

## **Geostatistical analysis in paddy field data and implications for management**

### **ABSTRACT**

Soil properties and yield were recorded in grid-spacing in a West Malaysia paddy field for the year 2000. Geostatistical analysis showed that soil properties and yield were notably correlated in space, and the range of spatially dependent yield was shorter than the soil properties. Co-kriging was used to estimate spatial pattern of yield with surrogate data (soil properties) was not successful for this field. The spatial yield map illustrated that the middle portion of the plot has lower yield ( $<3.5\text{t/ha}$ ) compared to both ends in lengthwise. A management zone is suggested in the low yielding areas where soil N and soil P need to be improved for obtaining high yield ( $>5\text{t/ha}$ ).

**Keyword:** Geostatistical analysis; Soil property; Yield; Co-kriging; Management zone