



Brahmastra, Agniastra, Neemastra and Dashparni Ark: Low-Cost Botanical Formulations for Sustainable Pest Management

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Nowadays, farmers are mostly using chemical pesticides to control insect pests in crops. These chemicals give quick results and kill insects fast. However, continuous and excessive use of chemical pesticides has created many problems. Insects are becoming resistant to pesticides, meaning the chemicals are no longer as effective as before. Sometimes, after spraying, pest numbers increase again (pest resurgence). Chemical residues remain on crops, which can be harmful to human health. Beneficial insects like ladybird beetles, spiders, and pollinators are also killed. In addition, soil health and the environment are affected, and the cost of cultivation increases. To overcome these problems, natural and plant-based preparations such as Brahmastra, Agniastra, Neemastra and Dashparni Ark are becoming popular among farmers. These are low-cost and eco-friendly pest control solutions used in natural farming. They are prepared using locally available plant leaves and cow-based materials. These formulations help prevent and reduce pest attacks when used at the right time and in the right way.

What is Brahmastra?

Brahmastra is a natural, plant-based insect control solution used in natural farming to manage crop pests in an eco-friendly and low-cost way. It is prepared from different bitter and medicinal plant leaves mixed with indigenous cow urine. Brahmastra does not act like chemical pesticides that immediately kill insects. Instead, it works slowly by repelling insects, reducing their feeding, disturbing their growth, and preventing egg laying. When applied at the right time, especially during the early stage of pest attack, it helps reduce pest population safely without harming the environment and beneficial insects.

How to Make Brahmastra?

Brahmastra can be easily prepared at the farm level using locally available materials. For preparation, neem leaves (3 kg), custard apple leaves (2 kg), papaya leaves (2 kg), guava leaves (2 kg), and pomegranate leaves (2 kg) are required. If some leaves are not available, farmers can use other locally available bitter leaves. First, all the leaves should be crushed properly. Then, the crushed leaves are mixed with 10 litres of indigenous cow urine in a clean iron or earthen pot. The mixture should be boiled on a low flame until it rises or foams 3–4 times. After boiling, allow the solution to cool and keep it in shade for about 48 hours. Then filter it using a clean cloth and store it in a plastic container. The prepared Brahmastra can be stored in the shade for up to three months.

How to Use Brahmastra?

For spraying in the field, farmers should mix 3–4 litres of prepared Brahmastra with 200 litres of water per acre of crop. The solution should be sprayed uniformly on both upper and

lower surfaces of the leaves using a knapsack sprayer or power sprayer. Spraying should be done during the early morning or evening hours and avoided during hot afternoon sunlight. For better results, it should be applied at the early stage of pest infestation and can be repeated after 7–10 days if needed.

Target Insect Pests

Brahmastra is effective against both sucking and chewing insect pests. It helps control sucking pests such as aphids, jassids, whiteflies, thrips, and mealybugs. It is also useful against chewing pests like leaf-eating caterpillars, semi-loopers, and early-stage larvae of borers. It can be used in many crops such as paddy, cotton, pulses, vegetables, oilseeds, and fruit crops.

How Farmers Apply It in the Field?

Before spraying, farmers should filter the solution properly to avoid blockage of the spray nozzle. The diluted solution should be sprayed evenly across the crop so that all plant parts are covered. It is important to monitor the field regularly and spray when the pest population is low or at the beginning of infestation. Farmers should avoid mixing Brahmastra with chemical pesticides. If necessary, spraying can be repeated at weekly intervals depending on pest severity.

How Does Brahmastra Kill or Control Insects?

Brahmastra controls insects mainly through repellent and antifeedant action. Neem leaves contain a natural compound called azadirachtin, which disturbs insect growth and prevents proper moulting. The bitter compounds present in different leaves make the plant unpalatable, so insects stop feeding on it. As a result, insects become weak, their development is affected, and their population gradually decreases. It may not give immediate knockdown like chemical pesticides, but regular and timely application effectively reduces pest damage in crops.

What is Agniastra?

Agniastra is a natural pest control formulation used in natural farming to manage harmful insects, especially caterpillars and borers. It is prepared using cow urine, neem leaves, tobacco, green chilli, and garlic. Due to its strong ingredients, Agniastra is considered more powerful than many other natural formulations. It helps in controlling insects without causing harm to the environment, soil, or beneficial insects when used properly. Agniastra does not always give instant knockdown like chemical pesticides, but it effectively reduces pest population by stopping feeding and disturbing insect activity.

How to Make Agniastra?

Agniastra can be prepared easily at the farm level using locally available materials. For preparation, take 10 litres of indigenous cow urine, 5 kg of neem leaf paste, 1 kg of tobacco powder, 500 grams of green chilli paste, and 500 grams of garlic paste. First, mix all the ingredients properly in a clean iron or earthen pot. Then boil the mixture on a low flame until it rises or foams 3–4 times. After boiling, allow the solution to cool and keep it in shade for about 48 hours for proper fermentation. After two days, filter the solution using a clean cloth and store it in a plastic container. The prepared Agniastra can be stored in a cool and shaded place for some time.

How to Use Agniastra?

For field application, mix 2–3 litres of Agniastra in 200 litres of water for one acre of crop. Spray the solution uniformly on both upper and lower surfaces of the leaves using a knapsack sprayer or power sprayer. Spraying should be done during morning or evening hours and avoided during hot afternoon sunlight. For better results, apply Agniastra at the early stage of pest attack. If pest infestation continues, spraying can be repeated after 7–10 days.

Target Insect Pests

Agniastra is mainly effective against chewing pests and larvae such as stem borers, fruit borers, pod borers, and leaf-eating caterpillars. It is especially useful in crops like cotton, vegetables, pulses, maize, sugarcane, and fruit crops where borer problems are common. It works best on early-stage larvae.

How Farmers Apply It in the Field?

Before spraying, farmers should filter the solution properly to prevent clogging of the sprayer nozzle. The spray should cover all plant parts, especially the areas where larvae are feeding. Farmers should regularly monitor their fields and apply Agniastra when the pest population is low or at the beginning of infestation. It should not be mixed with chemical pesticides. Protective gloves should be used while preparing and spraying because it contains tobacco and chilli

How Does Agniastra Kill or Control Insects?

Agniastra works through multiple actions. Neem contains azadirachtin, which disturbs insect growth and development. Tobacco contains nicotine, which affects the nervous system of insects. Garlic and chilli act as strong repellents and feeding deterrents. When insects come in contact with sprayed plants, they stop feeding due to irritation and bitterness. Their growth and development are disturbed, and gradually their population decreases. Although it may not provide immediate killing like synthetic chemicals, regular and timely application helps in effective pest suppression.

What is Neemastra?

Neemastra is a natural and low-cost pest control solution prepared mainly from neem leaves, neem fruits, cow dung, and cow urine. It is widely used in natural farming to manage sucking insect pests in different crops. Neemastra is easy to prepare at the farm level and is safe for the environment, soil, and beneficial insects when used properly. It works mainly as a repellent and feeding deterrent, helping to reduce pest population gradually. It is most effective when applied at the early stage of pest infestation.

How to Make Neemastra?

Neemastra can be prepared using locally available materials. For preparation, take 5 kg of neem leaves, 5 kg of neem fruits (if available), 5 kg of fresh cow dung, 10 litres of indigenous cow urine, and 100 litres of water. First, crush the neem leaves and fruits properly. Then mix them in a plastic drum with cow dung and cow urine. Add 100 litres of water and stir the mixture well. The solution should be stirred twice daily (morning and evening) for two days. After 48 hours, filter the solution using a clean cloth. The filtered solution is ready for spraying in the field.

How to Use Neemastra?

Neemastra is generally used directly after preparation. About 200 litres of prepared solution is sufficient for spraying one acre of crop. The solution should be sprayed uniformly on both upper and lower surfaces of the leaves using a knapsack sprayer or power sprayer. Spraying should be done during early morning or evening hours and avoided during hot sunny periods. For better results, it should be applied when the pest population is low or at the beginning of infestation. If needed, spraying can be repeated after 7–10 days.

Target Insect Pests

Neemastra is mainly effective against sucking pests such as aphids, whiteflies, jassids, thrips, and mealybugs. These pests suck plant sap and weaken the crop, causing yellowing, curling of leaves, and reduced growth. Neemastra can be used in crops like paddy, cotton, vegetables, pulses, oilseeds, and fruit crops where sucking pests are common.

How Farmers Apply It in the Field?

Before spraying, farmers should filter the solution properly to avoid blockage of the sprayer nozzle. The spray should cover all parts of the plant, especially the underside of leaves where sucking pests are usually found. Regular field monitoring is important to identify early pest attacks. Neemastra should not be mixed with chemical pesticides. Farmers are advised to prepare fresh solution for better effectiveness and use protective measures while spraying.

How Does Neemastra Kill or Control Insects?

Neemastra mainly works due to the presence of neem compounds such as azadirachtin, salannin, and other bitter substances. These compounds act as repellents and antifeedants. When insects feed on sprayed plants, their feeding activity reduces, their growth is disturbed, and egg laying decreases. As a result, the pest population gradually declines. It does not give instant killing like chemical pesticides, but regular use helps in reducing crop damage and maintaining ecological balance in the field.

What is Dashparni Ark?

Dashparni Ark is a natural plant-based pest control solution prepared from the leaves of ten different plants (“Dash” means ten and “Parni” means leaves). It is widely used in natural and organic farming for controlling a wide range of insect pests. Dashparni Ark works mainly as a repellent, antifeedant, and growth inhibitor. It helps in reducing pest populations gradually without harming soil health, beneficial insects, and the environment. It is a low-cost and eco-friendly alternative to chemical pesticides.

How to Make Dashparni Ark?

Dashparni Ark is prepared using the leaves of ten different plants along with cow-based materials and some natural spices. To prepare it, first collect 2 kg each of ten types of leaves such as neem, custard apple, papaya, guava, pomegranate, castor, datura, calotropis (ak), nirgundi, and any other locally available bitter leaves. Chop or crush all the leaves properly into small pieces. Take a large plastic drum and add about 200 litres of clean water. Put all the crushed leaves into the drum. Then add 5 kg of fresh cow dung, 10 litres of indigenous cow urine, 500 grams of green chilli paste, and 500 grams of garlic paste. Mix everything thoroughly using a wooden stick. Cover the drum with a clean cloth and keep it in a shaded place. Allow the mixture to ferment for about 30 to 40 days. Stir the solution daily, preferably once in the morning and once in the evening, to ensure proper fermentation. After 30–40 days, filter the solution using a clean cloth. The filtered liquid is Dashparni Ark and is ready for spraying in the field.

How to Use Dashparni Ark?

For field application, mix 3–5 litres of Dashparni Ark in 200 litres of water for one acre of crop. Spray the solution uniformly on both upper and lower surfaces of leaves using a knapsack sprayer or power sprayer. Spraying should be done during early morning or evening hours. Avoid spraying during hot sunlight. For best results, apply at the early stage of pest infestation and repeat after 7–10 days if necessary.

Target Insect Pests

Dashparni Ark is effective against many types of insect pests that attack crops. It helps in controlling sucking pests such as aphids, whiteflies, jassids, thrips, and mealybugs, which suck plant sap and cause yellowing, curling of leaves, and weak plant growth. It is also useful against chewing pests like leaf-eating caterpillars, semi-loopers, stem borers, fruit borers, and pod borers that damage leaves, stems, flowers, and fruits. Because it is prepared from different bitter and medicinal plant leaves, it has a broad effect on many harmful insects. Dashparni Ark can be used in crops like paddy, cotton, vegetables, pulses, oilseeds, sugarcane, and fruit crops where both sucking and chewing pests are commonly found. It works best when applied at the early stage of pest attack before the pest population becomes too high.

How Farmers Apply It in the Field?

Farmers should regularly monitor their fields to detect early pest infestation. Before spraying, the solution must be filtered properly to prevent nozzle blockage. The spray should cover the entire plant, especially the underside of leaves where pests are usually present. Dashparni Ark should not be mixed with chemical pesticides. Protective gloves should be used while preparing and spraying. Repeated application may be needed depending on pest intensity

How Does Dashparni Ark Kill or Control Insects?

Dashparni Ark works due to the combined effect of different plant compounds present in the ten leaves. Neem contains azadirachtin, which disturbs insect growth and feeding. Datura and Calotropis contain bitter and toxic substances that repel insects. Garlic and chilli act as strong repellents and feeding deterrents. The fermented mixture extracts active compounds from all plant materials, making the solution effective against many pests. When insects feed on sprayed plants, they stop feeding, their growth is affected, egg laying reduces, and gradually their population declines. It does not give instant knockdown like chemical pesticides but provides effective control when used regularly.

Conclusion

Brahmastra, Agniastara, Neemastra, and Dashparni Ark are low-cost and natural pest control solutions prepared from locally available plant leaves and cow-based materials. These formulations help control sucking and chewing insect pests in many crops. They mainly work by repelling insects, stopping their feeding, and disturbing their growth, which gradually reduces pest populations. Although they do not give instant results like chemical pesticides, regular and timely use helps in effective pest management. These natural preparations are safe for soil, beneficial insects, and the environment. By using them as part of Integrated Pest Management (IPM), farmers can reduce chemical pesticide use, lower cultivation costs, and promote sustainable and healthy farming practices.

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