

ABSTRACT

The rationale of this study is that land clearing and changes in vegetation, have influenced soil physical properties to such an extent that an important measure, the infiltration rate, is greatly affected. The determination of infiltration rates have been done using the drip-type rainfall simulator. It has been found that the infiltration rates of soils of various landuses are as follows:

	Landuse	IR (cm/hr)
1.	Forest (control)	20.97
2.	Rubber, 20 Year-old	20.98
3.	Oil Palm, 20 Year-old	20.42
4.	Rubber, 7 Year-old	7.99
5.	Oil Palm, 7 Year-old	8.14
6.	Bare Soil, 5 Year-old	4.61
7.	Bare Soil, 1 Year-old	6.41

The study also found that there exists a close relationship between infiltration rates and soil physical properties, namely the soil bulk density, total pore space, organic matter content and soil stability index. The correlation coefficient of the relationship ranged from 0.86 to 0.96 (using simple regression technique).

ABSTRAK

Rasional kajian ini adalah pemugaran dan perubahan jenis tumbuhan, telah mempengaruhi sifat-sifat fizikal tanah ke tahap di mana kadar infiltrasi telah dipengaruhi dengan banyaknya. Penentuan kadar-kadar infiltrasi ke atas pelbagai jenis gunatanah telah dilakukan dengan simulator jenis-titis. Didapati bahawa kadar-kadar infiltrasi adalah seperti berikut:

	Gunatanah	Kadar infiltrasi (sm/j)
1.	Hutan (kawalan)	20.97
2.	Getah, 20 tahun	20.98
3.	Kelapa sawit, 20 tahun	20.42
4.	Getah, 7 tahun	7.99
5.	Kelapa sawit, 7 tahun	8.14
6.	Tanah terdedah, 5 tahun	4.61
7.	Tanah terdedah, 1 tahun	6.41

Kajian juga mendapati terdapatnya hubungan rapat antara kadar infiltrasi dan sifat tanah iaitu ketumpatan pukal tanah, ruang liang total, kandungan bahan organik dan indek kestabilan tanah. Kofisien korelasi perhubungan adalah berjulat dari 0.86 hingga 0.96 (teknik regrasi mudah).