

**YIELD RESPONSE TO TIME OF APPLICTION OF
ORGANIC FERTILIZER (AMUTHAKARAI SAL) AS
TOP DRESSING IN GROUNDNUT (*Arachis hypogaea*)
CULTIVATION**

277

BY

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ABSTRACT

This experiment was conducted to study the yield response to time of application of organic fertilizer (Amuthakaraisal) as top dressing in groundnut cultivation. 'Amuthakaraisal' consisting of cow dung, urine and molasses was applied at different growth periods (15, 30 and 45 days after sowing). Application of urea at the rate of 30 kg / ha was done as a control at 30 days after sowing.

Pod yield showed response to different times of application of Amuthakaraisal. The treatment with three times of application of Amuthakaraisal at 15, 30 and 45 days after sowing, remarkably ($P < 0.05$) produced highest number of pods and seeds than other treatments. The T_2 with two times of application of Amuthakaraisal (15 and 30 days after sowing) produced lowest number of pods and seeds.

The nodule numbers were significantly influenced ($P < 0.05$) by different times of application of Amuthakaraisal. T_5 (Control treatment) significantly differed ($P < 0.05$) from the other treatments except T_3 and produced higher number of nodules. Different times of application of Amuthakaraisal during their vegetative growth period didn't influence both fresh and dry weights of leaves and roots, but, both fresh and dry weights of stems were remarkably influenced ($P < 0.05$) by different times of application of Amuthakaraisal. The T_3 was significantly ($P < 0.05$) higher in fresh and dry weights of stem than other treatments.

Increasing time of application of Amuthakaraisal increased fresh and dry weights of kernels and shell in T₃. And three times of application of Amuthakaraisal showed significantly ($P < 0.05$) higher on both fresh and dry weights of kernels and shells than other treatments.

There was no significant effect on 100 kernels weight and shelling percentage by number of application of Amuthakaraisal at different times. Dry weights of pods and seeds per plot were influenced by different times of application of Amuthakaraisal. The T₃ was significantly ($P < 0.05$) higher in dry weights of pod and seeds per plot than other treatments. The T₃ produced highest dry weights of pods and seeds per hectare than others. T₁ was significantly lower in dry weights of pods and seeds.

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