

Kanyarat Buarat 2014: Effects of Green Manure Together with Tillage Systems on Growth, Yield and Some Soil properties Rice Production. Master of Science (Soil Science and Management Technology), Major Field: Soil Science and Management Technology, Department of Soil Science. Thesis Advisor: Mr. Suphachai Amkha , Ph.D. 76 pages

This study was conducted to determine the effects of soil organic amendments with tillage systems on growth and yield of Pathumthani 80 rice and some soil properties in paddy soil. The experiment was conducted by using 4X2 Factorials in Randomized Completely Block Design. The first factor was soil organic amendments (mungbean; VR, sesbania; SR, sunhemp; CJ and rice straw; RS), and the second factor was tillage systems (conventional tillage; To and minimum tillage; T1). The results that adding organic matter derived from mung bean was gave the highest of plant height normal seeds, which increased soil pH, exchangeable potassium and plant carbon stock. In addition, adding organic matter derived from sunhemp was gave the highest of abnormal seeds and increased soil organic matter and total nitrogen in soil. By the time, conventional tillage was gave the highest of abnormal seed, while minimum tillage increased soil carbon stock.

Interaction between soil organic amendments with tillage systems on growth, yield of rice and some soil properties in paddy soil. The results was found that adding organic matter derived from mung bean with conventional tillage was gave the highest of normal seeds and increased soil pH. In addition, adding organic matter derived from sunhemp with conventional tillage was gave the highest of abnormal seeds and increased soil organic matter.

---

Student's signature

---

Thesis Advisor's signature