

PROJECT REPORT

**FUNDAMENTAL RESEARCH GRANT SCHEME
(FRG171-SSK-2008)**

**ECONOMIC ANALYSIS OF INTERCROPPING *Orthosiphon
stamineus* WITH *Durio zibethinus* AND *Hevea brasiliensis*
WITH DIFFERENT ORGANIC FERTILIZER REGIMES**

RESEARCHERS

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ABSTRACT

Economic analysis on *Orthosiphon stamineus* Benth. under rubber and durian farm was conducted at Kg. Kogopon, Papar, Sabah. The main objective of this study was to study the economic viability of planting *Orthosiphon stamineus* (Misai Kucing) in Rubber and Durian farm involving fertilizer application of various types. A Randomized Complete Block Design (RCBD) was used. *O. stamineus* was planted with spacing 1.5 m between rows and 0.45 m within rows of plants. The site was divided into three (3) blocks or replicates. Each block contained four (4) treatments and 20 plants of *O. stamineus* for each treatment. Three (3) organic fertilizer treatments were applied to each block excluded control block. Two (2) rates of fertilizer were used and standardized for each fertilizer. In order to conduct the economic analysis, data on yield monthly harvested and recorded to make it per hectare basis. Thus, the approaches for isolating the benefits and costs of intercropping *O. stamineus* with Rubber or Durian are based on 'With project' and 'Without project'. Economic criteria such as Net Present Value (NPV), Internal Rate of Return (IRR), Benefit-Cost Ratio (BCR), Payback Period (PBP) and Sensitivity Analysis (SA) were analyzed for 20 years period project. From the computation of 20 years period projection, it is found that the NPV, IRR, BCR and PBP under durian at discounted factor rate 10% were RM91,751.00, 36.57%, 1.05 and 7 years for per hectare basis. Similar result also found under rubber were RM47,413.00, 55.45%, 1.04, 4 years. As a conclusion, the project intercropping of *O. stamineus* either under rubber and durian indicated economically feasible.

ABSTRAK

Analisis ekonomi terhadap *Orthosiphon stamineus* Benth. di bawah kebun Getah dan Durian telah dijalankan di Kg. Kogopon, Papar, Sabah. Objektif utama kajian ini dilakukan adalah untuk mengkaji kebolehsandaran ekonomi penanaman *O. stamineus* (Misai Kucing) di bawah kebun Getah dan Durian melibatkan penggunaan pelbagai jenis baja. Rekabentuk Rawak Penuh Lengkap (RCBD) telah digunakan. *O. stamineus* telah ditanam pada jarak 1.5 m di antara baris dan 0.45 m dalam baris tanaman. Tapak tanaman telah dibahagikan kepada tiga (3) blok atau replikasi. Setiap blok mengandungi empat (4) rawatan dan 20 pokok *O. stamineus* untuk setiap rawatan. Tiga (3) rawatan baja organik telah digunakan untuk setiap blok tidak termasuk blok kawalan. Dua (2) kadar baja telah digunakan dan disama-ratakan untuk setiap baja. Untuk melaksanakan analisis ekonomi, data hasil tuaian bulanan dan direkodkan untuk mendapatkan nilai per hektar. Kemudian, pendekatan analisis faedah dan kos terhadap tanaman selingan *O. stamineus* dengan Getah dan Durian adalah berdasarkan kepada 'With project' dan 'Without project'. Kriteria ekonomi seperti Nilai Kini Bersih (NKB), Kadar Pulangan Dalaman (KPD), Nisbah Faedah Kos (NKF), Tempoh Bayaran Balik (TBB) dan Analisis Kepekaan (AK) telah dianalisis untuk 20 tahun tempoh projek. Daripada analisis projek untuk 20 tahun, didapati bahawa NKB, KPD, NFK, TBB di bawah durian pada kadar faktor terdiskaun 10% adalah RM91,751.00, 36.57%, 1.05 dan 7 tahun untuk setiap hektar. Keputusan sama juga didapati di bawah Getah iaitu RM47,413.00, 55.45%, 1.04, 4 tahun. Kesimpulannya, projek tanaman selingan terhadap *O. stamineus* sama ada di bawah Getah dan Durian terbukti boleh bersandar secara ekonomi.