



Over the past few years, there has been growing worldwide concern about the adverse effects of certain chemical pesticides. Lowered sperm count and reduced fertility, genital deformities and other congenital abnormalities, immune system dysfunction, altered foetal development, abnormal physical, mental and psycho-social developments in infants and children, degenerative disorders, cancer and other health problems are increasingly reported to be the result of exposure to some pesticides.

The food we consume every day is highly contaminated with chemical pesticides. Our homes also use a large number of these pesticides to get rid of common household pests such as houseflies, mosquitoes, cockroaches etc. Here are some guidelines for ensuring a home free of chemical pesticides by using natural remedies to combat them.

Controlling Silverfish .

Silver fish are long living, fast moving, wingless insects. Adults are 1/2 an inch in length, and are grey to green in colour. They are frequently introduced into the home through old stocks and are mainly seen in bookcases, shelves, behind windows and doors, especially in bathrooms and kitchens due to excessive moisture. They are also found in the nests of insects, birds and mammals.

(i) Take a card coated with any flour paste and place it near the shelves and boxes. It will trap the silver fish.

(ii) Excessive moisture favours the multiplication of silverfish. Calcium carbonate, which acts as a dehydrating agent can be used to absorb the excess moisture.

(iii) Periodic airing and sunning of materials will help prevent infestation.

(iv) To prevent further infestation, take 20 gms each of sweetflag powder and cumin powder in a cloth pouch and keep it in the corners of shelves.

Mosquito Control

Mosquitoes are transmitters of malaria, yellow fever, dengue fever, filariasis etc. They deposit their eggs on the watery surface near dustbins, unclean water, drainage etc. Breeding is increased in contaminated sewage water.

→ Use yellow non-attractive light to prevent the entry of mosquitoes into the houses.

→ Use mosquito nets and screens on windows and doors

→ Place burning coal in a mud vessel (preferably) and put dried neem, vitex¹ and pungam² leaves over it. Place this in the closed room for half an hour after dusk and then open the windows. This will repel mosquitoes. Keep the windows closed during the evening hours.

→ Cultivate plants such as castor and lemon grass around the house. These also repel mosquitoes.

→ While constructing a house make sure that the subdrains are

1. *Agnus castus*.
2. *Pongamia glabra*.

Natural Remedies for Controlling Pests in Your House

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perpendicular to the main drain so that there is no water stagnation or erosion at the connection point of the drains.

→ Do not allow any water to stagnate around the house as mosquito larvae breed in standing water.

→ If a water source cannot be drained, apply kerosene oil as a suffocating film on water surfaces. When the larvae try to break through the water surface to breed, the film of oil clogs the breathing tube and suffocates it.

→ Citronella oil is a good natural mosquito repellent which can be applied on clothing.

Getting Rid of Houseflies

Houseflies are transmitters of several diseases such as cholera, dysentery, diarrhoea etc.

→ Fly control is rooted in sanitation. Garbage should be wrapped and garbage containers tightly covered and frequently washed.

→ The shelters of pets and livestock should be cleaned regularly.

→ The garden should be kept free of unnecessary debris as this can serve as a breeding ground for flies.

→ Screen doors opening outwards is an excellent method of preventing problems with flies.

→ Powdered custard apple seeds act as contact poison for flies.

→ Grind 50 grams of garlic into a paste with water. Dilute with 5 litres of water and spray in the kitchen, bathroom etc. This repels houseflies.

→ Set up a trap using a plastic bottle without a shoulder. Half fill it with

water and add a few drops of any oil. Add 2 - 3 drops of milk. This attracts flies.

→ Cultivate plants such as chrysanthemum and marigold which repel houseflies.

Keeping Bedbugs in Check

These are blood-sucking parasites which transmit a large number of diseases such as relapsing fever, typhoid, plague etc. They have a lifespan of one year. Sealing the cracks and crevices of floors is the best measure for preventing bedbugs.

Fighting Cockroach Menace

Cockroaches are common household insects which contaminate foodstuff and cause damage to magazines, papers, boxes etc. The presence of this insect can be identified by a foul smell along with visible excreta.

→ A home-made cockroach trap can be built by putting a banana peel or a piece of white bread in a wide mouthed jar, and smearing the top inch of the inside of the jar with petroleum jelly (vaseline). The cockroaches enter the jar but cannot crawl out.

→ To set up a cockroach trap in a kitchen or bathroom, take a bottle without a shoulder and fill it with any sweet drink and add a tablespoon of oil. The cockroaches will climb in and drown.

→ Cockroaches live longer without food than without water. Therefore potential water sources such as dripping faucets and leaks as well as food sources should be reduced.

→ Food waste should be kept in containers with tight fitting lids and should be emptied outside frequently.

→ Dirty dishes should be submerged in soapy water until they are washed. The kitchen should be thoroughly cleaned, especially in areas where grease tends to accumulate.

→ Grind a handful of neem leaves into a paste and dilute with water. Filter the extract and spray in corners of the house

and in damp places. The leaf extract of marigold is also effective.

→ Small cracks and crevices should be sealed with paint or cement to reduce the number of cockroaches.

→ Avoid creating clutter - a stack of old newspapers is an ideal habitat for cockroaches.

Reduction Measures for Ants

Ants are another problem in our kitchens. When dealing with ants reduction is a more realistic goal than total eradication.

→ As with any other household pest, it is essential to clean and remove the food which attracts ants, clear the garbage, keep kitchen counters, the stove and the floor clean.



→ Identify the point of entry into the house and close it. This can be done by following the ant trail. If a clear ant trail leading to the entry point is not visible, place small pieces of card board or wax paper, dipped in a sugary solution around the room (in the evening). The next morning a thick ant trail should lead you to the point of entry. Once the entry point is identified it should be sealed with tape, toothpaste or petroleum jelly.

→ A soapy sponge or a spray bottle filled with soapy water can kill individual ants and erase the chemical trail the ants are following. Hot soapy water can also be used to drench the nest outside. Some ants are killed in the process and it forces the survivors to relocate the nests.

→ Ants can also be driven out of flower pots by taking the pots outside and

flooding them repeatedly with water.

→ Ants can also be lured away from the house by placing food particles in a small dirt filled clay flower pot. Once the ants move in, they can be destroyed by pouring boiling water into the pot.

Rodent Control Techniques

Rats and mice are prolific breeders and most active at night.

→ To prevent the entry of rats into houses, avoid overhanging trees or branches. Metal mesh should be fitted on all windows, ventilators, gutters, and drains and manholes should be covered properly.

→ Close fitting doors are a must. Rat holes must be closed immediately with cement, and if the hole is big enough should be filled with glass pieces. Accumulation of water near the house should be avoided.

→ Left over food and empty food containers should be kept away from storage places.

→ The best trap for a rat consists of a base, a spring, a trigger and a heavy wire. The spring is released as soon as a rodent steps on the trigger and the wire snaps down the rodent. Bait such as sweet food, dry fish, coconut piece, onion, etc. can be used as bait in the trap to encourage the rat to enter it.

Ways of Combating Termites

Termites can damage buildings worth several crores and can be more deadly than natural disasters.

→ Concrete foundations in construction are highly recommended as well as concrete caps over hollow block walls.

→ Ventilated spaces between the ground and wooden structures are also useful to fight termites.

→ The foundation of a building should not be buried, since this allows termites to tunnel into the wooden parts.

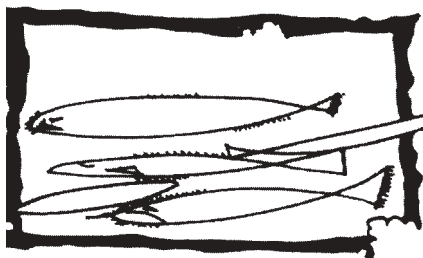
→ The use of neem wood can prevent termite attacks.

→ Particle barriers such as granite, sand or glass splinters can be used as a base material. The grain used should be big enough for the termites to move, and the spaces between them should be too small for termites to panel through. A 20 cm thick layer of these particle barriers can be placed outside the building or in crawl spaces.

→ *Neem* mulches act as a deterrent to termites. Neem oil and castor oil in a concentration of 3 percent can be sprayed over the termite nests. Latex from calatropis can also be used for termite control. Black pepper which is toxic for many insects, is also helpful.

Controlling Storage Pests

Wheat flour, turmeric powder, gram flour, rice flour, pulses, etc. get infested with pests such as the red flour beetle, the saw-toothed weevil, etc. if these food materials are stored in containers which are not opened for a long time. Many people are not aware of the symptoms nor the reasons for infestation by storage pests. The larva



as well as the adult of the insect breaks down the hard seed coat and enter the grain or pulse. Sometimes they completely eat away the endosperm content of the grains. In the case of flour damage, they make cases as well as leave excreta in the container itself.

Moisture and Drying

Excessive moisture in stored foodstuff is a major cause of fungal diseases such as mould, and also serves to attract pests. Hence, periodic airing of stored food in the hot sun prevents it from getting spoilt.

It is safe to store large quantities of foodgrains in gunny bags. Before storing, the bag may be treated with a neem kernel solution. A 10 percent neem kernel solution can be prepared, by powdering one kilogram of neem

kernel, gathering the powder in a cloth pouch and soaking it in 10 litres of water overnight. Squeeze the pouch to get the extract and dip the gunny bags into this solution for half an hour. Dry the gunny bags in shade and then use it to store grains. This method prevents storage pests for a year and can also be used for the treatment of cloth bags which are used for storage. For 10 cloth bags, two to three litres of neem seed extract solution is required.

Storing Plant Products

For storing grocery items such as pulses, wheat, *ragi* and other millets, the following methods can be adopted.

1. For a kg of any grain, 10 gms of neem seed powder must be used. The powder can be collected in a cloth pouch and placed inside the containers.
2. Powdered sweet flag rhizomes can be mixed in the proportion of one kg per 50 kg of grain. For the storage of rice, one kg per 100 kg of grain is recommended. This powder can be put in to a cloth pouch which is placed in the container where the grain is stored.

Common Insects Found in Foods Stored at Home

<u>Name of the Insect</u>	<u>Signs of Identification</u>	<u>Food Stuff Attacked</u>
Grain weevil	Black or brown body with long nose	Wheat
Saw-toothed grain beetle	Black flattened body with saw like teeth	Sorghum milo, maize, rice, flour, nuts, dried fruits, candies etc.
Paddy moth	Yellow coloured body with fringes of hair	Rice, sorghum, ragi
Rice weevil	Reddish brown coloured body with long nose	Rice, wheat, maize, millet and other grains
Copra beetle	Blue coloured body with red coloured legs	Copra, palm, kernels and animal food products
Indian meal moth	Reddish brown coloured body with whitish hind wings	Broken grains, flour and other grains
Drug store beetle	Flat reddish brown coloured body with hair	Turmeric, ginger, coriander and spices
Red flour beetle	Flat reddish brown coloured body	Vegetable powders, gram flour, copra, oil seeds, wheat flour, dry fruits
Pulse beetle	Reddish brown in colour with a round shaped body	All pulses like stored cowpea soyabean, blackgram, green gram, chickpea



3. Turmeric powder can be mixed at the rate of 40 gms per kilogram of grain. This provides for effective control over a period of nine months and can be used in solvent form to treat two kg of grain. The grain should be shade dried for half an hour before storage.

4. 50 grams of custard apple seed powder can be mixed with one kg of pulses such as soyabean, cowpea, red gram, pigeonpea etc. This mixture can be put into small cloth pouches and placed in storage containers.

5. While storing rice and pulses in metal containers, add two red chillies, and a handful of dried *neem* or vitex leaves which will give protection against storage pests.

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Escape

Fix yourself a drink.

And fix one for me.

You sleep on the bed.

I shall sleep on the couch.

Tomorrow morning, we will get up

Work for another day

And I promise

Tomorrow I will fix the drinks

Sharing

Sometimes, when you are just about to sleep

A thought comes to you

And you want to share it with the woman sleeping next to you.

You look at her,

Another thought comes to you

You forget the first one and express the other.

Assuming you have shared it.

Well, life is just a matter of preferences and assumptions

Taken for granted.

Vikram Singh

Foolish Radha

I was a fool to think

You're enamoured of my charms

My own mirror tells me

That I am a withered flower.

Colours and scents are bygone dreams

Then what in me caught your attention

And made you mad for me?

My mind and body soon responded to you –

Shameless me!

I thought I had the reins of my mind in my own control,

but no, I am pulled by some one else

I know not how to stop

Oh! Time, the great physician

Reliever of all pains

Come and cure this pain,

The terrible pain of love for that naughty Muraleedhara.

M.D. Umadevi Atherjanam