

**RESEARCH ARTICLE :**

## Phosphorous mobility under sub surface drip fertigation system on banana cv. rasthali

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**SUMMARY :** The field experiment was carried out at AICRP- Water Management block, Agricultural College and Research Institute, Madurai during 2010-2011 to study the effect of subsurface drip fertigation on growth, yield, quality and economics of banana cv. Rasthali. The soil sampling was done at emitting point (laterals placed at 25 cm depth of soil from surface) and 15 cm horizontally away from the emitting point of the same lateral. Similarly, the soil samples were also collected from 0-25, 25-50 and 50-75 cm depth of profile (vertical) between the drippers. The soil sampling was done 24 hours after fertigation at flowering stage of the crop. The nutrient mobility study revealed that fertigation treatments maintained higher concentration of available phosphorous around root zone of banana compared to surface irrigation with soil application of recommended dose of fertilizers where most of the nutrients moved to deeper layer due to leaching fraction of applied fertilizers. Fertigation of phosphorous at various levels also resulted in more available phosphorous at all soil layers compared to soil application of fertilizers.

**KEY WORDS :**

Subsurface drip fertigation, Nutrient mobility, Phosphorous, Banana

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