

Gitimal / Liquid Microbial plant and soil nutrient

Developed by Everything Organic Nursery, Patlekhet, Nepal

Gitimal / Liquid Manure is a foliar spray for everything in the garden, and can also be added to compost as a starter, or soil to introduce beneficial microbes and fungi to improve the health of the soil food web. It provides plant nutrients and repels insects. It is prepared by collecting locally available plant resources. Plants with tittu, taro, piro (bitter, astringent and hot) qualities are used for making gitimal. These plants are available all over Nepal. Farmers can prepare Gitimal themselves at very low cost.

It is similar to commercial products like E.M., and provides important microbes and fungus components to the soil. This improves the health of the soil and improves delivery of nutrients to plants.

It is not necessary to use all the plants that are listed here. Use as many as possible that can be found in your area. Below is a list of 27 plants native to Nepal that can be used in making Gitimal.

In warm weather, it should be soaked for 2 weeks before using. Then it is mixed with water in a ratio 1 part Gitimal to 10 parts water. It can also be combined with EM and applied at the same ratio. Best times for application are early morning or late afternoon, as the stomata (leaf pores) of the plants are more open then and will receive the Gitimal-EM solution more efficiently. It was originally called Gitimal or tonal tonic as it has been shown to be more effective if certain songs are sung during application. Plants seem to prefer Eastern classical music more than western music. Nepali folk songs are probably also appreciated.

Advantages of Gitimal / Liquid Manure

- Low cost
- Uses local resources and local knowledge.
- Increases the fertility of soil
- No side effects on human health, ecosystem and environment.
- No need to use pesticides so save million of rupees used to import pesticides and fertilizers.

Materials Required (use as many as you can find in your area)

1. Neem (*Asadirachta indica*)
2. Bakaino (*Melia azedarach*) Eng: Persian lilac (Nepali Mahaneem)
3. Titepaati (*Artemisia caruifolia*)
4. Ban Mara (*Eupatorium adenophorum*)
5. Lasun Garlic
6. Khorsani hot pepper
7. Asuro (*Justicia adhatoda*)
8. Khirro (*Holarrhena pubescens*)
9. Pyaj Onion
10. Tulsi (*Ocimum tenuiflorum*) Basil
11. Bojho (*Acorus calamus*)
12. Kagati ghas (*Cymbopogon pendulus*) Lemon grass
13. Mewa ko paat (*Carica papaya*) leaf of papaya
14. Sayapatri ko paat (*Tagetes erecta*) marigold leaf
15. Laliguras ko paat (*Rhododendron arboretum*) leaf of rhododendron
16. Aaru ko paat (*Prunus persicae*) leaf of peach

17. Surti ko paat (*Nicotiana glauca*) tobacco leaf
18. Simal (*Bombax ceiba*) Kapok tree
19. Dhatura (*Datura metel*) or Dhataro (*Datura stramonium*)
20. Pire jhar (*Persicaria capitata*) Pink knotweed/Japanese knotweed
21. Jai phul (*Jasminum humile*) Nepali jasmine
22. Ghor tapre (*Centella asiatica* or *Hydrocotyle Nepalensis*) Indian pennywort
23. Sisnu (*Urtica dioica*) stinging nettle
24. Ketuke (*Agave cantala*) Agave
25. Sajyon (*Jatropha curcas* or *Moringa oleifera*) Jatropa
26. Timur leaf (*Zanthoxylum acanthopodium*) or seeds Nepali pepper tree
27. Aangari (*Strobilanthes atropurpeas*) Kashmir Acanthus
28. Gai/ Bhaishi ko gobar /Cow dung
29. Gai/ Bhaishi ko Gahut /Cow urine
30. Kharani / Wood Ash
31. Plastic Drum

Method:

- ❖ Chop down all the collected materials to 2-3 inches long.
- ❖ Now start filling those chopped materials in the drum until half filled.
- ❖ Now pack cow dung and ash in jute sack or in appropriate cloth and put in the middle of that drum.
- ❖ Continue filling the remaining materials until 70% of the drum is filled.
- ❖ Now add cow urine until it covers all the added materials, if cow urine is not available water also can be added.
- ❖ Now store in a warm place and stir once a week.
- ❖ It will be ready for use after 2 weeks in warm season or Terai region or after 4 weeks in cool season.

Methods of spraying:

For small seedlings / saplings.- Mix 1 part of gitimal with 10 parts of water and spray gently on both sides of leaves.

For other plants 1 part of gitimal can be mixed with 5 parts of water and can be sprayed like above.

It should be sprayed once a week.

Note: should be sprayed at dawn or dark when stomata are opened.

Everything Organic Nursery, Patleket, Nepal