

# Grub Compost: Multi Merit Organic Fertilizer

## INTRODUCTION:

- Organic fertilizers are derived from animal or plant matter.<sup>[1]</sup>
- Dung & Pit Compost are the widely used organic fertilizers in rural India.<sup>[2]</sup>
- Nitrogen fixing bacteria, Vermicompost and Green manures have got success in catching attentions of many farmers.<sup>[3]</sup>
- Other organic fertilizers such poultry waste, fish manure, neem cake and bacterial biocompost are also available.
- The majority of organic fertilizers can be prepared locally or on the farm itself.



## PROBLEMS:

- Low rate of nutrient release due to low decomposed (simplified) matter.<sup>[4]</sup>
- Trend shows, cheaper (less processed) the fertilizer lower the nutrient content.<sup>[5]</sup>
- The process involved in preparation of highly processed efficient fertilizer requires investments for setup and raw materials eg. specific earthworms in vermicompost.<sup>[6]</sup>
- The market available efficient organic fertilizers are expensive as compared to chemical fertilizers.<sup>[6]</sup>

## THE GRUB:

- The adult and larvae (grub) of Dung beetles are used to make the compost.<sup>[7]</sup>
- The coprophagus beetles are used.

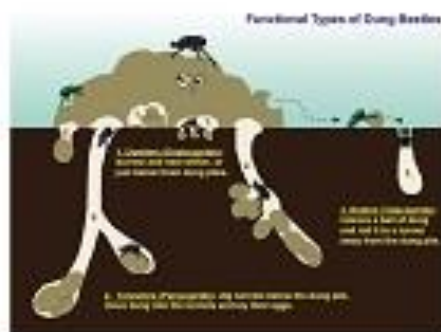


ADULT

GRUB (LARVA)

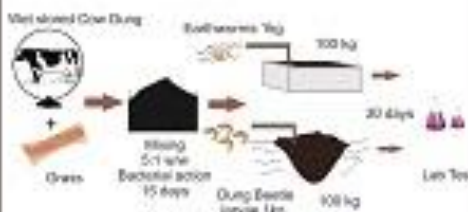
## LIFE CYCLE:

- These beetle complete their life cycle in dung and soil.<sup>[8,9]</sup>



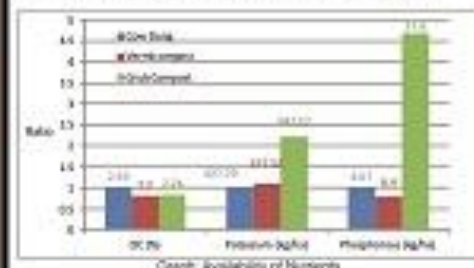
## METHODOLOGY:

- These grubs are used in similar way as earthworms in vermicompost.<sup>[6]</sup>
- Raw material used is cow dung and dry grass.<sup>[6]</sup>
- Two separate units were setup for grub compost and vermicompost using same raw material.



## THE MAJOR ADVANTAGES:

- Beetle and grubs convert the raw dung and organic waste faster than worms.<sup>[10]</sup>
- Grub compost is very much better in nutrient content (Graph).
- The smaller Paracoprid beetles mix nutrients far better than earthworms.



## RESULT AND CONCLUSION:

- The Grub compost is useful in developing agricultural regions such as Kokan.
- The technique can be commercialized by developing large scale and portable small scale composters.

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Sachin Vijay Chorge  
Project co-ordinator