



Bio Solution- Liquid Organic Manure

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Abstract

Another significant benefit of liquid organic manures is their environmental sustainability. By converting organic waste materials into useful agricultural inputs, they assist in lowering the need for synthetic fertilizers—which are frequently linked to pollution and environmental deterioration. By lowering erosion and increasing water retention, the use of organic manures also encourages soil conservation. To sum up, liquid organic manures are a big stride in the direction of sustainable agriculture. They offer a workable and efficient way to improve agricultural yields, preserve the environment, and improve soil fertility. The advantages of liquid organic manures will keep improving the general well-being and productivity of agricultural systems as more farmers implement these techniques.

Introduction

Panchagavya Description of this holy combination could be traced out in Vedas. Ayurveda describes five important substances obtained from cows, viz. milk, ghee, curd, urine and dung. All these five products are individually called gavya. In Sanskrit, panchagavya means the blend of five products obtained from a cow. Panchagavya is prepared by suitable combinations of these gavyas, which is given as under: Cow dung - 5 kg Cow urine - 4 litre Cow milk - 3 litre Cow curd - 2 litre Cow ghee - 1 kg Water - 10 litre The above ingredients are mixed in a clean container thoroughly and kept for 15 days. The content is to be stirred twice a day both at morning and evening. It should be kept in the shade and covered with a clean gunny bag. Cow dung - 5 kg Cow urine - 4 litre Cow milk - 3 litre Cow curd - 2 litre Cow ghee - 1 kg Water - 10 litre The above ingredients are mixed in a clean container thoroughly and kept for 15 days. The content is to be stirred twice a day both at morning and evening. It should be kept in the shade and covered with a clean gunny bag.

Procedure

7 kg cow dung and 1 kg cow ghee are mixed thoroughly and stirred both in morning and evening hours for 3 days After 3 days, 10 litres cow urine and 10 litres water are added, mixed and kept for 15 days with regular mixing through stirring both in morning and evening hours After 15 days, the following ingredients are added and mixed: Cow milk - 3 litres, cow curd - 2 litres, tender coconut water - 3 litres, jaggery - 3 kg, well ripened banana - 12 Contents are stirred twice in a day throughout the process. The container should be kept under shade and covered with gunny bag Enriched panchagavya is ready after 30 days

Uses

The cost of production of panchagavya is about ` 25-35 per litre. The B:C ratio up to 2.1 has been achieved in different crops with application of panchagavya. Panchagavya contains many useful microorganisms such as fungi, bacteria, actinomycetes, etc (Table 1). It contains

macro-nutrients, essential micro-nutrients (Table 2), many vitamins and essential amino acids. Presence of growth regulatory substances such as indole acetic acid (IAA), gibberellic acid (GA3) and cytokinin in panchagavya cause a stimulatory effect on the growth rate of crops. The presence of plant growth enzymes, i.e. GA 3-oxidase, and GA 2-oxidase in panchagavya favours rapid cell division and multiplication and helps in enhancement of biological efficiency of crop plants. The formulation acts as tonic to enrich the soil, induce plant vigour with quality production. Nodule formation in pulses is enhanced.

References

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