





## **ON-SITE READY TO FRUIT (RTF) BAG 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 'Ready to Fruit' (RTF) Bag technology developed at ICAR-IIHR addresses to bring mushrooms to every rural and urban home; the joy of growing their own mushrooms where there is space, skill and resource constraints. The RTF bag production unit comprises of a straw storage, straw cutting, straw soaking, mixing and bag filling shed, sterilization chamber, inoculation chamber and incubation or growth chamber. Machinery required will be motorized chaff cutter to cut straw, ICAR-IIHR designed multifuel boiler with chamber for sterilization. The RTF bags produced by the incubatees in the ICAR-IIHR incubation center can either be sold to urban and rural homes for home production or can be extended into the cropping phase at the incubatees own facility and the harvested mushrooms can be sold. 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.

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<b>MUSHROOM INCUBATION FACILITY</b>	<b>STERILIZATION ROOM</b>
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<b>INOCULATION ROOM</b>	<b>INCUBATION ROOM</b>

**Incubation facilities available:**

Sl.No.	Name of the facility	Function/ utility	Maximum capacity
1	Chaff cutter	To cut paddy straw into pieces	500 kg per day
2	Autoclave for sterilization	To sterilize 1kg bags @ 30-35 bags per cycle	3 cycles per day Maximum 100 bags (1kg wet substrate) can be sterilized per day with in institute's working hours (Max. 8 hours)
3	Incubation room	To incubate the sterilized and spawned bags	Bag hanging system can hold 500 bags (1kg wet substrate) maximum in the incubation room
4	Cropping room	To keep incubated bags for mushroom cropping	<b>NOT AVAILABLE</b> Incubatees to take the incubated bags to keep them in their own cropping room

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

S. No.	Particulars*	Charges to be paid by incubatee	Terms and Conditions
1	<b>Membership fee</b>	Rs 5000	Non-refundable Validity period-1 year, Thereafter Rs 2500/- every year.
2	<b>Caution deposit</b>	Rs 10000	Refundable, Validity period-till the time of final exit from incubation
3.	<b>Rental Fee</b>	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. <b>Rs. 1000/- (Rs. One thousand only) per mushroom variety for those who have NOT undergone ICAR-IIHR</b>	<b>COMMON FOR BOTH TRAINEES (A) AND NON-TRAINEES (B)</b> One-hour session for two days are not charged Afterwards, Rs.1000 per hour will be charged

		<b>mushroom training (Non - Trainees)</b>	<b>Note: The scientific advice time will be provided as per the availability of the mentor and prior appointment basis</b>
5	<b>RENTAL FEE DETAILS</b> (Incubatee choose one among the following for their incubation period)		
Option A	Rental fee for sterilization & inoculation <u>ONLY</u>	Rs.500 per day and multiple thereof	Minimum of 20 bags (1kg wet substrate) to maximum of 100 bags sterilization every day (25 working days x 100 = 2500 bags may be possible). Bags should be taken back to the incubatee's premises everyday
Option B	Rental fee for sterilization, inoculation and keeping the bags for 25 days incubation in the existing facility	Rs.1000 for every 20-bag minimum to maximum of 100 bags production	Minimum of 20 bags (1kg wet substrate) to maximum of 500 bags sterilization @ 100bags sterilization every day  However, spawn running space available only for a maximum 500 bags with present facility

**In case of Option A (sterilization and inoculation only), Option B (sterilization, inoculation and 25 days spawn running), inputs will be provided (if requested by Incubatee) on payment as per the following terms and conditions**

- a. Maximum of 30 kg (Rs. 450) Paddy straw per person in the beginning of incubation will be provided on payment. Afterwards, the incubatee should arrange paddy straw on the their own. However, other input materials can be provided on payment as per the availability of materials in stock .
- b. Manpower will not be provided at all.**

**Input material charges:**

- i. Input material charges for 20 RTF 1kg (wet straw per bag) bags production (Oyster mushroom)**

Non absorbent Cotton plugs	20 no	Rs 30/-
PP cover 12x16 inches size, 45-50 micron thick	20 no	Rs 20/-

Alcohol based hand sanitizer	25 ml	Rs 18/-
PVC ring 1¼ inch diameter, 3 mm thickness	20 nos	Rs 30/-
Spawn of particular variety	1 kg	* Rs 70/-
<b>Total</b>		<b>Rs 168/-</b>

Note: \* As per ICAR-IIHR spawn rate and liable to change

### iii. Input material expenditure for 80 bags production for Shiitake or King oyster mushroom (1kg bags)

Non absorbent Cotton plugs	80no	Rs 30/-
PP cover 8x16 inches size, 45-50 micron size	80 no	Rs 30/-
Alcohol based hand sanitizer	50 ml	Rs 18/-
Hard wood Saw dust/wood chips	26.7 kg	Rs 54/-
Wheat bran	2.67kg	Rs 20/-
Rice bran	2.67kg	Rs 20/-
PVC ring 1¼ inch diameter, 3 mm thickness	80 nos	Rs 30/-
CaCO <sub>3</sub>	961 grams	Rs 34/-
Spawn of particular variety	4 kg	Rs 80/-
<b>Total</b>		<b>Rs. 316/-</b>

Note: \* As per ICAR-IIHR spawn rate and liable to change

#### Terms and conditions

1. All the fees and material charges to be deposited at ABI center, ICAR-IIHR, Hesaraghatta, Bengaluru-560089
2. Providing inputs are subject to the availability of the stock at Mushroom Lab, ICAR-IIHR

#### 5. Terms and conditions:

- 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 4.30 pm excepting Second Saturdays, Sundays and on all central Govt. holidays.

- 2-3 sterilization cycles 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 substrate preparation to RTF bag production has to be carried out by incubatees themselves.
- Institute man power will not be spared for incubatees.
- All payments including input material charges may be paid to ABI wing ICAR-IIHR. If the incubatees bring their own input materials, input material charges will not be applicable
- Institute is only facilitator for promotion of mushroom cultivation. 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:

<b>Oyster mushroom cultivation</b>	<b>Shitake or King Oyster mushroom cultivation</b>
1. Straw cutting 2. Soaking 3. Drying 4. Bag filling 5. Sterilization 6. Inoculation 7. Incubation	1. Substrate (saw dust) preparation 2. Bag filling 3. Sterilization 4. Inoculation 5. Incubation
After incubation of bags, the incubatee will take the bags to their premises for cropping period.	