Effect of a rice, wheat straw and sulphuric acid on plant growth of mung bean (Vigna radiata L.)

M. Shirin¹ and F. Andarz²

1. Graduate Student, Departement of Agronomy and Plant Breeding, Ramin Agricultural and Natural Resources University, Mollasani, Ahvaz, Iran.
2. Former Graduate Student, Departement of Soil Science, Shiraz University, Shiraz, Iran.

The study was carried out to determine effects of rice and wheat straw and/or sulphuric acid incorporated to soil on vegetative growth of mung bean (Vigna radiata L.) plant at seedling stage. A factorial arrangement in a Completely randomized design was used with 4 replications there were three levels of rice or wheat straw (0, 5, 10 g/kg soil) and 3 levels of sulphuric acid (0, 2 or 4 g/kg soil) incorporated. Results showed that the root/dry weight and root length were highest in treatments with 10 g/kg of rice or wheat straw. The root dry weight significantly increased in 10 g/kg wheat straw + 2 g/kg sulphuric acid and 5 or 10 g/kg rice straw + 4 g/kg sulphuric acid. The leaf area of mung bean increased when 10 g/kg of rice straw was incorporated alone or with 2 or 4 g/kg sulphuric acid. Also, the leaf area increased by wheat straw (5 or 10 g/kg) + 2 g/kg sulphuric acid incorporated to soils. In acid treated soil, rice or wheat straw increased shoot dry weight.

Keywords: Rice, Wheat Straw, Sulphuric acid, growth, mung bean (Vigna radiata)