

## **Evaluation of Cu coated urea on selected soil series of Malaysia.**

### **ABSTRACT**

Urea is useful fertilizer because it is immediately available to plants and have an immediate response. Urea as a fast release fertilizer however is subjected to rapid depletion from the soil due to ammonia loss and leaching. If fast release fertilizers are applied too heavily, the plant can be damaged usually by burning. As well as it caused ground water pollution by leaching. The application of urea normally resulted in high losses more than 30-50% due to different environmental and biological factors. There is need to produce an efficient slow release fertilizer which is more efficient, environmental friendly and economically beneficial. For this purpose a study was conducted in order to find out an environmental friendly controlled release fertilizer. In this laboratory experiment, the effects of Cu coated urea on release of total nitrogen in selected soil series were observed. An incubation experiment was carried out for 6 weeks from 2nd June to 15 July 2008 in laboratory. Three soil series: Rengom, Holy rood and Serdang were sampled and used as fresh soil. The release of urea N, ammonium and nitrate was analyzed every week for each sample and it's 3 replications, by spectrophotometer and distillation method, respectively. The results of experiment showed that the cooper coatings significantly reduce the fast release of urea by inhibiting the urease activity.

**Keyword:** Copper coated urea; Ammonia volatilization; Urease inhibitor.