

EM-fermented plant extract (EM-FPE)

There are many traditional recipes of fermented plant material, with or without any additional preparations, some to be used as liquid manures, some for pest control. EM-FPE makes use of this traditional knowledge on pest control and adds EM for fermentation to optimize the effect.

EM-FPE for pest control and EM5 for disease control may be mixed along with activated EM solution (AEM) so as to economize labor for application.

Preparation & application:

Fill a container (preferably of plastic, with an airtight lid) two-thirds with plant material freshly cut and chopped (into one-inch pieces), e.g. 14 liters volume in a 20-liters bucket.



Add clean and chlorine-free water of the same volume. This will more or less fill the container. Add 3% (of the water volume) EM1 and 3% molasses/jaggery, in our example (3 x 140ml =) 420ml of each. Instead of adding EM1 and jaggery, you may add the same volume (420 ml) of AEM.

In order to submerge the plant material fully you might have to place a heavy weight, e.g. a flat stone, on top of the plant material. Close the container, keep it airtight for one week to ten days, and let fermentation take place.

After one week strain (sieve) the coarse materials out and keep the clear EM-FPE in an airtight container for storage. Strained and stored like this, the extract has a shelf life of two months.

EM-FPE is used as a foliar spray at the same dilution as EM5, i.e. between 1:200 to 1:1,000. Regular sprays e.g. fortnightly, serve as a preventative measure, but in case of acute pest attack sprays should be applied every other day.

Plant material:

For pest control you are advised to choose plants that are known to have a pest-repelling or controlling effect, such as e.g. neem and tobacco. Spice plants and medicinal plants are likely to have such effects; also plants that are typically used for live fences, i.e. which stray cattle and goats do not touch, such as e.g. *adathoda* and *vitex negundo*.

A list of recommended plants: *adathoda vasica*, *aloe vera*, *andrographis paniculata*, *artemisia vulgaris*, *calotropis gigantea*, chilli, *chrysanthemum cinerifolia*, devil's trumpet (*datura*), garlic, ginger (*zingiber officinale*), neem (*azadirachta indica*), *nerium theviti- folia*, onion, papaya, *parthenium*, pepper, *pongamia glabra*, *strychnos nux vomica*, tobacco plant, *tulasi (ocimum sanctum)*, turmeric (*curcuma longa*), *vitex negundo*.



A mixture of at least five different plants is recommend as we rarely know which particular plant acts against which specific pest. The farmer or gardener is encouraged to be inventive and create her/his own cocktail and experiment with it. Whatever plant material is available readily and free of cost, may well constitute the major proportion of the mixture.