

**PERTUMBUHAN DAN PRODUKTIVITAS PORANG  
(*Amorphophallus onchophyllus*) PADA BEBERAPA ASOSIASI TEGAKAN  
DI HUTAN RAKYAT NGLANGGERAN GUNUNG KIDUL**

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**INTISARI**

Hutan rakyat dengan sistem agroforestri kompleks dimana lahan mengarah pada pola *full trees*, biasanya naungannya rapat sehingga di bawahnya tidak ditanamai tanaman semusim yang pada umumnya membutuhkan intensitas cahaya yang tinggi. Peningkatan produktivitas lahan dapat dilakukan dengan memperkenalkan jenis yang mempunyai toleransi tinggi terhadap naungan. Porang (*Amorphophallus onchophyllus*) adalah jenis umbi-umbian yang mampu bertahan di bawah naungan. Penelitian ini bertujuan untuk mengkaji pengaruh asosiasi tegakan terhadap morfologi, pertumbuhan dan produktivitas porang di bawah tegakan hutan rakyat.

Penelitian dilakukan di Nglanggeran Gunung Kidul pada bulan November 2011 sampai bulan Juli 2012. Rancangan yang digunakan adalah *Split Plot* dengan plot utama asosiasi tegakan dan sub plot intensitas cahaya. Ada tiga macam asosiasi tegakan yaitu dominasi mahoni, dominasi sono dan campuran. Masing-masing tegakan dibagi menjadi empat sub plot berdasarkan tingkatan intensitas cahaya, yaitu sangat rendah (0-7%), rendah (8-14%), sedang (15-21%) dan tinggi (>21%). Sub plot berukuran 10x10 m dengan jarak tanam porang di dalamnya 75x75 cm. Setiap sub plot diambil 15 sampel untuk diukur parameter pertumbuhan dan produktivitasnya. Pengaruh faktor lingkungan terhadap pertumbuhan dan produktivitas dianalisis dengan ANOVA.

Hasil analisis menunjukkan bahwa asosiasi tegakan mempengaruhi morfologi, pertumbuhan dan produktivitas porang. Pertumbuhan tinggi dan diameter batang semu, lebar tajuk dan biomassa tertinggi ada pada tanaman porang yang ditanam di bawah tegakan campuran sedangkan terendah di bawah tegakan sono. Namun biomassa berbanding terbalik dengan produktivitas porang. Produktivitas yang diukur dari penambahan berat basah umbi porang pada plot campuran 23,05%, pada plot mahoni 95,67% dan pada plot sono mencapai 132,87% dalam satu musim tanamnya.

Kata kunci: Porang, agroforestri, hutan rakyat, pertumbuhan, produktivitas

***GROWTH AND PRODUCTIVITY OF KONJAC  
(*Amorphophallus onchophyllus*) ON A VARIOUS ASSOCIATION OF STANDS  
IN COMMUNITY FOREST NGLANGGERAN GUNUNG KIDUL***

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**ABSTRACT**

*Community forest with complex agroforestry system that tended to full trees land pattern often had dense overshadow that did not enable the cultivation of crop that usually needs high intensity of sunlight. The land productivity could be improved by introducing tolerance species. Konjac (*Amorphophallus onchophyllus*) was tuber species able to survive under the dense crown. The study aimed at examining the impact of the association of stands on the morphology, growth and productivity of konjac under the stands of the community forest.*

*The study was conducted in Nglanggeran Gunung Kidul in November 2011 to July 2012. It used split plot design with the main plot of the association of the stands and the sub-plot of sunlight intensity. There were three associations of the stands, which were mahogany dominated, Indian rosewood dominated and mixture. Each of the stands was divided into four sub-plots based on the sunlight intensity, which were very low (0-7%), low (8-14%), medium (15-21%) and high (>21%). The sub-plot of 10 x 10 m was prepared with the interval of konjac of 75 x 75 cm. There were 15 samples drawn from each of the sub-plots that their parameters of growth and productivity could be measured. The impact of environmental factors on growth and productivity was analyzed using ANOVA.*

*The results of analysis showed that the associations of the stands had significant impact on morphology, growth and productivity of konjac. The growth in height and diameter of petiole, the width of crown and biomass the highest were found in the konjac grown under mixture, while the lowest was found under the stands of Indian rosewood. However, the biomass was inversely proportional to the productivity of konjac. The productivity was measured from the increase in wet weight of the tuber of konjac in mixture, which was 23.05% and in the mahogany plot was 95.67% and in the Indian rosewood plot was 132.87% in a single cultivation season.*

*Key words: Konjac, agroforestry, community forest, growth and productivity*