

ชื่อเรื่อง

The Function of Vetiver in Agriculture Ecosystem

ชื่อผู้วิจัย

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Abstract

The experimental results showed that vetiver could efficiently ameliorate many properties of soil. For example, it could lower the acidity and exchangeable Al of strongly acid soil by 0.5-0.7 and 0.3-0.6 cmol.kg^{-1} , respectively. A significant increase in soil organic matter, total N, available N and K, and porosity was found after planting vetiver for 29 months. However, vetiver didn't enhance soil P. After vetiver was established, the moisture of soil was increased by 20.3-42.3% in 0-20 cm depth and by 4.2-13.4% in 20-40 cm depth, respectively. Furthermore, vetiver distinctly slowed down the dropping speed of soil moisture. The vetiver treatment averaged 60% and 93% less runoff and soil loss than the control, respectively, in 2 years. Vetiver also improved the microclimate of agricultural ecosystem, which increased the relative humidity by approximately 5%, and declined the air temperature by 1-2 degrees centigrade, and so on.