

# **Organic Pesticides and Insecticides**

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# 1. <u>Beejamrit</u>

Beejamrit is used in the treatment of seeds. Remedies related to treatment and with its use, the plants are protected from soil-borne disease.

### Material-

- Cow dung 2 kg
- Cow urine 5 liters
- Water 20 liters
- Termite soil 1 kg (Red ants houses soil below the Banyan/Peepal tree)
- Chuna 100 gm

### Method-

- First take 20 liters of water in a vessel (only use plastic bucket or pot of clay, no iron bucket or any metal utensil)
- Put 5 kilograms of cow dung in a cotton cloth and tie the bundle with the help of a pole. Hang such that the dung bundle kept hanging above the water vessel.
- Now take 5 liters of cow-urine and half a kilogram of dim/red ant house soil. Mix it together and leave this mixture for half an hour.
- After 1 hour, squeeze the bundle slowly and remove all the juice of the cow in water. Take out the dung bundle.
- Mix everything with the help of a wooden stick left to right until a small vortex started to form in the solution. Immediately after that mix in the opposite direction that is from right to left for 12-15 times. (This process has to be repeated two more times after 10-12 hours.)
- After this, again hang the cow dung in the bucket with the help of poles in the slurry and leave it for 10-12 hours.
- After 10-12 hours, once again mash the dung bundle for 2-3 minutes, add 100 grams of lime to the slurry in the solution, for the third time and last time, from the poles left to right 10-12 times and from right to left 12-15 times mix as you make the bar vortex.
- Beejamrit should be prepared by mixing it thrice in 24 hours. Use it by filtering with a cloth.



#### Storage-

• Beejamrit can be kept for 3-4 weeks.

# Method of use-

• Get the seeds thoroughly bathed with Beejamrit and use the seeds after drying in the shade for 1 hour after treatment. Beejamrit provides life force to the seed. As cow dung fungus in Beejamrit control diseases.

- Use clay or plastic utensils to make Beejamrit, not metal.
- Do not pour cow dung directly into the mixture, make a bundle and squeeze its juice.
- Sieve the mixture before use.



# 2. Neemastra

Neemastra kills small insects, saplings insects and insects in the crop.

# Material-

- 100 liters of water
- Neem leaf 10 kg
- Fresh cow dung 2 kg
- Cow urine 10 liters

# Method-

- First take 100 liters of water in a drum and mix 10 kg of powdered neem leaves in it.
- Then add 2 kg of dung to the mixture and mix it well in water.
- Then add 10 liters of urine in the mixture.
- After this, leave the mixture tanked for 3 days to rot and stir it in between with pole 3 times in a day.
- Sieve the mixture after 3 days.

This solution can be used for spraying crops once a week (without adding more water)

- Before use, reduce the neem leaves by crushing them.
- After mixing all the ingredients together, cover the mixture in the shade for 2 days.
- Mix the mixture every morning and evening with the help of a pole.
- Sieve the mixture with the help of a cotton cloth before use.



# 3. Brahmastra

This substance is an effective medicine to destroy all insects and pests in the crop.

### Material-

- Neem leaf 3 kg
- Papaya leaf 2 kg
- Sindwar leaf 2kg
- Bitter guard/karanj/castor leaf 2 kg (whichever is found use)
- Vine leaf 2 kg
- Datura leaf 2kg
- Cow urine 10 liters
- Waste of fruits (guava, berries, mangoes, jackfruit etc.) 2 kg

### Method-

- Grind all the leaves and fruits pieces separately and grind them coarsely.
- Now heat 10 liters of urine in an earthen pot.
- After this, powdered neem leaves, papaya leaves, sindwar leaf, bitter guard/karanj leaf and add the datura leaf alternately.
- After this, heat the mixture till it comes to boil.
- To reduce the pressure of the boil, either lower the flame or the fire or take it off the stove. Boil 5 times in the same way. With the help of pole stir the mixture time to time during the boil. Leave to cool after boiling.
- After it gets cold, cover the mixing vessel with a cloth and keep it in a shady place and leave it like this for two days.
- After 2 days, sieve it with fine/thin cotton cloth.

#### Storage-

• Brahmastra can be kept for 6 months.

#### Use-

• It is used for the destruction of large insect pests and insects in the crop. Due to its use, health of the crop is good and the yield also increases.



# Method of use-

• Mix 2.5 liters of Brahmastra in 100 liters or spraying in one acre sprinkle. After 15 days it can be sprayed again on the crop.

- It is necessary to grind or crush the materials being used.
- Do not excessive boil the mixture, otherwise its medicinal properties will be lost.
- After the mixture cools down, wrap it with a cloth or sati sack and let it sit for two days. Keep it in a place.



# 4. Agniyastra

This substance is an effective insecticide to destroy fruit borer and sundi insects.

### Material-

- Cow urine 10 liters
- Green chili 500 gm
- Garlic 500 gm
- Tobacco 1 kg
- Neem leaf 5 kg

### Method-

- Coarsely grind green chilies, garlic and neem leaves.
- Heat 10 liters of cow urine in an earthen pot.
- Then add 5 kg of powdered neem leaves to it.
- Then mix 500 grams of powdered green chilli and powdred garlic alternately.
- Then add 1 kg of finely chopped tobacco and mix it well, shake with the help of pole
- Once this entire mixture comes to boil, either reduce the heat or put the pot off from the stove and almost immediately again let it boil on the stove.
- Stirring/mixing the mixture with the help of pole in between. Similarly, after boiling for 4 times, take the whole mixture off the stove and let it cool.
- Make sure that the boil does not continue to boil over and over again, so the mixture will not get more cooked and waterier and its demonic qualities will not be destroyed.
- After frosting, cover the mixture with a cloth or cotton sack. Place it in a shady place for 2 days.
- Sieve the mixture with a cotton cloth after 2 days.

#### Storage-

• The mixture can be kept and used for 3 months.

#### Use-

• It is used for the destruction of insect pests and all insects and all big sundis. It is an effective insecticide.



# Method of use-

• Mix 2.5 liters of agniyastra in 100 liters for spraying in one acre crop.

- It is important to grind or crush the ingredients being used.
- Do not boil the mixture excessively otherwise its medicinal properties will be destroyed.
- After mixing the mixture, cover it with a cloth or cotton sack and leave it in a place for two days. Sieve the mixture with a cotton cloth before use.



### 5. Milk aur Sonth Dawa

This substance is a fungus destroyer.

### Material-

- Dry ginger 200 gm
- Domestic cow milk 5 liters
- Water 2 liters

### Method-

- First prepare the powder or dry ginger, then boil it in 2 liters of water till the water go from 2 liters to 1 liter.
- After that leave it for 2 hours to cool down. After that filter it with cotton cloth.
- Then boil 2 liters of cow's milk in a separate pot until it becomes 1 liter.
- After that, leave the milk to cool down for 2 hours.
- Then mix boiled water with milk and dry ginger.

#### Storage-

• It cannot be kept longer than the day.

#### Use-

• Mix 2.5 liters of medicine in 100 liters of water for spraying in one acre crop.

- Make powder by grinding and crushing sooth.
- Boil dry ginger in 2 liters of water until it is 1 liter.
- Boil 2 liters if milk until it is 1 liter.



# 6. Cow Dung and Hing Dawa

This fluid protects the crop from fibrous pests. Useful for under soil germinated fruit (tuber crops).

# Material-

- Cow dung 5 kg
- Cow urine 5 liters
- Water 20 liters
- Asafetida 150 grams
- Lime 100 grams

### Method of use -

- First of all, take 20 liters of water in a vessel, in which the cow dung and cow urine are well mix and cover the pot with cloth or sack and let the mixture rot for 4 days.
- After 4 days, add asafetida and lime to it and mix well with the help of a pole. Keep in mind that the asafetida should be grinded finely and mix with water in a glass and then mix it in the mixture.
- Then filter it with a cotton cloth.

#### Storage-

• It can be kept for 4 days.

#### Use-

• Removes yellowing of leaves. It sprinkled in tuber crops (potato, sweet potato etc.). it is used as fungicide even when fungal disease occurs.

# Method of use-

• Mix 2.5 liters of cow dung medicine in 100 liters of water for one acre crop.

- Cover the mixture of water and cow urine and let it rot for 4 days.
- After 4 days, add asafetida and lime.
- Before use, finely grind the asafetida and dissolve it thoroughly in glass of water.



# 7. Khatta Matha Ghool

This fluid protects vegetables from many diseases and also acts as a fungicide.

### Material-

- Sour matha 6 liters 3 days old yogurt
- Water 100 liters

### Method-

- First take 100 liters of water in a drum, mix 6 liters of sour matha in it.
- Stir it well with the help of a pole.

#### Storage-

• Use within 8-10 hours with the preparation of matha solution. Keeping it for longer than this reduces its effect.

#### Use-

• Spray this solution directly on the crop without adding water. All kinds can be used in fungal diseases and viral diseases of crop. Used especially as tonic in vegetable crops. Due to this, yield of the crop is also good.

- Make matha with sour curd.
- Use for decoction without adding water to the solution.



### 8. Lemon-Egg Ki Dawa

It is an insecticide, useful for crop enrichment.

#### Material-

- Lime juice 1 liter
- Raw egg 6 poultry

### Method-

- First of all, take a 1-liter plastic or transparent container with a glass lid.
- Add lemon juice to this pot.
- With this juice, put 6 eggs in the dough.
- After this, close the suit box with the lid.
- Open the lid once or twice a day and leave it open for half a minute (with air). Close the lid again.
- In 8-10 days, the peel of the egg melt on its own and dissolves in the lemon juice. Use should wait 25-30 days for complete rotting.
- When the egg is completely melted, open the lid and bring the medicine in use.

#### Storage-

• It can be kept for one month.

#### Use-

• The is useful for prevention of plants from various diseases. Also used as tonic for the plant. It is especially used in chilis, vine vegetable crops and paddy etc.

# Method of use-

• Spraying 50 ml of solution in 15 liters of water is beneficial.

- Use transparent utensils.
- Open the lid once or twice a day, leave it open for half a minute, close the lid again (with air)
- Leave the paste for 25-30 days to rot completely.



# 9. Bel-patra ka Kaadha

This decoction is effective in controlling paddy disease and sundi pests.

### Material-

- Vine leaf 5 kg
- Soap powder 100 grams
- Water 10 liters
- A utensil

### Method-

- First put 5 kg of vine leaves in a pot.
- After that add 10 liters of water and boil it for 30 minutes
- Mix it well with a pole and leave it to cool.
- After cooling, filter the decoction with a sati cloth and add 100 grams of soap powder and mix it well.
- Add 100 liters of water to this decoction and use.

# Experiment-

- This decoction is sufficient for use in one acre crop. Spray it in the morning and evening to crops.
- This decoction cab be used 1 to 2 times during the harvest period. Use the prepared decoction immediately and do not store it.
- While preparing this decoction, wrap your nose with a cloth.

- It is necessary to boil the vine leaves for 30 minutes.
- Mix 100 grams of soap/surf.
- Make a solution by mixing the decoction in 100 liters of water before use.



### 10. Karanj ka Kaadha

#### Materials required-

- Karanj seeds 5 kg
- Soap powder 100 gm
- Water 100 lietrs

#### Method-

- Separate the seeds from the fruit of karanj and soak it for 1 hour.
- After that take the soaked seeds out of water and grind well to make a paste.
- Take the powdered seed paste in a cloth in a pot filled with water for 10-12 hours soak it.
- Squeeze the decoction of the curd with a cloth and take it out in water.
- Add 100 grams of soap powder to this decoction.
- Mix this solution in 100 liters of water and spray it in one acre. Use it

#### Experiment-

• Assessment of crop condition and damage, this decoction can be sprayed 2-3 times in one crop. Walnut powder or shikakai powder can also be used in place of soap water. This decoction can be used in all crops.

#### Storage-

• This decoction should be used immediately after making as it is not possible to store it.

- It is necessary to fluff and grind before using the seeds of karanj.
- Dip the paste of ground seeds into a cloth tied in water.
- Add 100 grams of surf/soap power to the decoction.
- The decoction is to be needed with 100 liters of water before spraying.



# 11. Neem Beej Ghool

It is a very popular bio pesticide made from neem seeds. It is used to prevent various types of insects in crops. This is very effective recipe mainly for insects such as pod borer and grasshoppers that eat leaves.

### Material-

- 500 grams of neem seeds
- 5 liters of water
- Soap or surf powder 20 grams

### Method-

- Grind finely 5000 grams of dried neem seeds
- Tie it in a fine cloth (maslin cloth) like a bundle and keep it in a pot for 5 liters of water overnight (for about 12 hours) 5-10 minutes gradually mash and allow the neem seed extract to dissolve in the solution.
- Then filter the slurry with a fine cloth and add 5 liters of water to it. Now the total volume of solution will be 10 liters.
- Add 20 grams of soap or any detergent powder to this solution and use it as a spraying to control insects in the crop.

# Experiment-

- About 150 liters of solution will be required in one acre (10 liters solution will be sprayed in 8 decimal fields).
- There is a possibility of using this solution from the initial stage of the crop itself and spraying it continuously at intervals of 15-20 days does not harm the crops in any way.
- When making of nursery of vegetables especially tomato, brinjal, chili and cabbage etc. it should be used only from the 7-8 days of the stage of the plant and regular spraying should be done after a gap of 8-10 days.

# Storage-

• Fresh spray should be made for spraying every time.



• Farmers should collect 50-100 kg neem seeds during the neem season, wash it thoroughly with water and dry it properly and keep it in a safe place in plastic or coir sacks or in a pot.

- Grind and use dried neem seed
- Make bundle of ground seeds and keep them submerged in water for 12 hours.
- Spray 5 liters of water and 20 grams of surf in the prepared solution.



# 12. Tobacco ka Kaadha

The insects that eat white fly, mite leaves are successfully controlled using a decoction of leafy tobacco usually in villages. In villages where farmers cultivate tobacco and tobacco is available, they can use their own tobacco, otherwise the tobacco found in the market can be made using its powder as follows.

#### Material-

- 1 kg of tobacco
- 10 liters or water
- Clay or metal vessel with a capacity of 10-15 hours
- Soap or surf powder 200 g

### Method of preparation:

- Soak 1 kg of tobacco in 10 liters of water overnight (about 10-12 hours)
- Boil this solution in a clay or metal vessel for about 30 minutes or until color turns red like coffee. The water will reduce due to boiling until the solution becomes red in color. Add more water to it and make it again in 10 liters and boil for 1-2 minutes. Remove it from the fire. Leave the decoction to cool.
- Now mix this 10-liter decoction into 90 liters of water and make it 100 liters.
- Add 200 grams of soap or detergent powder to it and do it on the sprinkling the crop.

# Use and storage-

- This decoction should be used within 5-7 days.
- Keep in mind that decoction or use of tobacco should not be used more than twice as it can also harm good insects.

- It is necessary to soak tobacco in water overnight (10-12 hours).
- Boil the solution until color turns red like coffee.
- Dissolve 10 liters or cut in 90 liters of water, add 200 gm of surf and use for spraying.



# 13. Cow Dung and Cow Urine Ghool

Naturally large amounts of bacteria are found in the cow dung and cow urine of the native cow which can be used not only to protect the crops and diseases from scientific methods but the production of crops can also be increased.

Here, its use mainly consists of all kinds of sundries, such as leaf-eating sundi insects, fruitpiercing lobes, white flies, gourd and red-worm worms and moths. The methods of controlling insects are being described.

### Materials-

- Cow dung 5 kg
- Cow urine 5 liters
- Neem or karanj leaf 5 kg
- Lime 100 grams
- 5 liters of water
- Clay or plastic utensil 1

#### Method-

- Collect 5 kg of cow dung and 5 liters of cow urine of native cow and 5 kg of neem or karanj leaves.
- Cut neem/karanj leaves into small pieces. Keep in mind that the juice from the leaves should not come out.
- Now mix cow dung and cow urine in a clay or plastic vessel and mix it well so that a paste is prepared.
- Now add 5 liters of water and dilute it slightly by mixing the mixture properly. Put the chopped leaves of neem/karanj in it as well and mix them very well with a thin coat of cow dung and urine.
- Place this mixture in a shaded place and cover the pot properly with a lid or plastic sheet on the top and tie it with a rope or twine. Keep in mind that there will be a gas in this vessel which has to be prevented from coming out.
- Open this after exactly 4 days and with the help of a stick. Mix the whole mixture very well. Now it has to be filtered with a thin cloth.
- If the mixture looks thick, add 4-5 liters of water to it and dilute it and filter the solution and separate the leaves.



- In this solution, mix 100 grams of lime and mix once again.
- Add as much water to slurry as possible, so that the total amount of the slurry becomes 80 liters.
- Use 80 liters of solution for the crop planted in one acre, spray it in the evening.

- It is necessary to cut the leaves of karanj.
- Cover the mixture and keep it in a shady place for 4 days and keep mixing it with the help of the poles in between.
- Sieve the solution before use and mix 100 grams of it in it.