



Value Addition in Mushroom


Day 1, Plenary Session III, Time-1400 Hrs-1515 Hrs , 17th Dec 2009, MSME DI, Guindy, Chennai

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Tamil Nadu Technology Development & Promotion Center

An autonomous society of Government of Tamil Nadu and Confederation of Indian Industry

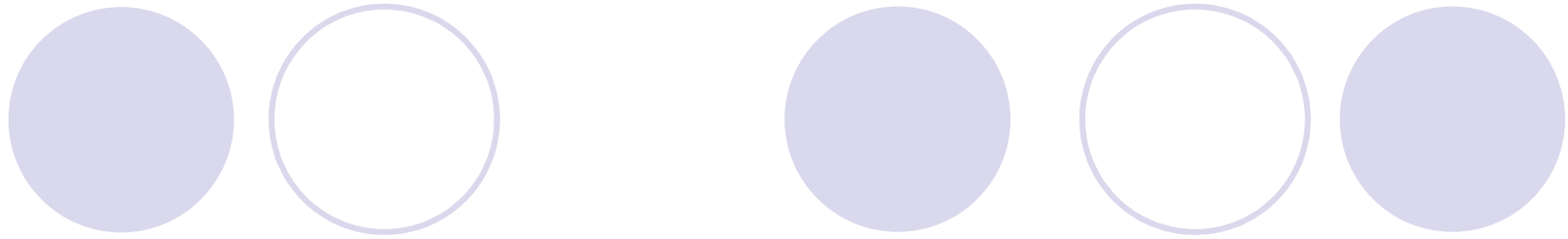


VALUE ADDED PRODUCT IN MUSHROOM

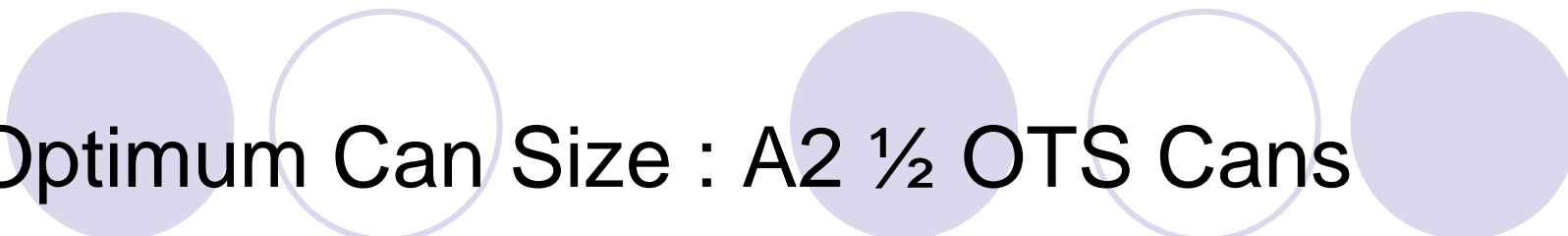
- Mushroom in Cans
- Dehydrated Mushroom
- Freeze Dried Mushrooms
- Frozen Mushrooms
- Mushroom Pickle
- Mushroom Jams/Sweets

Mushroom in Cans





- Mushrooms graded and sorted
- Bottom stalk removed
- Steam Blanching for 5 mins
- Semi Cooked Mushrooms ready for canning
- Brine (2 % Salt + 2 % Sugar + 0.2 % citric Acid) as preserve Media

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- Optimum Can Size : A2 ½ OTS Cans
 - Ratio Brine : Mushroom- 1:1.75
 - Filling the mushroom in OTS Cans
 - Filling the Brine in 70 ° Deg C
 - Exhausting the cans 20 Mins
 - Seaming the cans
 - Retorting in Hot Water 85 deg. C for 20 mins
 - Cooling
 - Cleaning & Packing in Cartons



DEHYDRATED MUSHROOM

Principles of drying

Drying basically involves the removal of water by evaporation from the surface of the product to the surrounding air.



TYPES OF DRYIER

- Tray drier
- Continues belt drier
- Fluidized bed drier
- Tunnel drier



CABINET /TRAY
DRIER

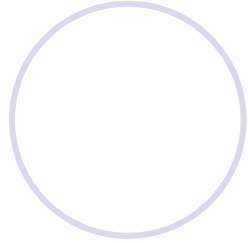
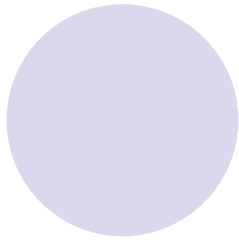


SOLAR TRAY DRIER

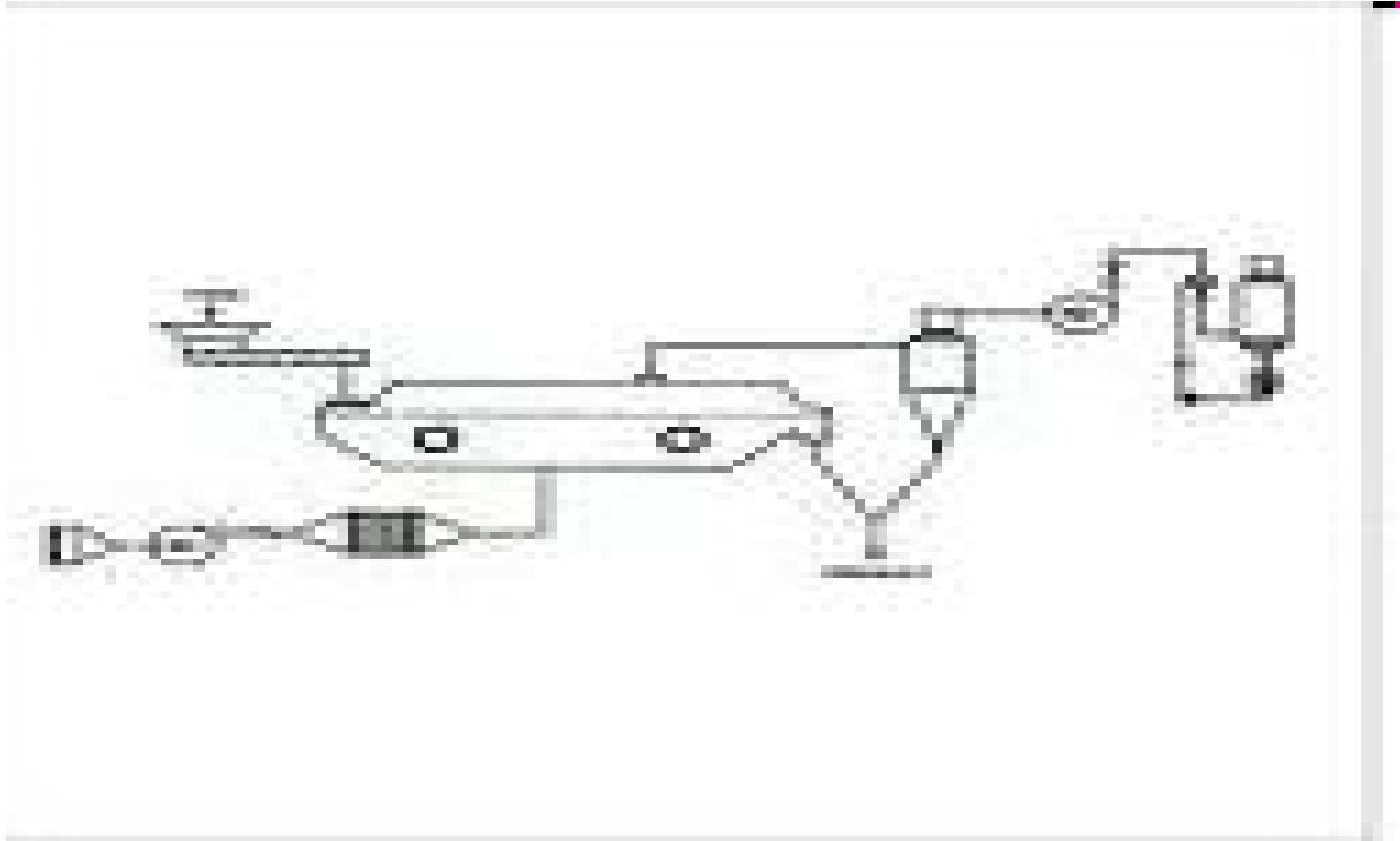
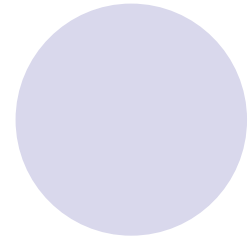
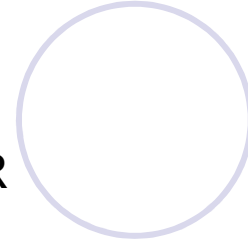


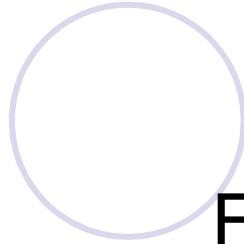
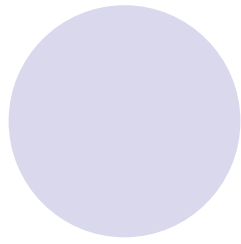
Dehydration of Mushrooms

- Grading the Mushroom
- Cutting to required Shape
- Blanching optional
- KMS (Potassium Meta Bi Sulphate) treatment Optional

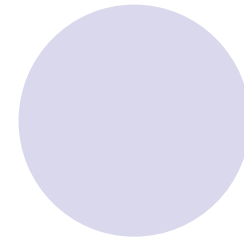
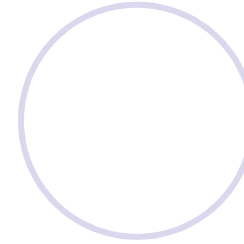


FLUIDIZED BED DRIER





FREEZE DRIER



Dehydrated Mushroom Specification

- Moisture : 4% maximum
- Color : Tan to darker /brown color

Microbiological:

TPC	100,000/g,
Yeast/Mold	<300/g,
Coliforms	<200/g,
Salmonella	ND/25g. .



FROZEN MUSHROOMS

- CUT MUSHROOMS
- BLANCHING
- KMS TREATMENT
- BLAST FREEZING TO -36 DEG.C
- PACKING
- STORAGE IN -18 DEG.C

MUSHROOM PICKLE



- MUSHROOM PRESERVED IN SALT & OIL
- CUT MUSHROOM
- ADDING SPICES, TAMARIND JUICE AND SALT
- TOPPING WITH OIL
- PACKIN & STORAGE



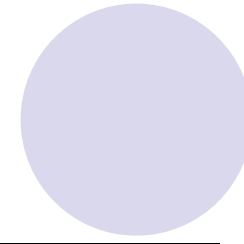
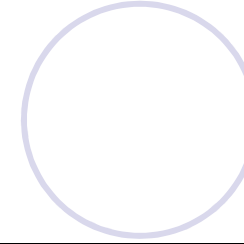
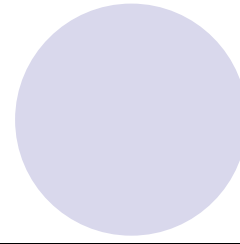
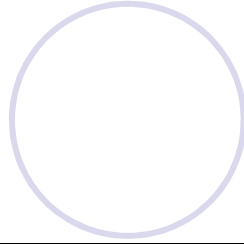
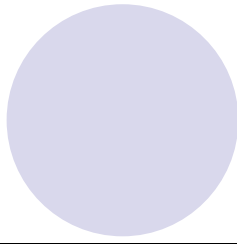
MUSHROOM JAMS & SWEETS

- GRADED MUSHROOMS
- GRINDING AND EXTRACTING JUICE WITH FIBRE
- ADDING SUGAR AND PREPARING TRADITIONAL SWEETS

COST ECONOMIC OF THE MILKY MUSHROOM

CAPACITY OF THE PLANT 50 KG/DAY- 200 POCKETS/DAY

50 Kg/Day-Production Plant			
EQUIPMENTS			
S.No	Item Name	Capacity	No of Qty
1	Test Tubes	10 ML	10
2	Auto Clave	250 Lits	1
3	laminar Flow Chamber	2' X 2' x 4'	1
4	SS Vessels	Lot	
5	Stove/LPG Cylinder		1
6	Paddy Chopper M/c	1000 kg/Hr	1
7	Plastic Barrels	100 Lits	20
8	Tables	6 X 4	2
9	Band Sealing Machine		2
10	Knives and Utensils	Lot	
11	Borewell Pump and Motors		1
12	Water Spray Gun		1
13	Water Motors	1 H.P	2
14	Trolleys	500 Kg	2

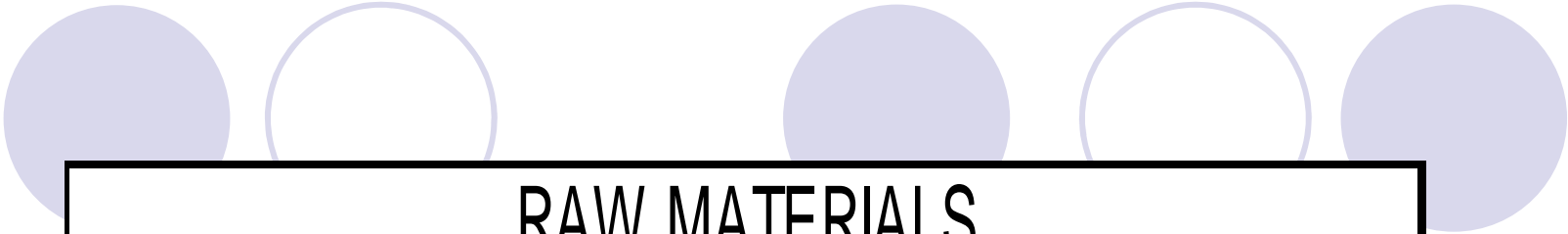


CONSUMABLES

1	Glucose Bottles	500 ML	
2	Bed Polythene Cover	14 " X 24 "	
3	Seed Polythene Cover	7 " X 10 "	
4	Threads/Paper/cotton		

STRUCTURES

				Capacity	Approximate Cost	Total Value
1	Cement Tank	12' X 6' X 3'	3		6000	18000.00
2	Bed incubation Shed	100' X 16' X 12'	1	3000 Beds & 5000 pockets	75000	75000.00
3	Mushroom Shed with Sylphalein sheet dome	50' X 11' X 12'	8	300 Beds	60000	480000.00




RAW MATERIALS

1	Paddy Straw		
2	Sorgam		
3	Carbendazim		
4	Pharmalein		
5	Calcium Carbonate		

Working Capital

S.N	Item name	Qty in kg	Approx. Price	Total Value
1	Paddy Straw	2000	7.5	15000.00
2	Sorgam	2000	10	20000.00
3	Seed Cover	200	90	18000.00
4	Bed Cover	200	90	18000.00
5	Pharmalein	500	20	10000.00
6	Calcium Carbonate	20	300	6000.00
7	Carbendazim	10	300	3000.00
8	LPG Cylinder	2	7500	15000.00
9	Man Power Men	4	200	800.00
10	Man Power Women	6	150	900.00
11	Threds/Paper	1	20	20.00
TOTAL				106720.00



YIELD CALCULATION

S.NO	ACTIVITY	NO OF DAYS
1	SEED FORMATION	20
2	BED FORMATION	20
3	MUSHROOM BED FORMATION	20
4	MUSHROOM YIELD	90

TOTAL OUT PUT IN KG : 4500 KG

AVERAGE SELLING PRICE : Rs.70/kg

TOTAL GROSS INCOME : RS. 315000/-

TOTAL NET INCOME : RS. 208280/-



THANK YOU





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