



MUSHROOM-BASED VALUE-ADDED PRODUCTS

LANDSCAPE ANALYSIS
July 2023

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Why have mushroom-based products increased in popularity?



Health Benefits

Benefit claims:

- Increased energy
- Greater focus
- Reduced stress
- Enhanced mood
- Stronger immunity
- Improved gut health



Taste and Texture

- Flavor enhancer (umami)
- Novelty
- Similar mouthfeel to meat
- Versatility (from center of the plate to a sprinkled-on seasoning)



Sustainability

- Reduced need for land and resources
- Smaller carbon footprint
- Short growth cycle
- Appeal to eco-conscious consumers

Product Categories

Perishable

- Fresh soup kits
- Pâté
- Cheese logs
- Prepared soups, broth, and stock
- Meat alternatives



Shelf-Stable

- Dried (sliced or whole)
- Canned or pickled
- Jerky
- Beverages (coffee, tea, and hot cocoa)
- Powders
- Seasoning blends
- Pasta and noodles
- Snacks (chips, popcorn, and chocolate)



Product Categories

Supplements

- Powders
 - Protein powder
 - Capsules
 - Green juice blends
 - Mushroom blends
- Elixirs
- Tinctures



Skin Care

- Face wash
- Serum
- Oil
- Lotion
- Cream
- Mist

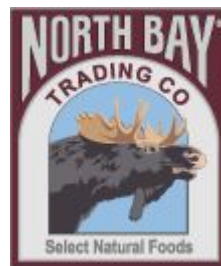




- 31 varieties
- Package sizes from 1 oz. to over 25 lb.
- Lion's mane, sliced: \$37.35 per lb.
- Oyster, whole: \$46.95 per lb.



- Six varieties
- Package sizes from 2 oz. bags to 10 lb. cases
- Shiitake, sliced: \$9.99 per 4 oz.
- Maitake: \$14.99 per 4 oz.



- 10 varieties (including one mix)
- Package sizes from 1 oz. to 40 lb.
- Oyster, organic, pieces: \$13.60 per 5.5 oz. bag, \$229.95 per 10 lb. box



DRIED MUSHROOMS



- 13 individual species and three mixes
- Package sizes from ½ oz. to 16 oz.
- Shiitake, sliced: \$24.99 per lb.
- Lion's mane, organic: \$39.95 per lb.



- Three species
- Package sizes from 3 oz. to 16 oz.
- American lion's mane: \$54.99 per lb.
- Oyster: \$17 per 3 oz.
- Interesting “mine land to farmland” story



DRIED MUSHROOMS

Recommended species: oyster and lion's mane

Process: whole, sliced, or processed mushrooms dried to 15%–20% of fresh weight, with water activity less than .4 a_w

Supplies needed: food processor, dehydrator, scale, and water activity meter

Packaging: freezer bags for storage until ready to use (generally good for six to 12 months)

Up-front supply cost: \$1,500–\$10,300



Note: Due to market saturation and low profit margin, we do not recommend drying mushrooms to sell. We recommend drying mushrooms only if you need to store them for use in a value-added product.



Weston 74-1001-W Dehydrator
\$270

SEASONING BLENDS

*Target has provided financial support to Mercy For Animals in the past.



McCormick

- \$4.33
- 4.59 oz.
- Shiitake



Simply Organic

- \$8.49
- 3.14 oz.
- Porcini and shiitake



Good & Gather (Target*)

- \$1.99
- 2.65 oz.
- Porcini and white button



Trader Joe's

- \$2.99
- 2.1 oz.
- Porcini and white button

SEASONING BLENDS

Colorado Mushroom Co

Benefits:

- Delicious
- Full of Vitamins & minerals
- Anti-Inflammatory
- Supports Immune System
- Antioxidants
- Supports Healthy Heart
- Fight Tumors
- Strengthens Bones
- Supports Healthy Heart
- Increases Energy
- Increases Brain Function

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, cure, prevent or treat any disease.

TACO MEXI-SPICE
SAVORY UMAMI SEASONING



Colorado Mushroom Co

- \$13.33
- 2 oz.
- Nine flavors using porcini or shiitake



Hazel Dell

- \$10
- 2.3 oz.
- Seasoning rub using shiitake, lion's mane, crimini, and oyster

SEASONING BLENDS

Recommended species: oyster and lion's mane

Process: processed mushrooms dehydrated and ground to a fine powder, blended with spices and salt

Supplies needed: food processor, dehydrator, grinder, and scale

Other ingredients: salt, herbs, and spices

Packaging: spice jar or shaker (2–4 oz., typically)

Up-front supply cost: \$1,000–\$10,200

Per-ounce average retail price: \$3.64 (\$0.94–\$6.67), \$4.40 for small makers

Potential profit margin: 60%–70%



VEVOR 2500g Spice Grinder

\$135



*Pan's has provided in-kind support to Mercy For Animals in the past.



- Six varieties
- 2.2 oz. bags
- Uses shiitake mushrooms
- \$8 per bag



- Five varieties
- 2 oz. bags
- Uses crimini and portobello mushrooms
- \$4.99–\$6.66 per bag



- Six varieties
- 2.46 oz. bags
- Uses shiitake stems
- \$7.99–\$9.99 per bag



MOKU

- Five varieties
- 2 oz. bags
- Uses king oyster mushrooms
- \$5.66–\$6.83 per bag



- Three varieties
- 2 oz. to 6.25 oz. packages
- Uses oyster mushrooms
- \$10–\$27 per bag



JERKY

Common species: oyster

Process: boiled, marinated, and dehydrated

Supplies needed: stock pot, pH meter, container for marinating (Cambro), dehydrator, water activity meter, and scale

Packaging: resealable pouches, typically 2 oz.

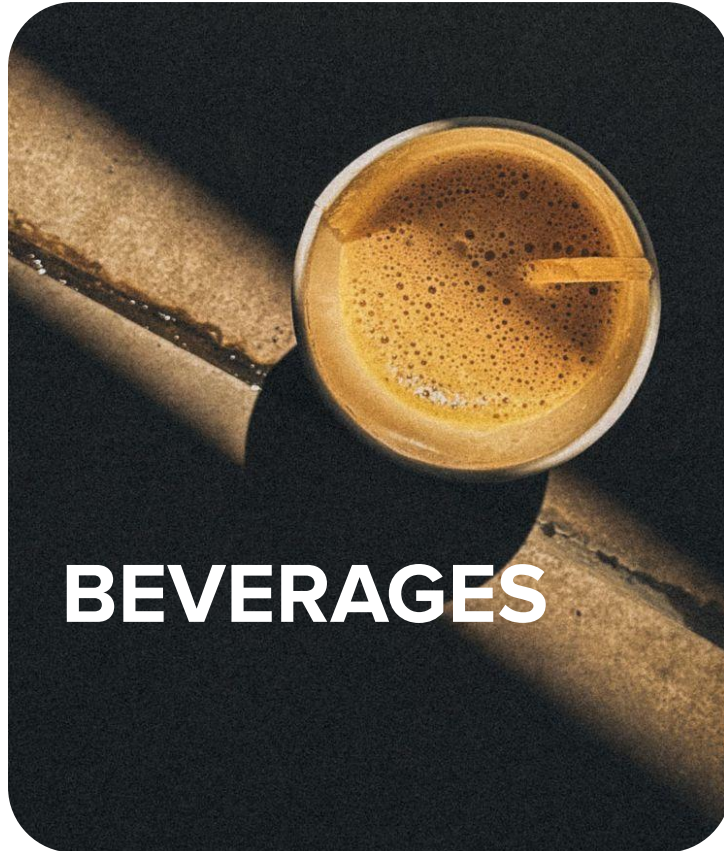
Up-front supply cost: \$1,100–\$9,800

Per-ounce average retail price: \$4.94 (\$3.33–\$10)

Potential profit margin: 40%–60%



Cambro Storage Container, Six Quart with Lid
\$26.31



BEVERAGES



- Hot chocolate, coffee, and latte blends
- Uses chaga, cordyceps, king trumpet, lion's mane, reishi, and turkey tail
- \$4–\$10.58 per oz.
- Om also offers protein powders, drink mixes, and creamer.

MUD\WTR®

- “Coffee alternative”: cacao, matcha, and turmeric
- Uses chaga, cordyceps, king trumpet, lion's mane, reishi, turkey tail, maitake, and shiitake
- \$5.26–\$7.81 per oz.
- MUD\WTR also offers creamer, sweetener, and mushroom powders.

R Y Z e

- Mushroom coffee
- Uses cordyceps, king trumpet, lion's mane, reishi, turkey tail, and shiitake
- \$4.72–\$9.46 per oz.

BEVERAGES



Wild Love Farm

- \$2–\$3.33 per oz.
- 4.5–6 oz. bags
- Mushroom coffee and hot chocolate (two flavors)
- Uses lion's mane, oyster, and shiitake



Mushroom Mana

- \$10.71–\$11.43 per oz.
- 1.40 and 4.2 oz. bags
- Golden mylk, mocha, and chai cacao
- Uses reishi, turkey tail, maitake, lion's mane, and cordyceps

BEVERAGES

Recommended species: lion's mane, cordyceps, chaga, turkey tail, and reishi

Process: powdered mushrooms mixed with ground coffee, tea, cocoa or cacao powder, and other ingredients

Supplies needed: food processor, dehydrator, water activity meter, grinder, and scale

Packaging: resealable pouches with valve

Up-front supply cost: \$1,600–\$10,700

Per-ounce average retail price: ground or whole-bean coffee: \$1.85 (smaller producers: \$2.50–\$3.33); instant coffee: \$8.22; coffee alternatives: \$5.20; tea: \$7.75; and cocoa: \$5

Potential profit margin: 60%–70%



BenchFoods 16-Tray Dehydrator

\$895–\$1,395



Nuts.com

- Six varieties
- 4 and 8 oz. bags
- Lion's mane, chaga, reishi, cordyceps, bolete, and shiitake
- \$7.99–\$29.99 per bag

myriad mycology

- 12 varieties
- 150 g bags
- Reishi, cordyceps, lion's mane, chaga, turkey tail, maitake, shiitake, blazei, agarikon, and mesima sang-huang
- \$25 per bag

mushroom
REVIVAL

- Three varieties
- 2.12 oz. container
- Lion's mane, cordyceps, and a blend (cordyceps, lion's mane, reishi, turkey tail, chaga, shiitake, tremella, mesima, maitake, and poria cocos)
- \$27.96–\$34.95 per container



POWDERS



Forest Mushrooms

- Six varieties
- 2–16 oz. bags
- Chaga, cordyceps, porcini, lion's mane, shiitake, reishi, portobello, turkey tail, and wood ear
- \$10–\$45 per bag



Mount Si Fungi

- Four varieties
- 2 oz. bags
- Shiitake, oyster, lion's mane, and turkey tail
- \$17–\$19 per bag

POWDERS

Recommended species: any aside from shiitake

Process: mushrooms processed to a uniform size, dehydrated, and ground into a fine powder

Supplies needed: food processor, dehydrator, water activity meter, grinder, and scale

Packaging: plastic or kraft bags, typically in 2, 4, 8, or 16 oz. sizes

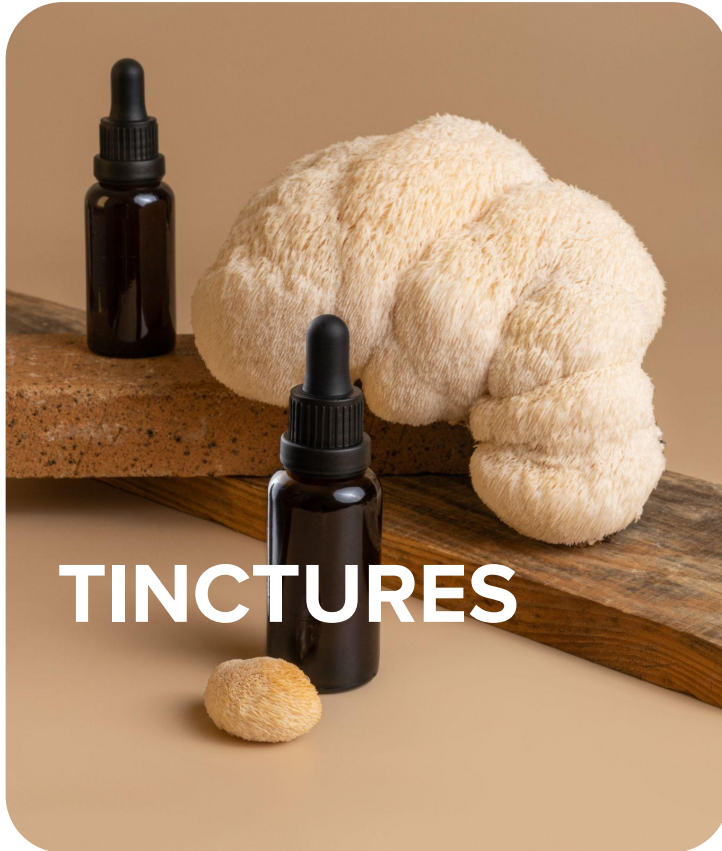
Up-front supply cost: \$1,600–\$10,700

Per-ounce average retail price: \$4.29 (\$1.56–\$9.50) when marketed as food

Potential profit margin: 30%–40%



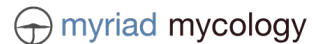
Grain Grinder Ultra High Speed Pulverizer
\$250–\$400



- Five varieties
- 2 and 4 oz. bottles
- Lion's mane, reishi, cordyceps, chaga, and an immunity blend (chaga, reishi, maitake, and shiitake)
- \$30–\$40 per bottle



- Four varieties
- 2 oz. bottles
- Cordyceps, reishi, lion's mane, and a blend (chaga, lion's mane, cordyceps, reishi, shiitake, maitake, tremella, turkey tail, mesima, and poria cocos)
- \$27.96–\$34.95 per bottle



- Two varieties
- 2 oz. bottles
- Reishi and chaga
- \$25 per bottle

TINCTURES



Taylor's Mushrooms

- Two varieties
- 2 oz. bottles
- Turkey tail and lion's mane
- \$30 per bottle



Harmony Acres Farm

- Nine varieties
- 2 and 4 oz. bottles
- Lion's mane, cordyceps, wild reishi, wild turkey tail, wild chaga, and blends
- \$14.99–\$39.99 per bottle

TINCTURES

Common species: any—single species or blends

Process: double extraction

Supplies needed: dehydrator (optional), jug, stock pot, hot plate or other cooking surface, hydrometer, and heat gun

Other ingredients: high-proof grain alcohol

Packaging: dropper bottles, typically in 1, 2, or 4 oz. sizes

Up-front supply cost: <\$150–\$9,000+

Average retail price per 2 oz.: \$26.91 (range: \$14.99–\$35)

Potential profit margin: +60%



Heat Gun

\$12

Distribution



- Individual website
- Online marketplaces
- Farmers markets



- Local businesses
 - Specialty food stores
 - Gift shops
 - Farm stands



- Co-ops and health food stores
- Food hubs
- CSAs
- Grocery stores

Considerations



STATE REGULATIONS

Food regulations by state agencies vary from state to state. Make sure you understand your state's cottage food laws.



FDA

Medicinal products are considered “dietary supplements” and fall under **FDA rules.**



PLEASE DO YOUR HOMEWORK!

References

1. American Mushroom. “**Sustainability.**” Accessed December 12, 2023. <https://www.americanmushroom.org/main/sustainability/>.
2. Peters, Sam. “**Mushroom Skincare Is Huge Right Now.**” *Elle*, February 7, 2023. <https://www.elle.com/beauty/g42695414/mushroom-skincare/>.

Appendix

1. Competitive Pricing by Category as of July 2023

2. Processing Supplies (pricing as of July 2023)

ITEM	SELLER	DESCRIPTION	REGULAR PRICE	SALE PRICE
pH meter	Amazon	Dr. Meter digital pH meter	\$30.00	
Hydrometer or refractometer	Amazon	Upromax hydrometer	\$15.00	
Water activity meter	Amazon	VTSYIQI water activity meter (Local universities may also have equipment you can use.)	\$586.00	
Scale	Amazon	Aclas digital price-computing scale	\$149.00	
Food processor	Amazon	VBENLEM commercial food processor	\$574.00	\$470.00
Grinder	VEVOR	VEVOR commercial high-speed grinder, 2,500 g, 3,750 W	\$135.00	

ITEM	SELLER	DESCRIPTION	REGULAR PRICE	SALE PRICE
Grinder	The H2O Bottles	CGoldenwall high-speed grain grinder, 700 g, 2,500 W	\$400.00	\$250.00
Dehydrator	WebstaurantStore	Weston 10-rack stainless steel dehydrator, 15 sq. ft. (about 5 lb. at a time)	\$269.99	
Dehydrator	WebstaurantStore	Avantco 24-tray stainless steel dehydrator with glass door, 39 sq. ft. (about 15 lb. at a time)	\$529.00	
Dehydrator	WebstaurantStore	Avantco 32-tray stainless steel food dehydrator with glass doors, 52 sq. ft.	\$1,279.00	
Dehydrator	Commercial Dehydrators America	BenchFoods 16-tray commercial dehydrator, 27.5 sq. ft.	\$1,395.00	\$895.00
Dehydrator	Commercial Dehydrators America	BenchFoods 30-tray commercial dehydrator, 53 sq. ft.	\$3,495.00	\$2,199.00
Dehydrator	Commercial Dehydrators America	BenchFoods 32-tray commercial dehydrator, 55 sq. ft.	\$3,499.00	\$2,295.00

ITEM	SELLER	DESCRIPTION	REGULAR PRICE	SALE PRICE
Dehydrator	Commercial Dehydrators America	BenchFoods 60-tray commercial dehydrator, 104 sq. ft.	\$6,995.00	\$4,995.00
Dehydrator	Commercial Dehydrators America	BenchFoods 28-tray commercial dehydrator, 130 sq. ft.	\$8,995.00	\$5,995.00
Jug	Uline	F-style wide-mouth plastic jug with nonmetal screw-on lid	\$39.60	
Cambro container	Amazon	Cambro 6 qt. container with lid	\$22.80	\$15.99
Heat gun	Amazon	BLACK+DECKER heat gun, 1,350 W (Amazon offers several options for heat guns; a hair dryer may also work.)	\$30.00	

3. Packaging Supplies

A. Bags (dried mushrooms, powders, beverages, and jerky)

ITEM	SELLER	SPECS	QUANTITY	COST PER CASE	COST PER UNIT
Clear stand-up pouch with zip	Discount Plastic Bags	6" x 9", 4 mil, 8 oz.	500	\$109.82	\$0.22
Kraft Mylar stand-up pouch with zip	Discount Plastic Bags	5.975" x 9", 5 mil, 8 oz.	1,000	\$371.85	\$0.37
Clear stand-up pouch with zip	Uline	6" x 9", 5 mil, 8 oz.	1,000	\$200.00	\$0.20
Kraft stand-up barrier pouch	Uline	6" x 9", 6 mil, 8 oz.	1,000	\$257.00	\$0.26
Clear stand-up pouch with zip	ClearBags	7" x 9 15/16", 2.54 mil, 8–10 oz.	1,000	\$229.90	\$0.23
Kraft stand-up pouch with clear front	ClearBags	6 3/4" x 11 1/4", 4 mil, 8–12 oz.	1,000	\$344.90	\$0.34

B. Spice jars (seasoning blends)

ITEM	SELLER	SPECS	QUANTITY	COST PER CASE	COST PER UNIT
Clear round glass jar (lid sold separately)	TricorBraun	3.25" x 1.625", 2 oz.	12	\$8.14	\$0.68
Victorian square glass jar with gold lid	Specialty Bottle	3.15" x 2", 3.75 oz.	1		\$1.30
Glass spice jar	Burch Bottle & Packaging	3.68" x 1.72", 3.5 oz.	48	\$23.47	\$0.49

C. Dropper bottles (tinctures)

ITEM	SELLER	SPECS	QUANTITY	COST PER CASE	COST PER UNIT
Glass bottle with dropper, amber	Amazon (The Bottle Depot)	1 oz.	72	\$41.99	\$0.58
Glass bottle with dropper, amber (includes funnel and long droppers)	Amazon (LOTUSBTDT)	1 oz.	100	\$41.89	\$0.42
Glass bottle, amber (bottle and dropper sold separately)	The Bottle Depot	1 oz.	360	\$179.20	\$0.50
Glass bottle with dropper, amber	Uline	2 oz.	72	\$75.60	\$1.05
Glass bottle with dropper, amber	Berlin Packaging	2 oz.	72	\$52.26	\$0.73
Glass bottle, amber (bottle and dropper sold separately)	The Bottle Depot	2 oz.	240	\$155.40	\$0.65
Glass bottle with dropper, amber	Uline	4 oz.	72	\$90.00	\$1.25

ITEM	SELLER	SPECS	QUANTITY	COST PER CASE	COST PER UNIT
Glass bottle with dropper, amber (includes funnel, measuring cup, and labels)	Amazon (HWASHIN)	4 oz.	24	\$28.99	\$1.21
Shrink wrap	Amazon (Outus)	1.8" x 0.9", perforated	500	\$8.99	\$0.02

4. Mushroom Benefits Studies and Articles

- UCLA Health, “**7 Health Benefits of Mushrooms**”
- Harvard T.H. Chan School of Public Health, “**Mushrooms**”
- María Elena Valverde, Talía Hernández-Pérez, and Octavio Paredes-López, “**Edible Mushrooms: Improving Human Health and Promoting Quality Life**”
- Giuseppe Venturella, Valeria Ferraro, Fortunato Cirilincione, and Maria Letizia Gargano, “**Medicinal Mushrooms: Bioactive Compounds, Use, and Clinical Trials**”
- National Cancer Institute, “**Medicinal Mushrooms (PDQ®)—Health Professional Version**”