

Foliar Nourishment

Foliar fertilization or feeding entails the application — via spraying — of nutrients to plant leaves and stems and their absorption at those sites. It is not specifically an organic practice, though it is commonly used by many organic growers. The fertilizer materials used are typically soluble fish and seaweed-based products, naturally chelated nutrients – weed extract, Humic acid extracts – compost tea, and teas made from plants. At first glance, the use of foliar feeding appears contradictory to the organic notion that one feeds the soil to feed the plant. Organic growers rationalize the use of this approach on two points.

- a. Foliar feeding is strictly supplemental fertilization; it is not used as a substitute for traditional soil building practices.
- b. Foliar fertilization is understood to increase the production of root exudates, which stimulates biological activity in the rhizosphere (soil area adjacent to plant roots). The soil bio-life gets considerable benefit in this indirect way from foliar feeding.

**Liquid manures are really needed for any farms under organic in-conversion
and with poor soil fertility.**

The short duration crops grown should be fed properly during all the critical stages of growth the crops, facilitating them to grow better that will help to maximize the harvest. The soil of the farm under initial stages of conversion from conventional to organic cannot support the crops grown in it fully, so there will be poor yield from those crops. To avoid this sort of condition, we need to give ‘Foliar nourishment’. Different ways of doing this are as follows:

The liquid manures are very essential in the initial phase of the farm conversion from chemical farming methods into organic farming system. Among several liquid manures, the liquid manure that can supply the micronutrients should be given more importance.

Preparation Process

1. Use 200 liters plastic drum
2. Fill manure according to chart
3. Fill the drum balance with clean non-chlorinated H₂O
4. Float BD preps 502-506 & add potentised BD 507
5. Stir after 15 days (every 2 weeks)

Application Process

1. Filter
2. Dilute appropriately as per the chart
3. Spray

Benefits of Liquid Manure

- ✓ Helps to supply the essential nutrients to the crop as foliar nourishment
- ✓ Helps to spread 502-507 to the crop and controls the harmful micro-organisms present in the plant.
- ✓ Helps the crop to get the cosmic forces for its growth and crop produce.

Liquid Manures for different nutrients

No.	Nutrients Needed	Materials Needed	Requirement for 200 litres	Maturing Period	Dilution Ratio
1	Calcium (Ca) Nitrogen (N)	Cow dung Legumes, foliage	65 kg 2/3 barrel	3 months. 2 months	1:9 1:9
2	Potassium (K)	Wood Ash Yarrow Plant	20 kg 2/3 barrel	2 months 3 months	1:14 1:9
3	Phosphorous	Rock Phosphate Digitalis	20 kgs 2/3 barrel	2 months 3 months	1:14 1:9
4	Micro-nutrients	Fish meals Dried) Seaweed (fresh)	12.5 kg 2/3 barrel	6 months 4 months	1:30 1:20
5	Iron (Fe)	Stinging Nettle	2/3 barrel	2 months	1:9

Liquid manure for pest and disease control

1	Insecticide	Neem Cake Datura Neem Leaf	20 kg 20 kg 1/3 barrel	1 months 1 months 1 months	1:4 1:4 1:4
2	Fungicide	Casuarina	2/3 barrel	2 months	1:10

Production of Sea weed/ fish liquid manure

- ❖ Take 15 kg/ 200liters of dried seaweed or fish waste in a drum or in a tank,
- ❖ Fill the balance with water,
- ❖ Take one gram of the biodynamic preparations BD 502 to BD 507 for every 200 liters of liquid manure,
- ❖ Make a capsule with the help of good old compost,
- ❖ Keep the encapsulated biodynamic preparation over any half decomposed leaf/ straw in such a way to float or tie it inside the bandage cloth to hang it
- ❖ Allow the Biodynamic preparations (BD 502 – BD 506) to float or hang it by keeping cross sticks,
- ❖ Meanwhile take 10 ml of 5% BD 507, add it in 2 –3 liters of water and stir it for 15 minutes,
- ❖ Pour the stirred BD 507 into the drum,
- ❖ Close it with the gunny sac,
- ❖ Keep the drum or tank under shade,
- ❖ Initially, leave it for 15 days and stir the liquid every day for few minutes or atleast once in two days,
- ❖ In the beginning there will be more bubbling with odd smell, but at the end of production bubbling will be reduced with mild smell indicating the correct time for use.
- ❖ For use
 - Fish liquid manure – 1:30
 - Sea weed liquid manure – 1: 20

Production of Fish extract (growth hormone)

Materials needed:

- 1, Chopped fish,
- 2, Palm jaggery (Powdered),
- 3, Airtight container,

Method of making:

- ◇ Chopped fish is mixed with the powdered jaggery at equal portions,
- ◇ Put the mixture in an airtight container and close it tightly,
- ◇ Keep the mixture in the airtight condition for 20 days,
- ◇ Open the container and mix it thoroughly after 20 days and leave it airtight for another 20 days,
- ◇ After 40 days of making, the juice can be extracted and used.

Dosage:

Use 200 - 300 ml of the juice for every 100 liters as foliar spray, whenever the growth of the crop has to be induced.

Conclusion

Efforts have to be taken for the production of **Liquid manures** with the use of seaweeds or fish waste and other materials in a large scale for all the farms. These liquid manures will give the essential nutrients for any crop. The micronutrients deficiencies are generally not expressed in a crop, but it will certainly affect the yield of the crop. Hence the micronutrient deficiencies are described as **Hidden hunger of a crop**. Moreover the liquid manures made for other macronutrients are also required for most of the crops grown.