

Ghar Sodhon

A fumigant room disinfectant for disinfecting rearing house and its appliances

Disinfection means the elimination or inhibition of pathogenic micro-organisms in or on an object so that these no longer pose a threat. In sericulture, it is the destruction or inactivation of disease causing germs. The disinfectants help to reduce the incidence of disease by disinfecting the source of inoculums. The air of the rearing room is the common repositories of many of the pathogens which cause diseases in silkworm. If the sources of inoculums such as rearing equipments, environment etc. of the rearing room are contaminated with the pathogens, there are very less chances for saving the cocoon crop after brushing the larvae. Disinfection could be achieved by physical and/or chemical means. The micro-organisms differ in their resistance to destruction by physical/chemical means.

However, it is understood that presently, farmers are reluctant for room disinfection due to stress occurred during spraying the disinfection solution. Room disinfection presently available in the local market is not a ready made form and farmers are preparing disinfection solution without following the standard methodology. Sometimes, farmers are not allowed to remove their costly items/ utensils kept in the rearing house before spraying the disinfection solution due to scarcity of space/labour. Alternately, farmers are avoiding disinfecting the room due to damage of rearing house/ equipments etc. by the corrosive action of disinfection chemicals. Therefore, ultimate goal for room disinfection is not achieved in all rearing houses and disease is spreading.

To overcome the above situations, Central Sericultural Research & Training Institute, Berhampore (W.B.) recently formulated 'Ghar Sodhon' a room disinfectant with certain potential fumigant disinfectant chemicals considering the following advantages of fumigation disinfection.

- Diffusion of gas is very high and more than liquid.
- Gas can reach all the corners of the rearing room / equipments compare to liquid.
- In fumigant disinfectant, concentration and time of contact with pathogen is ensured about to destroy germ load completely but liquid disinfectant cannot ensure complete destruction of pathogen by required time of contact and concentration of disinfection.
- The area to be fumigated is usually covered to create a sealed environment for disinfection.
- Later on, the space is ventilated; the non hazardous gases are allowed to escape from the rearing room and render its safe for human enter.

Characteristics of 'Ghar Sodhon'

- It is a safe and cost-effective room disinfectant.
- It is effective equally in all environments.
- It is non-hazardous, non-staining, non-corrosive, non-irritative room disinfectant and effective against broad spectrum silkworm pathogens.
- The method of application is very easy and simple for disinfecting silkworm rearing house and rearing equipments.
- **Farmers can easily disinfect the rearing room without any stress and input like labour, spray machine, electricity, water etc.**

- **Farmer himself is enough for disinfection the rearing house and its appliances.**
- It ensures crop protection to destroy initial germ load in the rearing house thereby keep the rearing room free from pathogens at the outset of silkworm rearing.
- It contains anti-viral, anti-bacterial, anti-fungal and anti-protozoan chemicals, thereby, it is found very effective to inactivate all common silkworm diseases like, Grasserie, Flacherie, Gattine, Muscardine and especially, Pebrine.
- All rearing equipments like rearing tray, rearing stand, feeding stand, chandraki etc. used during silkworm rearing are disinfected by keeping inside the rearing room.
- No additional disinfectant chemical is required.
- 'Ghar Sodhon' is prepared with locally available chemicals.
- It is easy for transportation.

Method of application

- The product 'Ghar Sodhon' is available in the form of powder in a small sealed / air tight packet
- Open the sealed packet and keep the powder in a small glass or non-metallic plate (10-15 cm diameter) in a single / thin layer to facilitate the powder for fumigation smoothly in the rearing room.
- Close all the doors, windows, ventilators etc. of the rearing room in sealed condition for a minimum period of one day.
- On the next day, open all the doors, windows, ventilators etc. of the rearing room for fresh ventilation and the powder should be taken out from the rearing room.
- Silkworm rearing may be started on the next day of room disinfection.

Demonstration and transfer of 'Ghar Sodhon' technology



Requirement

1 pkt. (50g) is required for disinfecting rearing room and its appliances for rearing of 100 dfls, measuring 50 M³ or ~ 1800 Feet³ (~15'×12'×10').

Advantages

Average disease incidence was come down by 8 -10 % thereby average cocoon yield increase is 2.0 – 4.0 kg / 100 dfls.

Precautions

The disinfectant is to be kept in dry place and keep away from the reach of children after opening the packet.

Economics

Benefit Cost ratio: 5.19: 1.

Validation of 'Ghar Sodhon' technology at farmers' level

Silkworm Pathology Section of this Institute and seventeen Research Extension Centers, Sericulture Service Centers of Zonal Silkworm Seed Organization, Malda and Technical Service Centre, Directorate of Textiles (Seri), Govt. of West Bengal worked together under 'Ghar Sodhon'- a fumigant room disinfectant for silkworm disease management' in West Bengal, Jharkhand and Odisha states during 2014 -15 to find out its efficacy towards management of silkworm disease in rearing houses and appliances as well as to improve the larval survivality thereby increase the gain of cocoon yield over control.

Results

Average disease incidence has come down by 7.9% thereby gain of cocoon yield was 4.37 Kg (11.45%) / 100 dfls over control (5% Bleaching powder solution or 500 ppm Chlorine dioxide) using 'Ghar Sodhon' by 216 farmers brushed on 18,950 dfls for silkworm disease management.



For further details contact:

Director
Central Sericultural Research & Training Institute
Ministry of Textiles, Govt. of India
Murshidabad, Berhampore - 742101
Ph.: (03482) 253962 Ext.-244, 245
FAX: (03482) 251233/253930/224890
EPABX: (03482) 253962/63/64

BROCHURE: NO.16

YEAR: 2015

GHAR SODHON

A fumigant
room disinfectant for disinfecting
rearing house and its appliances



Dr. Satadal Chakrabarty
Dr. A. K. Saha



Silkworm Pathology Section
Central Sericultural Research and Training Institute
[ISO 9001: 2008 CERTIFIED]
Central Silk Board, Govt. of India, Ministry of Textiles
Berhampore – 742101 (West Bengal)