon induk yang paling baik berdasarkan beberapa parameter pengukuran.

**Kata Kunci:** *Durio zibethinus Murr.*, Pohon Induk, Pertumbuhan, Perakaran.

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## THE EFFECT OF VARIATION IN DURIAN PARENT TREES FROM CANDIMULYO PROVENANCE ON SEEDLING GROWTH PERFORMANCE UP TO 3 MONTHS OF AGE IN THE NURSERY

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### ABSTRACT

*Durian (*Durio zibethinus* Murr.) is one of the fruit plants that has high appeal in Indonesia. Of the various types of local durian in Indonesia, there is one type that is quite popular with the public, especially in Central Java and its surroundings, namely Candimulyo durian. Development and breeding of good durian species need to be done in order to obtain a new source of superior seeds. This study aims to determine the effect of Candimulyo durian parent tree variations on seedling growth performance until the age of 3 months.*

*This research was conducted at Klebengan Nursery, Faculty of Forestry UGM, from June to October 2024. The research design used is the Completely Randomized Design (CRD) method with 7 Candimulyo durian parents trees as the source of variations. From each parent tree number, 10 seedling samples were taken to be observed, each with 3 replications. Hence, the number of observation units is = number of parent trees (7) x number of seedlings (10) x number of replicates (3) = 210 units. The parameters observed and measured were height, diameter, number of leaf, media compactness, seedling sturdity, top root ratio, seedling quality index, number and length of primary, secondary, and tertiary roots. The observation results were analyzed using analysis of variance (ANOVA), then if there is a significant difference, DMRT further test was conducted.*

*The results showed that the survival rate for all Candimulyo durian parent tree seedlings had a range of 96 - 100%. The analysis result also showed that different parents trees of Candimulyo durian gave significant effects on seedling growth parameters, i.e. height, diameter, leaf, media compactness, seedling sturdiness value, top root ratio, seedling quality index, and tertiary root length. However, there is no significant effect on number and length of primary roots, the number and length of secondary roots, and the number of tertiary roots. Candimulyo 7 durian parent tree is the best parent tree based on several measurement parameters.*

*Keywords: Durio zibethinus Murr, Growth, Rooting, cParents Tree.*

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