

Mighty Mushrooms

FROM FARM TO YOU!

While often considered a vegetable, mushrooms are in fact neither animal or plant. They are part of a separate biological kingdom called Fungi, from well before plants were on Earth. ^{1,2}

✓ Unique culinary and nutrition characteristics

3 KEY BIOLOGICAL KINGDOMS:



ANIMAL
(meat and dairy)



PLANT
(fruits, vegetables, seeds, oils, grains)



FUNGI
(mushrooms)

MUSHROOM

Grows into a mature mushroom, opening its veil to release spores for the growing cycle to continue.

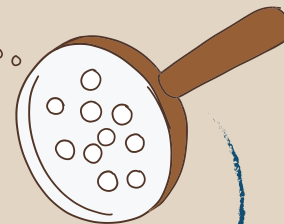
PINHEAD

Pushing out of the ground, it grows into a miniature mushroom the size of a pinhead.



STARTS WITH:

SPORES RELEASED FROM GILLS ON UNDERSIDE OF CAP
Mature mushrooms drop as many as 16 billion spores.

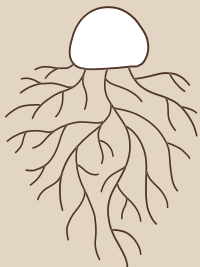


Fun FACT:

The mushroom above the ground is called the fruiting body, consisting of a **stem** and **cap**.

HYPHAL KNOT

Hyphae strands bundle together and prepare to grow a mushroom.



How do MUSHROOMS GROW?

Mushrooms grow in a unique & fascinating way.

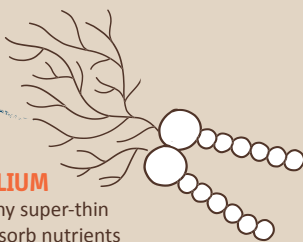
GROW INTO HYPHAE

Spores grow into fine white fibres (hyphae).



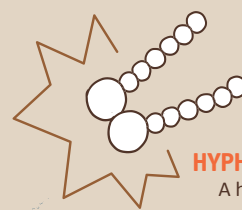
MYCELIUM

Consist of many super-thin threads that absorb nutrients from the environment.



HYPHAE MEET AND COMBINE

A hyphae join, forming roots called mycelium.



THE INCREDIBLE AUSTRALIAN

White mushroom journey



Always in season

and grown all year round indoors.



Can grow in light and darkness

Unlike plants, mushrooms don't need sunlight to grow, but when exposed to UV light, they can make over 100% of daily vitamin D needs*.³



A scientific marvel AND a precise art

- ✓ For a mushroom to grow, the temperature, humidity and carbon dioxide levels are varied and carefully monitored around the clock.
- ✓ Farmers respond as required.



Mushrooms are sustainably farmed, using circular farming methods

- ✓ Growers use solar power and recycled water.
- ✓ Recycled waste from other farms (straw and animal manure) is made into compost for mushroom growing, with the compost at end of production then sold to other farms or nurseries.
- ✓ Vertical growing = less land usage.
- ✓ Less water used compared to meat production.

Based on 100g

FROM THE FARM TO YOU *in 5 steps*

1. COMPOST (DAYS 1-30)

- ✓ Recycled waste from other farms (straw and poultry manure) is made into compost (which growers refer to as substrate) which is pasteurised before use for mushroom growing. At the end of mushroom production, compost is sold to other farms or nurseries for use as a growing medium for other crops.



2. SPANNING (DAY 31)

- ✓ Commercial mushroom growers use spawn that is propagated from mycelium onto a sterilised cereal grain, which are produced under controlled conditions.
- ✓ The spawn is mixed through the compost. Mycelium then colonises the compost, after which, the mushrooms form.



5. PACKAGING & SHIPPING

- ✓ Mushrooms are packed whole, or sliced and immediately refrigerated. Shipped within 24 hours of being harvested.



- ✓ Substrate removed and on sold as a growing medium for other crops.

- ✓ At harvest end, growing rooms are steamed at 65°C to eliminate pest contamination.

- ✓ Carefully harvested by hand.
- ✓ Mushrooms double in size daily.

4. HARVESTING (DAYS 58-79)



- ✓ Growing rooms have long shelves called growing beds, stacked 4 to 8 beds high.

- ✓ Colonised compost is extruded into the beds. A casing layer is applied on top, to promote the mushroom fruit body.

3. GROWING (DAYS 31-58)



Mushroom harvesting cycle is called a 'flush'.

There are 2-3 'flushes' from a growing cycle over a 3-week period.

DID YOU KNOW?

Mushrooms keep growing a little after they have been picked.

Get to know THE DIFFERENT VARIETIES

There are more than 2000 varieties of edible mushrooms worldwide, with the white button mushroom from the *Agaricus bisporus* species the most common.⁵



White Mushrooms (*AGARICUS BISPORUS*)

Most common but ever so versatile variety making up 95% of Australian fresh consumption.

DID YOU KNOW?

Australian grown mushroom varieties (white, swiss brown and portobello) are the same species (*Agaricus bisporus*)! The difference is simply their age and stage of harvesting as mushrooms double in size in every day.



Button mushrooms
= Harvest day 3



Cup mushrooms
= Harvest day 4



Flat mushrooms
or Portobello
= Harvest day 5

Fun FACT: the longer a mushroom is allowed to grow, the more its flavour develops. So, a white button mushroom has a very mild flavour, and a 'flat' mushroom has a robust flavour.

THE *AGARICUS BISPORUS* Family

WHITE BUTTON



Great size and texture to use whole

- Being the first harvested, their veil is tightly closed and texture very firm.
- Almost pure white, with the mildest umami flavour.
- Perfect for any cooking application with a crisp bite raw.
- Great whole, skewered for the BBQ, or in stews and in slow cooking.
- Fantastic crumbed and as a deep fried snack.

WHITE CUP



Perfect raw or cooked, Australia's favourite all-rounder

- Being second stage harvest, gills can be slightly open.
- Mild and delicate flavour, perfect for any recipe.
- Firm texture maintained during cooking.
- Creamy white colour great for pasta and risotto.
- Most versatile - great raw in platters or salads, whole roasted, stuffed and baked or diced and blended with meat dishes.

WHITE FLAT



Perfect for the BBQ

- Dense spongy texture, slightly softer than buttons and cups.
- Rich intense umami flavour and dark colour to sauces.
- Great whole, simply brushed with olive oil and put on BBQ, stuffed and oven baked or crumbed whole and shallow fried.
- Great fine diced and added to blended meat dishes or cooked and blended in soups or sauces.

SWISS BROWN



Great for casseroles or slow cooking

- Slightly nutty and richer umami flavour than white mushrooms.
- Brown mushrooms have less water content than white mushrooms, resulting in a firmer texture that allows it to hold together better in slow cooking.
- Good for beef, wild game and vegetable dishes.
- Best for high heat and long cooking applications.
- Great for casseroles, stew and skewering on BBQ as they hold their shape in slow cooking.

PORTOBELLO



Great for stuffing and slow cooking

- Largest cultivated mushroom.
- Hearty, savoury and meaty with lots of umami.
- Great for both meat and meatless dishes.
- Delivers hearty juiciness, rich flavour and firm, steak like texture, that keeps shape when cooked whole.
- Great for burgers and excellent for grilling, sautéing and roasting or diced and used in blended meat dishes.

Speciality MUSHROOMS

ENOKI



Flammulina velutipes Perfect for stir-fries

- Very mild and sweet slightly fruity taste when cooked.
- Firm crisp texture.
- Trim roots at base, discard and gently separate each strand.
- Must always be cooked and best cooked briefly before eating as becomes chewy if overcooked.
- Great sauteed and added cooked to salads, attracting flavours from the dressing/sauces, or added at the end of cooking for stir-fries, soups or risottos.

KING TRUMPET



Pleurotus eryngii Add to stir-fries or simply sauté. Great seafood substitute

- Delicate, nutty flavour and a firm, meaty texture.
- When cooked, texture mimics seafood, like scallops, particularly when stem sliced crosswise.
- Large size and savoury flavour can feature as centre for any entrée for any cuisine.
- Versatile for slicing and serving from large-to-small dice to slicing lengthwise to shredding.
- Cut lengthwise for slices -ideal for grilling, sautéing, roasting.
- Fork-shred for serving as a meaty option for barbecue sandwiches, tacos, or serving atop grilled meats.

TON'S MANE



Hericium erinaceus Great accompaniment to seafood

- Seafood-like with mildly sweet flavour and tender texture like scallops, crab, or lobster.
- Can be seared and served centre of plate.
- Accompaniment or alternative to seafood.
- Dry sauté in a hot skillet until water releases and edges brown, then add butter and seasonings.

MAITAKE



Grifola frondosa Distinct rippling fan, provides visual appeal to any dish

- Delicate, rippling fan shape that almost resembles feathers.
- Distinct aroma, rich, woody flavour with a succulent texture.
- Cooked as a whole cluster or torn into smaller pieces to suit any recipe.
- Lends itself to any dish - great for mains, side dishes and soups.
- Delicious sauteed in butter or oil, browning its delicate edges to desired degree of crispness.

MOREL



Morchella esculenta Delivers rich flavour in sauces and soups

- Distinctive savoury flavour.
- Rich earthy flavour.
- Best sautéed but can add a rich flavour to soups or sauces.
- Great in slow cooked dishes.

OYSTER



Pleurotus osreatus Velvet but firm, best sauteed

- Velvety and dense in texture.
- 'Briny' or delicate seafood flavour.
- Colourful dish addition - found in grey, yellow, pink and blue.
- Trim stems and discard.
- Can be sliced and stir-fried or gently cooked in large pieces to preserve unique appearance.
- Best lightly sauteed. When pan-fried, edges turn crisp.

SHIITAKE



Lentinula edodes Great for stir-fry, pasta and risotto

- Earthy, woody flavour and a rich meaty-yet-buttery texture when cooked.
- Dense, meaty flesh with slightly chewy texture.
- Tough stems can be removed and saved for soups and stocks.
- Good for pizza, pasta and dishes that call for bold flavours.

SHIMEJI



Lypohyllum or Pleurotus species Perfect hero for stir-fry




















- Firm texture with meaty but mildly sweet, nutty flavour.
- Separate from clumps at base.
- Perfect as hero in stir-fry. Loves sauce and can be added whole to soups, salads or pasta.

Fun FACT:

Mushrooms boast a delicious savoury flavour, known as **UMAMI** - the Japanese word for 'tasty' or 'meaty', which is considered the fifth basic taste along with sweet, salty, sour and bitter.



WHICH MUSHROOM IS BEST *when cooking?*

Perfect for...	WHITE BUTTON	WHITE CUP	WHITE FLAT	SWISS BROWN	PORTOBELLO	ENOKI	KING TRUMPET	LION'S MANE	MAITAKE	MOREL	OYSTER	SHIITAKE	SHIMEJI
BBQ 		✓	✓	✓	✓		✓						
BURGER 	✓	✓	✓	✓	✓		✓		✓		✓		
CRUMB & FRY 	✓	✓					✓				✓		
FLASH FRY 						✓		✓			✓		
GRILL 		✓	✓	✓	✓		✓	✓	✓				
PASTA 	✓	✓		✓			✓				✓	✓	✓
PICKLED 	✓	✓		✓			✓		✓		✓	✓	
PIZZA 	✓	✓	✓	✓	✓		✓				✓		
RAW 	✓	✓	✓	✓									
RISOTTO 	✓	✓		✓			✓				✓	✓	✓
ROAST 	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	
SALAD 	✓	✓		✓			✓						
SAUCE 	✓	✓	✓	✓	✓					✓			
SAUTE 	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SEAR 	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	
SLOW COOK 	✓	✓	✓	✓	✓	✓							
SOUP 	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
STIR-FRY 	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
STUFFED 	✓	✓	✓	✓	✓								

“ White mushrooms are one of the most cost-effective and versatile mushrooms across all cooking methods and meal occasions.

CHEF ADAM MOORE



UMAMI Power

Mushrooms contain distinctive flavour compounds including glutamates, ribonucleotides, and several synergistic volatiles.⁶

Together, they give the characteristic ‘umami’ savoury taste associated with cooked mushrooms and can enhance flavour of meals with less salt.⁶

Umami is found in:



Mushrooms



Tomatoes



Cheese



Soy sauce



Miso paste



Fish sauce

X-FACTOR INGREDIENT

- Delicious umami-rich flavour
- Meaty flavour and texture
- Natural flavour enhancer enabling less added salt
- Low-carb
- Fat & cholesterol-free
- Low-sodium
- Low-calorie/kilojoule
- Gluten-free
- B-group vitamins (B3, B5, B7, B9)
- Copper, Potassium, Phosphorus & Selenium
- Non-animal source of vitamin D
- 3 unique bioactives (ergothioneine, ergosterol & chitin)

Boosts the nutrition and flavour of any meal, truly delivering that X-factor!

Based on 100g^{4,7,9}



“ Adding mushrooms with its natural umami flavour can help bump up the taste and make it easier to use less salt in cooking. ”

DR FLAVIA FAYET-MOORE

DID YOU KNOW?

With their fabulous meaty flavour and texture, and less salt and fat, **mushrooms are a great meat replacer.**

However, **lower in protein**, mushrooms are not an equivalent protein replacement for animal protein.

PROTEIN CONTENT PER 100G ⁴	2.2g	31.5g
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But, they are a **natural and non-animal source of VITAMIN D**, important when 95% of Aussies are not meeting daily needs and 1 in 4 are deficient.^{3, 10}

Applicable for many dietary needs

- ✓ Flexitarian
- ✓ Gluten-free
- ✓ Halal
- ✓ Limiting/reducing animal foods
- ✓ Keto
- ✓ Kosher
- ✓ Low-carb
- ✓ Low-fat
- ✓ Low-salt
- ✓ Low-sugar
- ✓ Nut-free
- ✓ Plant-based
- ✓ Vegan
- ✓ Vegetarian

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