

Index for *Mushroom Cultivation: Become the MacGyver of Mushrooms*, by Richard Bray

Page numbers in *italics* denote photographs.

A

"aerial fruiting bodies," 17, 19–20
Agaricus bisporus. *See* Button mushrooms
air circulation and colonization, 137
annulus, 21

B

basidia, 18
Bearded Tooth mushrooms. *See* Lion's Mane mushrooms
bioremediation using mushrooms, 12
Blue Oyster mushrooms, species overview, 26
bottles, as substrates, 107–112
Button mushrooms
 species overview, 32–33, 34
 substrate preparation for, 114–117

C

Calvatia gigantea, 9
cardboard, as substrate, 94–96
climate considerations, 46–47
coco coir, as substrate, 92–93
coffee grounds, as substrate, 89–93
Comb-tooth mushrooms. *See* Lion's Mane mushrooms
Common Oyster mushrooms, species overview, 25
common problems
 contamination, 137
 moisture and circulation issues, 136–137
 pests and diseases, 139
 See also optimal growing conditions; sterile growing environments
compost blends, as substrates, 114–117
contamination
 and creating "glove boxes," 77–79
 and maintaining sterile environments, 69–75
 and pasteurization vs. sterilization, 67–69
 See also optimal growing conditions
coumarins (anti-fungal compounds), 120, 121
Cremini mushrooms, 32–33

D

DIY vs. ready-made kits, 51
drying and reconstituting mushrooms, 141–142

E

Enokitake (Enoki) mushrooms
 species overview, 34–35
 substrate preparation for, 81–88, 98–99, 101–105, 112
equipment and tools. *See* tools and equipment
expansion, of spawn
 and inoculating substrate, 63
 overview of, 50

F

faux leather, 12–13
Flamingo Oyster mushrooms, species overview, 28, 30
Flammulina velutipes. *See* Enokitake (Enoki) mushrooms
freezing mushrooms, 142
fruiting stage
 defined, 18–20
 optimal conditions for, 44–47, 56–58, 64
 See also individual mushroom names

G

gametes. *See* spores
gender, in mushrooms, 19
germination stage, overview of, 49–50
giant puffball mushrooms, 9
"glove boxes," creating, 77–79
Golden Oyster mushrooms, species overview, 27, 28
Grey Oyster mushrooms, species overview, 25
grifola frondosa. *See* Maitake mushrooms
grow bags, 126–127
grow chambers, preparing, 63
 See also substrates
growing conditions, optimal. *See* optimal growing conditions
growing medium, 14
growing methods. *See* substrates
growing vs. foraging, 13
growth, stages of, 14–15, 49–51

H

hardwood sawdust, as substrate, 101–105

harvesting

 process, 64–65

 times by species, chart of, 42

See also drying and reconstituting mushrooms; freezing mushrooms; storing mushrooms

Hen of the Woods mushrooms. *See* Maitake mushrooms

Hericium erinaceus. *See* Lion's Mane mushrooms

humidity tents, 134

hygrometers, 134

hyphae, 17

I

ideal growing conditions. *See* optimal growing conditions

Indian Oyster mushrooms, species overview, 26–27

indoor vs. outdoor growing

 considerations for, 44, 57–58

 substrates for indoor growing, 81–88, 89–93, 94–96, 101–105, 107–112, 114–117

 substrates for outdoor growing, 98–99, 114–117, 119–124

See also optimal growing conditions

inoculating substrates, 63

isopropyl alcohol, 134–135

Italian Oyster mushrooms, species overview, 26–27

J

jar filter disks, 130–131

K

King Oyster mushrooms, species overview, 30

L

Laminar Flow Hoods, 70

Lentinula edodes. *See* Shiitake mushrooms

Lion's Mane mushrooms

 Bear's Head Tooth, 37–38

 Comb Tooth, 38, 39

 species overview, 35–37

 substrate preparation for, 101–105, 119–124

Lung Oyster mushrooms, species overview, 26–27

M

Maitake mushrooms

- species overview, 41
- substrate preparation for, 101–105, 107–112, 119–124

Mason jars, 130

meiosis, 18–20

methods for growing. *See* substrates

micro-climates, creating, 46–47

moisture issues, 136–137

mold issues, 139

mulch, as substrate, 98–99

mushroom growth, stages of, 14–15, 49–51

mushroom leather, 12–13

mushroom structure

- and nutrient absorption, 17–18
- and sexual reproduction, 18–23
- and stages of growth, 14–15, 49–51

mycelium

- defined, 14
- effects of temperature on, 54
- in sexual reproduction, 18–20
- in stages of growth, 49–51

mycorrhizae mushrooms, 18

N

nutrition

- and absorption, 17–18
- requirements for good, 54

O

optimal growing conditions

- chart of, 56
- environmental, 44–47, 53–54
- indoors vs. outdoors, 57–58

See also common problems; indoor vs. outdoor growing; sterile growing environments

outdoor logs, as substrates, 119–124

Oyster mushrooms

- Blue Oyster, 26
- Golden Oyster, 27, 28
- King Oyster, 30
- Pearl Oyster, 25

Phoenix Oyster, 26–27
Pink Oyster, 28, 30
species overview, 24–25
substrate preparation for, 81–88, 89–93, 94–96, 98–99, 101–105, 107–112, 119–124

P

parasitic mushrooms, 18
partial veils, 21
pasteurization
 of cardboard substrates, 94
 of coffee grounds substrates, 90
 of compost blend substrates, 114
 defined, 68–69
 of straw substrates, 83–85
Pearl Oyster mushrooms, species overview, 25
Phoenix Oyster mushrooms, species overview, 26–27
pileus, 18, 22
Pink Oyster mushrooms, species overview, 28, 30
pinning, 20
Pleurotus ostreatus. *See* Oyster mushrooms
plugs, 31–32
Portobello mushrooms, 32–33, 34
pressure cookers, 127–129
primordia, 20
problems, common. *See* common problems

S

Salmon Oyster mushrooms, species overview, 28, 30
saprotrophic mushrooms, 18
secondary substrates, 63
septa, 20
Shiitake mushrooms
 species overview, 30–32
 substrate preparation for, 101–105, 119–124
Shot Gun Fruiting Chambers (SGFC), 131–134
slugs and snails, as pests, 139
space considerations for growing, 46
spawn
 defined, 14–15
 expansion of, 50–51, 63
 obtaining, 121–122, 130, 137
spores
 defined, 14
 in germination, 49–50

- in sexual reproduction, 18–22
- sterigma, 18, 22
- sterile growing environments
 - and creating "glove boxes," 77–79
 - methods for maintaining, 74–75
 - and pasteurization vs. sterilization, 68–69
 - and sources of contamination, 70–73
 - See also* optimal growing conditions
- sterilization
 - of bottle substrates, 108–109
 - defined, 68–69
 - of hardwood sawdust substrates, 103
- Still Air Boxes (SAB), 71
- stipe, 18
- storing mushrooms, 141, 142
- straw, obtaining, 130
- straw bags, as substrates, 81–88
- Strawberry Oyster mushrooms, species overview, 28, 30
- Stropharia rugosoannulata*. *See* Wine Cap mushrooms
- substrates
 - bottles, 107–112
 - cardboard, 94–96
 - coco coir and vermiculite mix, 92–93
 - coffee grounds, 89–92
 - compost blends, 114–117
 - defined, 14–15
 - general preparation of, 63
 - hardwood sawdust, 101–105
 - mulch, 98–99
 - outdoor logs, 119–124
 - straw bags, 81–88
 - See also* contamination
- Summer Oyster mushrooms, species overview, 26–27

T

- time requirements for growing, 46
- tools and equipment
 - for creating "glove boxes," 77
 - general, 126–131, 134–135
 - for growing in bottles, 107–108
 - for growing in coffee grounds, 89
 - for growing in mulch, 99
 - for growing in straw bags, 82
 - for growing on cardboard, 94
 - for growing on compost blends, 114

- for growing on hardwood sawdust, 102
- for making Shot Gun Fruiting Chambers, 131–134
- troubleshooting. *See* common problems
- Turkey Tail (problematic fungus), 139

V

- vermiculite mix, as substrate, 92–93
- Verticillium spot, 139

W

- Wine Cap mushrooms
 - species overview, 40
 - substrate preparation for, 98–99
- Winter Oyster mushrooms, species overview, 25

Y

- Yellow Oyster mushrooms, species overview, 27, 28