

Different Types of Formulation Used in Natural Farming

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Introduction

Natural farming is a way of crop cultivation by the primitive methods which harmonize with nature. Masanobu Fukuoka, a Japanese farmer and philosopher, introduced it in 1975, in his book 'The One-Straw Revolution'. Natural farming is an approach to do nothing. In short, it is a farming method of cultivating crops without altering much to the natural ecosystem. After commencement of green revolution, the residual effects of chemicals were seen in soil as well as crops. Hence, to overcome this type of problems, new concepts like organic farming and natural farming were introduced. Natural farming often known as traditional farming avoids use of chemicals.

Chemical free agriculture, cow products based natural farming, Shashwatkheti, and Zero-Budget natural farming is some of the titles used to describe it. Through the Bhartiya Prakrit Krishi Padhti (BPKP) initiative, Indian government promotes natural farming. Numerous types of formulations were adopted in natural farming to boost crop growth, production, quality and protection from pests and diseases. In crop cultivation, these formulations fulfil the role of synthetic fertilisers and chemicals.

Some formulations adopted under natural farming are mentioned below:

- Beejamritham (Seed treatment)
- Jeevamritham/ Jeevamrutha (Liquid inoculant)
- Ghanaheevamritha
- Nemastar
- Aganistar
- Kattilassi
- Bramastra

- Neemmalaham
- Sonthastar
- Dashaprani Ark or Kashaya
- ✚ **Beejamritham(Seed treatment):** Seeds, seedlings and other planting materials are treated with beejamritham to protect new roots from fungus, as well as seed and soil borne illnesses.
- ✚ Ingredients to prepare beejamritha are 20 litre water, 5 kg local cow dung, 5 litre local cow urine, 50 gram lime and one fist soil from any bund or basin of old tree. This excrement is wrapped in a cloth and submerged in urine for 12 hours. Dung is pressed and cow urine is separated from the dung, thereafter, the urine is mixed with 50 g lime.
- ✚ **Jeevamritha/Jeevamrutha (Liquid inoculant):** It is a fermented microbial culture. It not only provides nutrients, but also functions as a catalytic agent to promote the activity of soil microbes and increase the population of native earthworms. Jeevamritha preparation includes a barrel filled with 200 liters of water, 10 kg fresh local cow dung, 5 to 10 liters old cow urine, 2 kg jaggery (a local variety of brown sugar), 2 kg pulse flour and a pinch of soil from the farm's bund. Stir the mixture thoroughly before allowing it to ferment in shade for 48 hours. 200 litres of Jeevamritha can effectively covers an area of one acre.
- ✚ **Ghanajeevamritha:** It is a solid form of Jeevamritha, prepared by limiting the water supply while its preparation.
- ✚ **Neemastar:** It is prepared from 100 liters of water, 10 liters of cow urine and 2 kg cow dung mixed with 5 kg neem leaves & dried fruits of neem. It is a powerful formulation used against whiteflies, aphid, jassid, termites and nematodes, mill bugs, sucking pest, grasshoppers and fruit borers.
- ✚ **Agnistar:** To prepare agnistar, 2 kg neem leaves is mixed with 500 gram tobacco powder, 500 gram green chilly pulp and 250 gram desi garlic pulp, mixed with 20 litres cow urine. It is found effective against sucking pests, small caterpillars and grubs, leafhoppers and fruit borers. 6-8 liters formulation is used in 200 litres of water.

- ✚ **Brahmatar:** This formulation is effective against sucking pests, big caterpillars and grubs. 20 liters cow urine mixed with crushed leaves of any 5 plants 2 kg (each), whose leaves are bitter in taste, not preferred by animals and have medicinal properties. 6-8 liters formulation is used in 200 litres of water.
- ✚ **Khattilassi:** It is simply a dilution of 5 litres of khattilassi in 100 litres of water. It has anti-fungal and anti-viral properties.
- ✚ **Neem Malham:** is an effective remedy against all stem affecting insects. 20 liters cow urine is mixed with 20 kg fresh cow dung and 10 kg neem leaves/fruit pulp, 50 litres water is added to dilute it.
- ✚ **Sonthatar:** is used against all fungal, bacterial & viral diseases. It is prepared by using 200 gram dried ginger, 5 litres milk and 200 litres water.
- ✚ **Dashaparni Ark or Kashaya:** it is used as an alternate of neemastra, bramhastra and agnitra to control various types of pests. In 200 litres water, 20 litre cow urine, 2 kg cow dung, 1 kg tobacco powder, 1 kg chilli pulp, 500 gram turmeric powder, 500 gram garlic paste, 200 gram ginger paste and 10 gram asafoetida with any 10 leaves of bitter taste are mixed. 6-8 liters formulation is used in 200 litres of water.
- ✚ **Natural Fungicide:** Fungicides prepared from cow milk and cow milk curd is proved very effective against fungus.
- ✚ These formulations are prepared on the farm and used on the same farm or distributed to the needy, to fulfil the criteria of Natural farming. These formulations are safe and chemical residual free. Moreover, these are the best alternatives to expensive fertilizers and chemical insect-pest control.

References:

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