

ON-SITE SPAWN PRODUCTION INCUBATION AT ICAR-IIHR, HESARAGHATTA, BENGALURU

ICAR-Indian Institute of Horticultural Research, Hesaraghatta, Bengaluru, Karnataka is a premier horticultural institution in the country. It has state of the art End to End infrastructure and scientific expertise for Mushroom spawn (seed) production, Mushroom cultivation of Oyster, Milky, king oyster, shiitake and other lesser known species, processing and value addition, mushroom mechanization and training. The mushroom spawn production involves 5 steps i.e., Tissue culture, Mother spawn, Generation I, Generation II and Cultivation spawn. Machinery required will be Lmainar air flow, motorized grain cleaner, Boiler, mixer cum filling machine, inoculator and ICAR-IIHR designed boiler with chamber for sterilization along with spawn inoculation and spawn incubation rooms. The spawn bags produced by the incubatees in the ICAR-IIHR incubation center can either be sold to mushroom growers. ICAR-IIHR can help in market linkages through necessary information, linkages and contacts if any. The incubation facility at ICAR-IIHR at present is open to the entrepreneurs who have undergone mushroom cultivation training at ICAR-IIHR as on-site trainees.



MUSHROOM INCUBATION FACILITY



ICAR-IIHR designed sterilization system with separate boiler



Laminar air flow and BOD incubator



ICAR-IIHR designed grain mixer cum filling machine

ICAR-IIHR designed grain boiler



Spawn incubation facility

Incubation facilities available:

Sl. No.	Name of the facility	Function/ utility	Maximum capacity
1	Laminar air flow	Tissue culture	100 tissue culture Petri dish
2	Grain cleaner	To Clean the grain	200 kg per hour
3	Grain boiler	To boil the grain	180 kg boiled grain per batch
4	Autoclave for sterilization	To sterilize grain	180 kg grain per batch
5	Inoculation room with Laminar air flow and inoculator	To inoculate the spawn to sterilized grains	100 kg per hour
6	Incubation room	To incubate the sterilized and inoculated bag	Bags can hold 1500 kg in the incubation room up to full spawn growth

Fee structure for RTF bag production Incubation facility at ICAR-IIHR

S. No.	Particulars*	Charges to be paid by incubatee	Terms and Conditions
1	Membership fee	Rs 5000 + GST@18%	Non-refundable Validity period-1 year, Thereafter Rs 2500/- every year.
2	Caution deposit	Rs 10000	Refundable, Validity period-till the time of final exit from incubation
3.	Rental Fee	As per the option chosen by the incubatee	Refer item No. 5 below
4	Scientific advice for mentoring/ Training	A. No Fee for ICAR-IIHR mushroom Trainees B. Rs. 1000/- + GST @18% (Rs. One thousand only) per mushroom variety for those who have NOT undergone ICAR-IIHR mushroom training (Non - Trainees)	COMMON FOR BOTH TRAINEES (A) AND NON-TRAINEES (B) One-hour session for two days are not charged Afterwards, Rs.1000 per hour will be charged Note: The scientific advice time will be provided as per the availability of the mentor and prior appointment basis

5	RENTAL FEE DETAILS (Incubatees choose one among the following for their incubation period)		
Option A	Rental fee for tissue culture and making Mother spawn, G1 & G2 spawn	Rs.1000 + GST @18% per 10 tissue culture, G1 & G2 spawn production	Minimum 1 to 5 tissue culture plates, 15-75 G1 spawn bottles and 75-1125 G2 bottles.
Option B	Rental fee for sterilization & inoculation only	Rs.500 + GST @18% per day and multiple thereof	Minimum of 50 kg boiled grain to maximum of 150 bags boiled grain sterilization every day (20 working days x 100 = 2000 kg spawn may be possible). Inoculated sterilized grain with G2 spawn should be taken back after inoculation.
OptionC	Rental fee for sterilization, inoculation and keeping the bags for 8-10 days incubation in the existing facility	Rs.1000 + GST @18% for every 50 kg spawn minimum to maximum of 180 kg production	Minimum of 50 kg spawn to maximum of 180 kg spawn sterilization @ 180 kg spawn sterilization every day However, spawn running space is available only for a maximum 1500 kg spawn with present facility

Terms and conditions

- **Manpower will not be provided at all for any of the above operations**
- **All the fees to be deposited at mushroom lab, ICAR-IIHR, Hesaraghatta, Bengaluru-560089**
- Booking has to be done in advance; allotment will be done based on first come first serve basis and availability of the space and other facilities.
- The incubatees can occupy the spawn running chamber for maximum period of 25 days starting from the day of inoculation subject to the availability of space in spawn running chamber and availability of other equipment.

- Facilities are available only during official working days from 8.30 am to 5.30 pm excepting Saturdays, Sundays and on all central Govt. holidays.
- All the work may be carried out on daily basis with in the stipulated working hours
- If any electricity failure/problem occurs during the working hours, sterilization may be postponed to subsequent official working day or the alternative solution will be decided by the scientist of Mushroom Lab, ICAR-IIHR
- All the activities from Tissue culture to commercial spawn production has to be carried out by incubatees themselves.
- Institute man power will not be spared for incubatees.
- Institute is only facilitator for promotion of mushroom spawn production. Institute is not liable for any loss / mishap to material or person during the incubation period.
- Incubatees have to take all the responsibilities including their personnel risks.
- The decision of The Director, ICAR-IIHR, Bengaluru is final on any dispute if any arising during the incubation period.

7. Activities of Operations:

Mushroom spawn production
1. Tissue culture 2. Mother spawn production 3. Generation I spawn production 4. Generation II spawn production 5. Commercial spawn production
After complete spawn growth, the incubatee has to take the bags immediately