

SUMMARY

A research about the effect "tumpangsari" (taungya) on growth of acacia (*Acacia mangium* Willd.), the content of nitrogen (N) total, available phosphorus (P) and available potassium (K) from the soil have been carried out in Benakat, Muara Enim, South Sumatra Province. The tumpangsari's crops were peanut, unirrigated paddy and mixture between peanut and corn. The measurement of diameter and height of acacia and taking of soil samples were done after 9 months of tumpangsari was harvested and the plantation of tumpangsari was done only one time.

The result of the research could be concluded as follows :

1. Tumpangsari with peanut gave the best effect on diameter of acacia, otherwise tumpangsari with mixture between peanut and corn gave the best effect on height.
2. The content of N-total of the soil was highest on tumpangsari with unirrigated paddy but the content of available P was the lowest.
3. The content of available K was not much different among tumpangsari's crops themselves and also with control.
4. The content of available P tended to be lower by tumpangsari practice.

INTISARI

Suatu penelitian mengenai pengaruh beberapa jenis tanaman tumpangsari terhadap pertumbuhan akasia (*Acacia mangium*), kandungan N total, kandungan P dan K tersedia di dalam tanah telah dilakukan di Benakat, Muara Enim, Provinsi Sumatra Selatan. Jenis tanaman tumpangsari tersebut adalah kacang tanah, padi gogo dan campuran antara kacang tanah dan jagung. Pengukuran tinggi dan diameter akasia dan pengambilan contoh tanah dilakukan setelah 9 bulan tanaman tumpangsari dipanen dan penanaman tumpangsari hanya dilakukan sekali.

Hasil penelitian tersebut dapat disimpulkan sebagai berikut :

1. Tumpangsari dengan kacang tanah memberikan pengaruh paling besar terhadap diameter, sedangkan tumpangsari dengan campuran antara kacang tanah dan jagung memberikan pengaruh paling besar terhadap tinggi.
2. Kandungan N total dalam tanah paling tinggi didapatkan pada tumpangsari dengan padi gogo, tetapi kandungan P tersedia paling rendah.
3. Kandungan K tersedia di dalam tanah tidak berbeda nyata antara tumpangsari itu sendiri maupun dengan kontrol.
4. Adanya tanaman tumpangsari cenderung menurunkan kandungan P di dalam tanah.