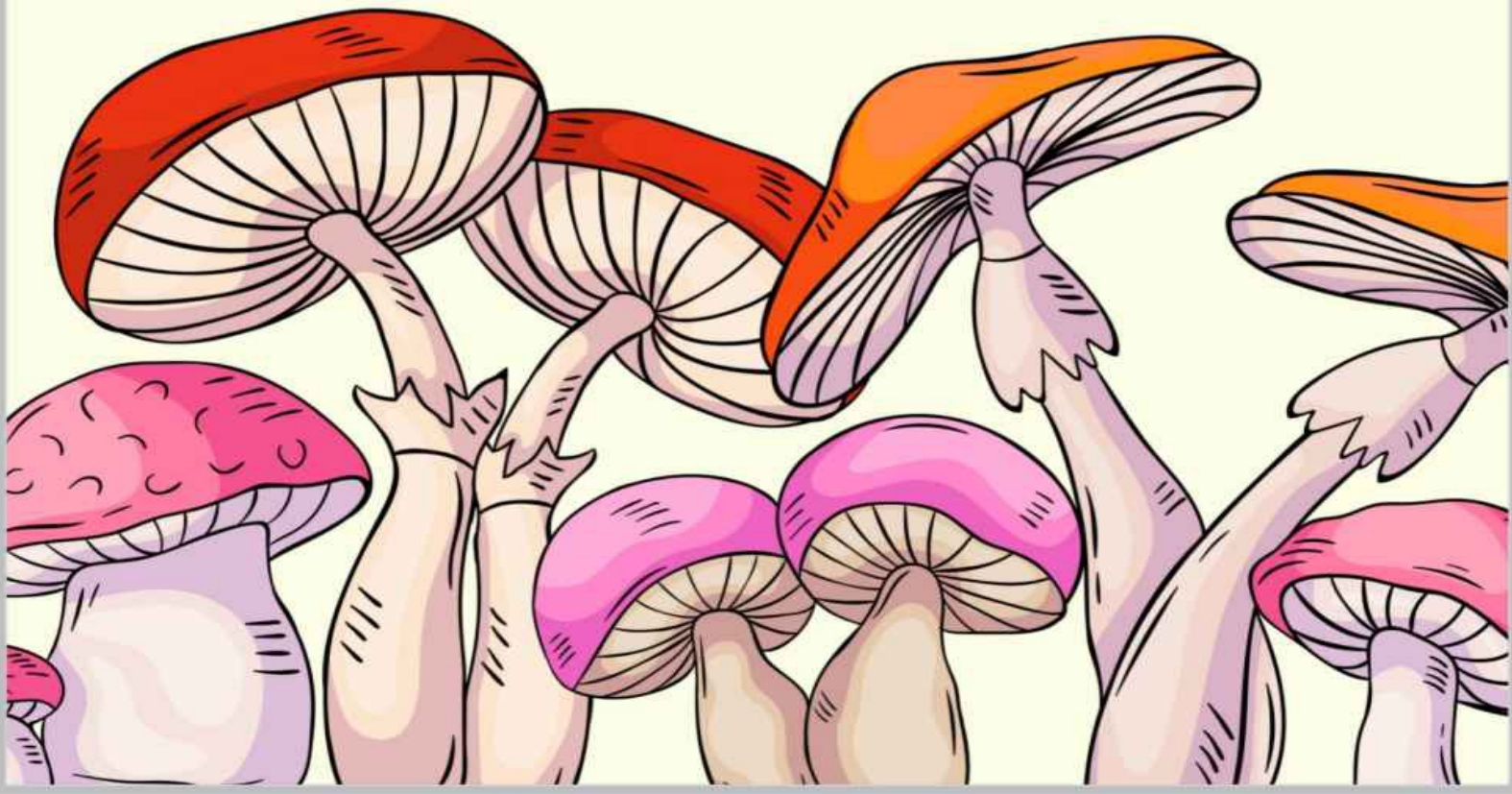
PROCESS CHECKLIST INCLUDED

ALEX FLOYD

GROW YOUR OWN PSILOCYBIN MUSHROOMS AT HOME

A Simple Step-by-step Guide To Successfully Cultivate, Grow And Harvest Psilocybin Magic Mushrooms



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Alex Floyd

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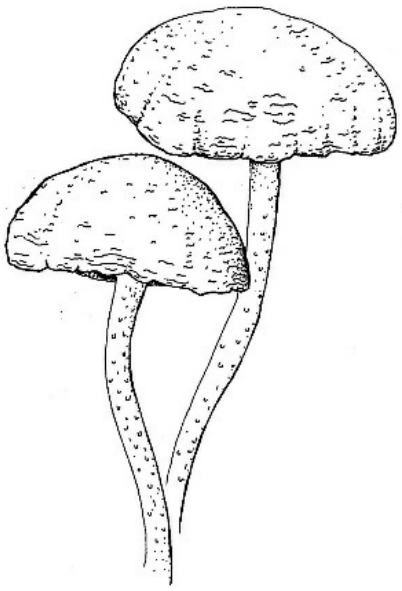


Introduction

Mushrooms have been used by human beings for a long time. A really, long time. There are records of their use as foodstuffs dating back to ancient times, but it is their use in other contexts that we're mainly focused on in this book. With that being said, we are interested in the recreational and spiritual uses of certain sorts of mushrooms, and how to grow them in the privacy of our homes.

The fact is, their recreational and spiritual usage seems to fade into the archives of forgotten history as well. In cultures across the world, the fungus has been a central part of religious and artistic practice for eons. With the advent of the 1960s, this usage burst onto the modern scene, and mushrooms have come to be known as a thriving aspect of modern recreational, creative, and spiritual practices of our time.

Since you're reading this book, there's a very good chance you encountered magic mushrooms at a festival or a smaller gathering of like-minded people. Many of us first met the magical effects in this way, and many have even foraged for the mysterious fungi in the wild where many varieties grow naturally. That's where there's a bit of a problem, though.

The issue experienced by many avid users of psilocybin is the basic scarcity of the mushrooms, outside of the specific context of gatherings, festivals, and foraging. There are a lot of folks who would prefer to have a steady and risk-free source, wherever and whenever they choose. Not only is this a matter of convenience, but it can also be a matter of general wellbeing.

When you're looking for magic mushrooms, it's not just about trying to find the right people. It can get pretty expensive, too. Worst of all, you have little or no control over the quality. This can lead to negative experiences and disappointment and can even sometimes lead to people being poisoned by the wrong mushrooms. Right there, we hit on the reason why this book is a necessary and highly useful addition to your bookshelf. You get to control your supply, in both quantitative and qualitative terms.

In other words, the whole point of this book is to give you the power to grow as much, or as little, as you personally want. You can also select the varieties you'd like to grow, with the utmost confidence in what the effects of each batch will be. This is a massive bonus to have, and with a little perseverance and application, it's readily available to everyone!

So, it really doesn't matter whether you're a veteran of the 1960s counterculture or just somebody interested in mycology in a more general sense; the primary purpose of this book is to place that power firmly into your hands. Don't get me wrong, there is something wonderful and exciting about searching for mushrooms in a Thai jungle. It's just that not everyone gets to do that sort of thing! Why should others have to miss out?

Throughout the following text, we will explore the subject of psilocybin mushrooms in some serious depth. We'll take a brief look at the broader historical and cultural aspects of their use, but the main gist of the book will be of a more practical kind. The main thing we'll be doing is looking at solid and reputable sourcing for all the information contained in the book, to ensure that you're getting the best available facts.

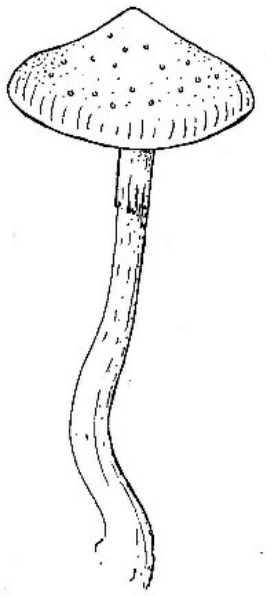
This means that everything you find in this guide will be properly cited and sourced so that you can easily check all the points, and even do some further research of your own. That's really the epicenter of the whole project when you think about it. Growing mushrooms is a scientific matter, so it makes sense to stick to the most rigorous and thorough practices.

Part of the scientific process is also to highlight certain methods and

approaches to growing psilocybin mushrooms, while also leaving the various techniques somewhat open. In doing this, we not only open doors to discerning ways of doing things but also leave room for further adaptations and innovations on the part of the reader. After all, science itself is all about new ideas, innovations, and improvements. So, with some effort and application, you can start your journey off in the best way possible!

It’s a fantastic journey in so many ways, too. There’s a little something for everyone, from the seasoned traveler to the novice. For the newer folks out there, we’ll be taking things nice and slow at first and also situating each step in its proper place. That way, you’ll easily be able to figure out anything you need to get started. For the more seasoned among us, there’s also going to be some technical and advanced information to sink your teeth into. That’s what we’re aiming for; a factual, in-depth book that covers you from step one to the harvest, and hopefully beyond that!

Above all, the growing of magic mushrooms is about the experience itself. It’s the experience of engaging with these mysterious fungi while learning how to nurture them. It’s also about the spiritual and emotional experiences that we have when we use the crop after harvesting. Finally, it’s all about the experience of togetherness with others, regardless of where they are on their personal path.



Chapter 1

A Brief History

To give a full account of the history of the psilocybin mushroom would require a book. Firstly, there's the full biological and evolutionary side of things. Then, there's the history of how and when humans began to use them. Each one of these aspects deserve a full-length analysis, and there's so much material to work with that it simply doesn't fit into a book about the practical side of growing mushrooms.

It's easy to see why we can only give a fleeting and brief history here. Some sense of the broader overview of this special fungus is necessary if only to establish the practical grower's technique in its proper context. To put it another way, it makes a lot of sense to let potential growers see the illustrious and distinguished tradition to which they belong. This is particularly true in a book about joining this very tradition right from your own home!

Early History

Mushrooms have evolved in different corners around the world, and native varieties of the fungus can be found on every continent. Yes, that's including Antarctica, where several mushrooms and other varieties of fungi have been found. However this should not be surprising, especially when you consider just how long they have been around.

Mushrooms are incredibly ancient, even in taxonomic and evolutionary terms. Some scientists are claiming that they first appeared in evolutionary history more than 700 million years ago (Bonneville et al., 2020). That is almost 300 million years earlier than scientists previously thought! Certainly, in all that time they have been able to occupy every corner of the planet, as well as diversifying into numerous varieties along the way.

However, we are not going to get distracted by this incredible story for too long, since our purpose here is to give a historical overview of human interaction with mushrooms. Since we only appeared on the scene very recently, by comparison to the mushroom, we'll have to somewhat trim down that history. We move from evolutionary biology to archaeology and history, beginning somewhere around 12-15 thousand years ago, with the arrival of human evolution.

The earliest evidence for the use of mushrooms is brought to us from archaeology with depictions made in cave paintings from several regions. These rock paintings, found in Spain, Australia, and other countries throughout the world demonstrate that prehistoric people were very familiar with the preparation and use of mushrooms (Dorr, 2021). This includes not only the use of the fungus for sustenance, but also for specifically spiritual and shamanistic purposes. This is the exact use the psilocybin mushroom has for many people today, and it shows how similar we still are to our very distant ancestors!

When we go back that far, things tend to get a little bit murky. There aren't any written records for the time, so it doesn't properly qualify as history. We must assume quite a lot and all the information we have is solely based on the scant evidence available. If we move forward a few thousand years, we start to get a lot more solid information. This is simply because cultures began to codify and record their religious and ritual practices in writing and tradition as the years and centuries went by.

We know that the ancient Greeks used varieties of magic mushrooms, as did the earliest Egyptians. Similarly, their use spread throughout Asia, from Siberia in the far north to Thailand, India, China, and others to the south. The ritual and religious use of specific psychotropic plants were also widespread in the Americas, including 'magic' mushroom varieties. The Nahuatl language (spoken by the Aztecs and Mayans) refers to magic mushrooms as the "flesh of the gods" because of their strong association with spirituality (Dorr, 2021).

The Greeks had many different spiritual and philosophical sects that practiced what they referred to as, "the mysteries." Little is known about these mystery cults, except for the fact that they used various hallucinogenic substances in their rites, including varieties of psilocybin mushrooms. The same has been said about the Oracle at Delphi, which

was the spiritual heart of Greece, going back to at least 1,000 B.C.E.

Ultimately, it seems clear to researchers today that most prehistoric cultures used all kinds of psychoactive substances in their religious practices, and that magic mushrooms appear to have been *high* on the list– pun intended. It's also worth noting that psilocybin mushrooms can be found indigenously pretty much everywhere, so early human civilizations were bound to come across them. Having discovered them, these communities naturally incorporated them into their spiritual and religious rites because of their effects on human consciousness.

Modern History

While the use of psilocybin mushrooms seems to have been almost universal across much of the ancient world, the use of these fungi became more underground in recent times. Certainly, with the arrival of our current era, the use of magic mushrooms became more socially unacceptable. There are many factors as to why this is, including religious and political changes across time.

With the fall of the Egyptian, Greek, and Roman empires, there was also a collapse in their various religious practices as well. Therefore, the practice of using many hallucinogens in these rites disappeared with the religions themselves. Although this doesn't mean that nobody used them anymore, it just means that their use became more covert. Many of the people living further away from urban centers continued to use the magic mushrooms, just as their ancestors had done.

For example, the Scandinavian people, who are commonly referred to as 'Vikings', continued to use them on the fringes of Europe. Similarly, reindeer herders across Siberia continued to drink the urine of deer that were fed a particular mushroom, and this is likely true across all regions in which the magic mushrooms are indigenous. The fact remains that whenever people try psilocybin mushrooms, they are instantly aware of the mystical component of their effect.

So, for hundreds of years, the consumption of magic mushrooms simmered away just below the surface. People continued to use them but preferred to keep things under wraps. For this reason, when movements of the 1960s started to look at new levels of consciousness, the scene was perfect for the

return of the magic psilocybin mushroom. People had become eager to investigate its sacred questions, and so the revival of the practice burst into public awareness once again.

This is where we arrive at the nagging question of: Why did people deliberately seek out the psilocybin mushrooms of their various regions? Why have humans always been drawn to psychotropic substances, like magic mushrooms? Are there multiple reasons for the activity, or could the reason be one that someone who has never partaken in the practice understand?

Uses of Psilocybin Mushrooms, Ancient and Modern

Clearly, most of the mushroom types that are used by humans are simply used for nutritional reasons. Depending on where you are in the world, there are likely multiple kinds of edible mushrooms that are featured in regional cuisine. Mushrooms are delicious and highly nutritious as well. Additionally, there are many mushroom varieties with known medicinal benefits, and these have also been popularly used over time.

For our present purposes, we only discuss the psilocybin magic mushroom. These varieties are not principally consumed for nutritional or medicinal reasons but are used in a specific way. Those of us who have used magic mushrooms will know what their effects are like; and for most people, the effect is one of a changed conscious reality.

There can be little doubt that our ancestors experienced the very same effect. Having eaten a mushroom that is now known to be a narcotic, ancient people could undergo these changes to rise above the level of ordinary human consciousness. They immediately associated this change with the world of the spirits and gods, and in some instances, they believed that magic mushrooms allowed them to communicate with the gods themselves.

Many people continue to hold this view to this day, and many of the people who routinely use psilocybin mushrooms will openly inform you of this belief. Our lives are largely dominated by many ordinary things. We experience the material universe around us in a known set of ways, and we experience ourselves in a particular set of ways too. Having consumed

psilocybin mushrooms, these ordinary experiences become challenged by a wholly different framework.

Of course, depending on the particular type of mushrooms in question, the overall effect is one of a changed mental context. Some psilocybin mushrooms have more overtly visual effects, causing a range of optical changes to the world. Other mushrooms are less visually effective but create a strong sense of spiritual awareness that wasn't present before. Some generate a feeling of euphoria, some cause people to laugh, while others will encourage deep mystical feelings within the user.

Whichever way you slice them, psilocybin mushrooms produce the experience of a significantly changed world. This is main reason why people first began to use these magic mushrooms in spiritual and mystical rituals, and it's part of the reason that this practice remains to this day. People have always used various substances to alter their experiences, but with psilocybin mushrooms, this effect is taken to new heights.

So, while much of the modern use of the mushroom is simply recreational, there's more to it than that. The experience of psilocybin mushrooms can indeed have a recreational aspect to it, but very few practitioners consider their use to be primarily for this reason. There's an undoubtedly mystical facet to the experience of consuming these fungi. Therefore the reason why so many people use the term 'trip' to describe the effects is because the periods after consumption seem more like a conscious journey than anything else.

Some Types of Psilocybin Magic Mushrooms

Many people, especially those who have no personal experience with magic mushrooms, tend to think that there's only one kind of mushroom that produces psychotropic effects. Either that or they may think there are merely a couple of types. The fact of the matter is that there are almost 200 species that are known to contain the active ingredient psilocybin (Janakian, 2020). That's a lot of variety, and there's no way to get around to all of them in this book.

What makes a little more sense is to isolate the top ten mushrooms that are used for their psychedelic properties with a brief list. This works well

because these are the mushroom varieties, you're most likely to be growing as well. For those who want to forage for wild mushrooms, it's strongly recommended that you consult a full description of all the mushrooms in your given area. Mushrooms can easily be confused, and some varieties are deadly and poisonous.

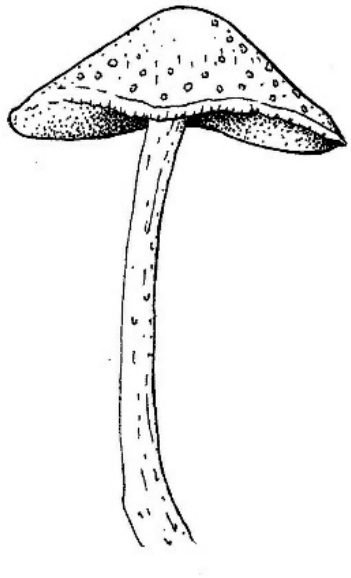
Given that the purpose of this book is to guide people through the growing process, it seems reasonable to give a quick list of those kinds you're going to see more often than others. There's some difficulty regarding the proliferation of subspecies and variations within groups, but this list will give you a fairly stable idea of what you're dealing with.

Psilocybe Stuntzii

With a conical cap that becomes flatter as they mature, these mushrooms are often called Blue Ringers, or Blue Legs, because of the tint on their stems. They naturally grow on the west coast of the US and often occur in fairly large clusters around mulch and rotting wood.

They can be grown indoors with some cautious effort, although few growers actually do. This is perhaps because they are tricky to grow for the most part and are a lot less potent than many other varieties. Nevertheless, they are a favorite among certain mushroom fans; and with slightly higher doses, they can be the perfect fungus.

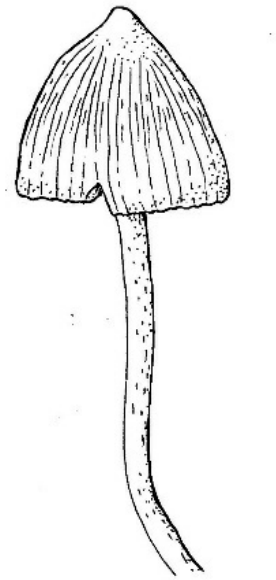
Psilocybe Caerulipes



Because of the bluish tint at their base, these mushrooms are often named Blue Foot Mushrooms. They can be found widely across much of the eastern US and Canada, although they can be hard to find despite their large range.

Given the general rarity of this mushroom, it can be difficult to obtain spores at times. However, they can be cultivated indoors and are slowly rising within the ranks of the varieties favored by growers. They are moderate in strength, placing them roughly at the same level as highly popular varieties like *Cubensis*.

Psilocybe Mexicana

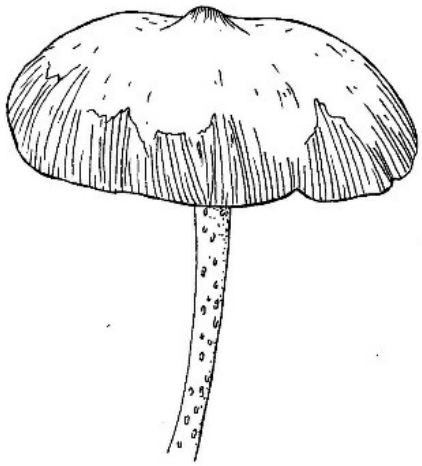


These mushrooms are thought to be the ones that were called “the flesh of the gods” by the Nahuatl-speaking people of Ancient Mesoamerica. They are a very potent, albeit small, variety of *psilocybe*. This makes them a favorite among mushroom aficionados.

They can be found growing naturally across the Oaxaca region of Mexico, particularly at moderate altitudes between 3-6 thousand feet. They like manure-rich soils and mosses and will even be found along paths.

The *Mexicana* grows in indoor cultivation settings and has, therefore, become a firm favorite with growers who are looking for a no-nonsense option to grow at home. It’s not a simple grow in the indoor setting, but with some care, you can get good results.

Psilocybe Caerulescens



Found natively in Oaxaca, Mexico, these mushrooms prefer to grow in patches free of other plants. Thus, they are often seen growing on the sites of landslides in their mountainous home region, leading to the nickname "The Landslide Mushroom."

Silvery-blue in color, and with a metallic sheen on some of them, this mushroom is quite easily distinguished from other varieties. However, it also tends to be on the milder side, so experienced people taking smaller doses are often underwhelmed with its overall potency.

This may make them the ideal mushroom for those who have never tried psilocybin before, given that there aren't any surprises in store for the user.

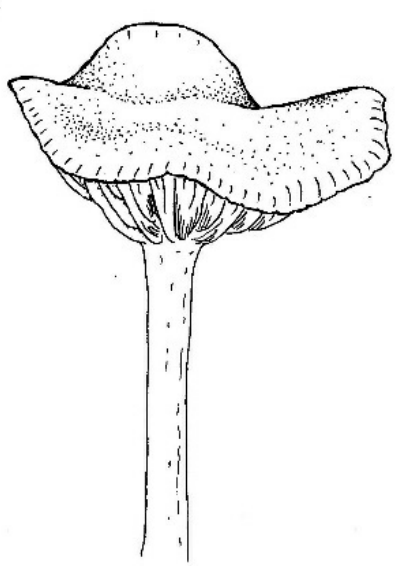
Copelandia Cyanescens

This entry is the only non-*psilocybe* variety on our shortlist, but it's a firm favorite among many users. Being happiest in dung-rich environments, especially with higher temperatures, this mushroom is found all around the world.

You can see them practically anywhere that's warm, or tropical. That especially includes the southern states of the US, Asia, Africa, and Australia. The fact that they aren't in the *psilocybe* family shouldn't disappoint you either.

These mushrooms are considered to be highly potent and deliver a seriously intense trip when taken in bigger doses. Not to be taken lightly, these are a very popular choice.

Psilocybe Cyanescens

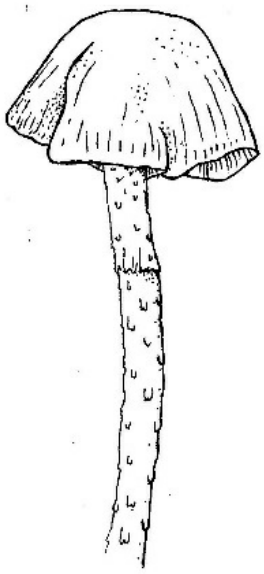


Because their caps have a distinctive corrugation toward the fringes, this little mushroom is often called the “Wavy Cap Mushroom.” The cap itself is often a tannish brown color, although there are variations on that theme.

They’re not easy to grow indoors but are among the most sought-after mushrooms because of their great abundance in the Northern Hemisphere. While they are likely indigenous to Europe, they have traveled far and wide on shipments of lumber. They prefer drier woody habitats, and thus can readily be found in wood mulch.

However, they are considered to be a very potent variety, so some care may be needed when consuming them. The dried form is considerably less intense than when eaten fresh, so that can make things a little simpler.

Psilocybe Zapotecorum

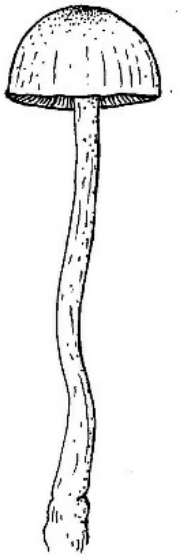


If you know your cultural geography, you'll be aware that the Zapotec people hail from the Oaxaca region in southern Mexico. That's also where this mushroom can be found in natural abundance.

Usually creamy brown, and with a conical cap, this mushroom enjoys a more swampy and moist environment. It grows to a good height compared with many other varieties, and when the conditions are right, it can grow in large bunches.

While there's a good deal of variation in terms of potency, this mushroom is regarded as a moderate to strong variety in general.

Psilocybe Tampanensis

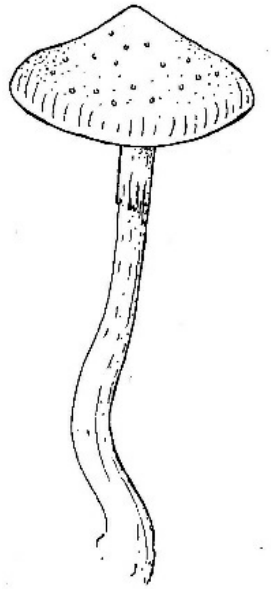


If you're looking for a mushroom that's relatively easy to grow, then these might just be the right ones for you. Sometimes called "Philosopher's Stones", these mushrooms grow a little differently from many others. That is, they grow *stones* called sclerotia at their base, which is where their nickname comes from.

These sclerotia are actually hardened masses of mycelium, which the fungus uses as a food reserve. It's these stones that most growers are after, and many folks disregard the flowering tops of the mushroom altogether.

In addition to being much more forgiving to the novice grower, these magic mushrooms are known for producing a really relaxed and comfortable experience once ingested, although some users have reported a heaviness in the limbs, or even mild nausea. Much of this is probably due to individual circumstances, though.

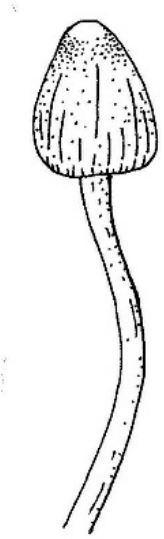
Psilocybe Azurescens



These mushrooms are perhaps the strongest mushrooms found in the wild, and a single gram of this variety is very likely to be a strong dose. Their shape lends to the nickname of "Flying Saucers", although they're also known as "Blue Angels" or "Azzies."

Because they grow on decaying wood and prefer sandy loose soils, they are most easily grown outdoors rather than indoors. Fortunately, they are also very resistant to colder temperatures, so growing outdoors in the Northern Hemisphere is quite easy.

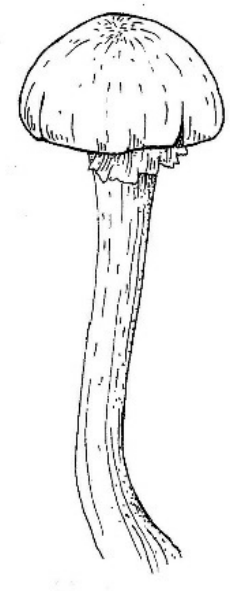
Psilocybe Semilanceata



These mushrooms, often called “Witches Hats” or “Liberty Caps”, are likely to be the most widely occurring magic mushrooms across the Northern Hemisphere. They are quite tricky to cultivate indoors, but many people forage for them across the US and Europe. They’re also considered to be among the very strongest of all the magic mushroom varieties.

They are a golden-brown color and have a very conical cap that looks a bit like the traditional depiction of the hats worn by witches, hence the nickname. In terms of potency, they are noted for their strength by comparison to other magic mushrooms.

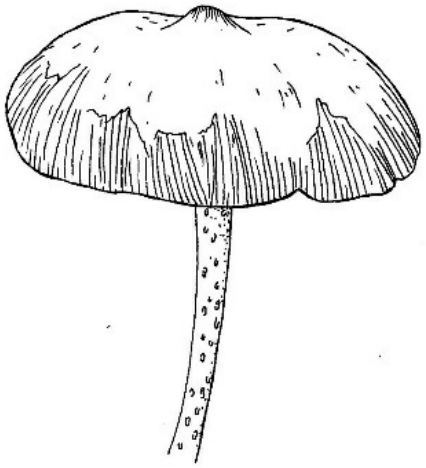
Psilocybe Cubensis



For those of you who have ever taken magic mushrooms without knowing exactly which kind they were, it’s highly probable they were *Cubensis.* Cubes, as they’re often known, are probably the easiest of all the magic mushrooms to cultivate. This means that they’re by far the most common mushrooms found on the market, and thus the ones most people have tried.

They are so widespread and popular that there are now quite a few variations within this single species. These mushrooms are found growing naturally across North America, Mesoamerica, Asia, and Australia. Since folks have begun cultivating the *Cubensis* for several decades, however, there are now thought to be around 60 different strains within the species.

These include famous strains such as Golden Teachers, Penis Envy, and a host of others. This mushroom is larger than the others and has a wide brim to the cap. They’re often a golden color but can also be with a bluish tint from exposure to oxygen.



Chapter 2

First Steps

Whenever we engage with a project, no matter what kind it might be, it makes a lot of sense to start at the beginning. All journeys must begin with that first step, and so it pays to ensure that the first step is a sound one. While there are several different methods, techniques, and kits available, there are some basic supplies you're likely to need to set up.

The very first thing to do before getting too far ahead of yourself is to create a short checklist of items required. There are many types of grow kits available out there, and these will typically arrive at your door pretty much complete. These *just add water* kits will be mentioned a little later in chapter four, but for now, we are dealing with the full growing techniques.

With that being said, there are some basic tools you will need to get a full home system set up, and these basic supplies are universally required for all these systems. Your first move will be to ensure you have these items ready, regardless of which approach to growing you ultimately prefer. You might think of this as a core list of necessities.

The Core List of Essential Supplies

All the home growing techniques, barring the prepared kits, have certain steps between preparation and harvest. In general, this means there are some basic initial steps that then develop in different directions later. These initial steps are universal to pretty much all the various techniques, and here, we will look at the supplies you'll need regardless of which technique you prefer.

Later, we will consider all the specifics inherent to some specific cultivation methods. For PF Tek, Monotub Tek, and outdoor methods, we

will list the tools and methods in their designated chapters (four through six) of this book. For now, let's focus on the basic things you're going to need regardless of the method you select.

Latex Gloves

No matter what approach you take to cultivating mushrooms in your home, the most central step involves sanitization. There must be a very high emphasis on keeping everything as sterile as humanly possible. For this reason, much of our core list has this focus. It's a serious rule of cultivation that everything must be as absolutely sterile as you can make it.

So, latex gloves are an absolute must. This not only helps to ensure that you can work without contaminating any of your supplies with bacteria, but it also serves to keep your hands protected from some of the items. These latex gloves are widely available, both in certain supply stores and online.

Rubbing Alcohol

Here's the second addition to the cleanliness cohort. Rubbing alcohol is going to be important in several ways during your grow, because of the obvious fact that it sterilizes surfaces and tools very well. Just as tools and equipment must be sterilized before surgical practice, everything you do during a mushroom harvest must be sterile.

There are several reasons why you'd want to keep things nice and clean in general terms, but this is heightened in the case of mushrooms because of their sensitivity to any kind of contaminant-especially bacterial contaminants.

Spores

Obviously, you can't begin your adventure with at-home magic mushroom cultivation without first sourcing your spores. There is some choice involved in making this selection, and a whole range of criteria to consider beforehand. Much of this will come with time and experience, as well as personal preference.

Nevertheless, we will provide some guidance a little later in this chapter about some great choices for the entry-level cultivator. These will be

principally based on the ease of cultivation so that growers can first become acquainted with the process. It's no use trying to grow the trickier varieties before you are first familiar with the entire procedure.

Syringes and Needles

Unless you're growing from a ready-to-use kit, you will definitely need a method of inserting the spores into your chosen substrate. In the grower's world, we normally refer to this activity as "inoculation". Basically, once you've prepared the bed into which you're going to seed the mushrooms, you need a method to insert them.

Very often, you will receive your spores with the required syringe-and-needle combination. It's not always the case, but the spores typically come pre-loaded into a syringe to make everything a little easier all around. If your supply doesn't include a needle and syringe, then you can easily source these yourself.

Pressure Cooker

This is the final element in your sterilization pack and a real must-have for any mushroom grower. A pressure cooker is a fantastic way to sterilize practically anything that will fit into it, and we can safely recommend using a larger-sized pot. Most growers will suggest at least a 15-liter pressure cooker, just to make sure that everything you're likely to need will fit comfortably inside it.

It is an absolute must to ensure that everything is in prime condition, sterile and clean. This includes all your tools, but also the crucially important substrate. Whichever way you decide to go in terms of your substrate, it will need to be thoroughly sterilized before use.

Substrate

Whether you're growing with one of the indoor or outdoor methods, you're going to have to select a form of substrate beforehand. There are a great many options available in terms of the substrate, from wood chips to flour and even some artificial options.

There will be a lot of trial and error involved in finding just the right option for you, going forward. It's really just a matter of personal taste and

experience. Some growers will swear by a certain choice, while others naturally go another way. We will give you all the tips you need to make an informed choice when we start to dig down into the methods later. For now, you'll need a substrate to finalize your core list of supplies.

It's worth saying once again that these listed supplies form the core from which you can build, depending on the method you select. This list is not intended, therefore, to be an exhaustive one by any means. It is merely the general starting point, and in the next chapters, we will itemize everything you will need to go forward with your chosen method.

Having looked at your basic supply needs, it's high time to consider which varieties of mushrooms you'd like to start your grower's journey with. As noted in the introductory chapters, there are around 200 known kinds of psilocybin magic mushrooms in the world. The question is which of them are the best to start off with. Let's look at some recommendations.

Mushroom Varieties and Their Cultivation

It's one of the profound joys of the psilocybin magic mushroom family that there is such difference and diversity to be found. Some magic mushrooms are relatively mild in terms of their effect, whereas others are very intense. Some mushrooms will grow quite easily and are tolerant of wider margins of error. Others will punish even the smallest mistake and are thus much harder to grow.

Additionally, there are some varieties that are so popular that they can be found almost anywhere you look, while others are so rare that you'd have to forage for them yourself. So, we've compiled a three-tiered list here, with all the information you'll need to make an informed choice about what you want to do.

There are many psilocybin mushrooms that can't yet be grown indoors. The reason for this is that their life cycles are just too complex to imitate in an indoor setting, and so they are basically only for foragers. There are some that won't grow indoors, but with the right care and attention, you can manage to find them growing in the outdoor patch.

Beginner

There is really no doubt about the choice here. For the first years of

psilocybin mushroom cultivation, there was only one kid on the block. That was the *Cubensis* , or more commonly known as “cubes”. There’s a very good reason for this. Nobody knew a great deal about growing psilocybin mushrooms, and these *Cubensis* mushrooms are the hardiest of all.

They’re pretty forgiving on the newer cultivator, and this makes them the perfect choice. The really wonderful thing about the cubes is that they’ve been cultivated indoors for so long that there are reportedly around 50 or more strains available. They are more or less the archetypal indoor shroom, and so all the advice in this book applies directly to them.

Cubes prefer the warmer temperatures of 24-28 ℃ for the incubation phase of growth, while they’re colonizing the substrate. Then, once you’re getting ready to pin them, you can drop it down a few degrees to about 22-25 ℃ .

This mushroom is about as hardy as a mushroom can get and will typically reward a cautious beginner quite well. They will forgive a mistake here and there, and so that makes them the ideal mushroom for starting out with. In fact, almost all the mushrooms available for sale will be cubes.

It’s really the all-around mushroom for everybody, and everyone who has tried *psilocybes* knows the cubes very well. We know and love every strain of this delicious magic mushroom!

Intermediate

This one’s a toughie to grow indoors, and a real challenge to the intermediate cultivator. It’s called the *Psilocybe cyanescens*, commonly named “The Wavy Cap” because of its appearance. The cap starts out looking like any other, but as the mushroom grows, it starts to grow in waves toward the fringes.

This mushroom has frustrated many growers over the years, and you really should have some experience behind you before you attempt it. This mushroom naturally occurs in liminal spaces, such as where forest and grassland meet, and is a colder climate shroom.

For the incubation phase, you’ll be looking for a temperature around the 18-24 ℃ range, although 24 is pretty high. Then, during the pinning and fruiting stage, the temperature should drop way down to between 10-18°,

with 18 being the total upper limit.

Many growers have succeeded with The Wavy Cap, and it's definitely one for the tripper because it's also much more potent than the cubes. These are not easy to grow indoors, but if you manage to get everything perfect, you may get that bonus crop you've been searching for!

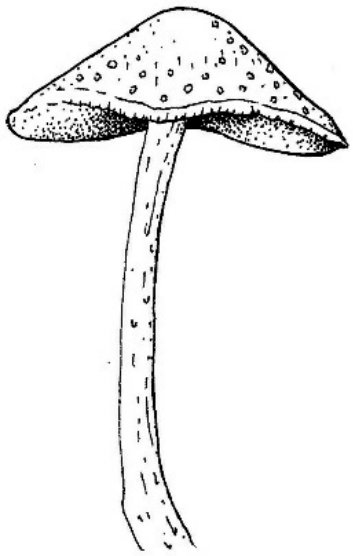
Expert

Here we encounter the *Psilocybe azurescens*. This psilocybe is one of the most potent shrooms on the planet and notoriously difficult to grow indoors. In fact, most serious growers seem to regard it as impossible to cultivate except in an outdoor growth, so that's the way to go!

Very little, if any, information exists on growing this powerful mushroom indoors, but a very experienced grower might be able to have a crop from an outdoor grow. They can be inoculated into an ordinary grain spawn and will readily colonize in the normal way. The difficulty arises in the transfer to the next phase where conditions are harder to mimic indoors.

They will normally require up to six months to mature, so that's another thing to bear in mind. However, with an outdoor grow, you can get them bedded and then move on to other things. You'll have to keep them damp through this entire period, so be prepared to put in the hard work with these mushrooms. If you are successful, you will certainly be rewarded with a seriously powerful psychedelic experience in the end!

If you consult the section below on outdoor cultivation, you will get the full picture of how to do this alternative grow. There, you'll get all the hints and tips for the outdoor growing enthusiast, and with some effort, that process should work for the notorious *azurescens* too. Given that this is a tougher one than almost any other, it is really one for the serious and experienced grower.



Chapter 3

Sterilization

As we noted above, the single most important factor in the cultivation of psilocybin magic mushrooms is sterilization. If there is an overarching mantra to growing shrooms, it should be *sterile, sterile, sterile!*

With each step that you undertake and each tool or supply you use; things have to be kept nice and clean. There's a very simple reason for this– mushrooms are sensitive to everything in their environment, and they have highly specialized niches in the natural world they inhabit. They also each operate in quite specific and limited ways, with some preferring drier habitats, others preferring altitude, some liking marshy areas, and so forth.

What all mushrooms are extremely sensitive to is bacteria. The introduction of bacteria into your grow, even just the bacteria on your fingertip could be enough to destroy your entire crop right then and there. It's that big of a problem for the mushroom grower!

Not only are mushrooms sensitive to bacterial infection, but they're also sensitive to contamination from other forms of fungus too. The point of sterilization is that you want to closely control what's growing in your tubs or jars, and the only thing that should be in there is the specific mushroom you've selected. Nothing else!

So, that is why we're devoting a chapter to the issue of sterilization alone. Whether bacterial, fungal, or just some other extraneous source of chemical infection, it all could result in the complete destruction of your crop. Can you imagine putting in all that effort, only to find that you've allowed a pest into your precious grow! That's a psilocybin cultivator's worst nightmare.

Open Flame Sterilization

We all know that fire kills things. It kills pretty much any living thing, in fact. That makes it a fantastic resource when it comes to purity. Obviously, there are limits to what you can safely sterilize with an open flame, though. Only metal and ceramic items can be cleaned in this way.

When it comes to smaller items like spoons, scalpels, or similar implements, a Bunsen burner is the perfect method. Some growers use lighters, but it’s preferable to have a device that frees up both of your hands so that you can do more.

Perhaps the most common use of the open flame method is when you’re sterilizing your needle before inoculating the substrate. The advice is that before you place the needle onto your syringe, you should heat the needle until it glows red. Then, you allow the needle to cool before you place it and begin injecting the spores.

Similarly, your mixing spoon should be sterilized before you mix your chosen substrate. Here, the open flame is a great option. Simply run the spoons through the Bunsen burner’s flame, and then allow them to cool before stirring.

It cannot be overstated that you should view your entire growing procedure in the way we view surgery. Everything you touch ought to be cleaned. Ensure that you know exactly what you’re going to be using, and then sterilize those items in preparation for the particular tasks you're going to carry out.

What’s important to remember here is that open flame sterilization is not the same thing as heat treatments like with the pressure cooker. Scientifically speaking, the open flame technique utilizes two distinct physical processes. With the open flame method, you create a chemical reaction, and this reaction generates heat (that is, exothermic).

Therefore, open flame sterilization should only be used on tools and equipment that cannot be damaged or destroyed by the chemical reaction. For any sterilization in which you want to retain a biological structure, the exothermic chemical reaction of flame is not desirable.

Pressure Cooker Sterilization

There are certain steps in the most common growing methods where you just can’t beat the good old pressure cooker. It’s true that you can normally get away with just heating things in an ordinary pot, but why do things in halves when you can do them brilliantly?

What makes the pressure cooker such a good option is physics. Under ordinary pressure, water boils and evaporates at 100 ℃. The pressure cooker has a locking lid, which means that you can pressurize the contents and create a much higher temperature. This is how we create superheated steam, for instance.

The higher the temperature, the fewer the possible contaminants; it’s that simple! So, the pressure cooker will give you the certainty that nothing will come along to destroy your beautiful little mushrooms before they mature.

The great thing is that if you don’t have one of these at home, you almost definitely know someone that does have one. You might be able to borrow one from a family member, or friend, and return it after you’re done. It is possible to use a regular pot, but the pressure cooker is by far the best choice.

As mentioned above, heat sterilization and open flame sterilization are not the same things. They obviously share the physical feature of heat, but they operate very differently. A good rule of thumb is to avoid using an open flame for anything that’s organic and biological, or in any instance where you could chemically alter the structure of biological materials like your chosen substrate.

There’s one notable setback with the pressure cooker sterilization method, though. That is, the time required to do it properly. It just takes a lot longer than any other method, so while it is a perfect method, it does have the length of time as a problem. For this reason, whenever you set up this method, remember to sterilize everything that you need to. Otherwise, you’ll have to do the whole thing all over again.

Pasteurization Alternatives

For many tasks, there’s no absolute requirement for full pressure cooker sterilization, and you can get away with simply pasteurizing an item or substance for use. Remember that the pressure cooker allows us to obtain

very high temperatures because the water is under a highly pressurized condition.

The pasteurizing method simply uses water at one atmosphere of pressure, and so the water evaporates once it hits 100 ℃. The evaporation then cools the contents of the pot, causing the temperature to remain stable at the boiling point. For this method, all you need is a regular pot on a regular stove.

This method will do just fine for supplies such as a secondary bulk substrate, or for swiftly disinfecting many tools at once. It's not as great for the tools and supplies relating to the very early stages of the procedure, such as grain spawn. This is because of how fragile the mycelial growth is at this time and for this occasion full sterilization is advised.

What makes pasteurization so useful is its speed. You can drop a whole bunch of scalpels, needles, syringes, and so forth, right into the pot and boil them in one go. Then, you can just pour off the water and wait a few moments until it all cools. With the pressure cooker, things end up taking a lot longer, often around eight hours, or so.

So, it's basically a faster method than the pressure cooker sterilization and can be reserved for those items and supplies that don't require the full treatment. It's also great for use whenever you are in doubt about how clean something may be.

What many experienced growers do is gather up everything they have just used, and place these in a large pot. That way, you can remain certain of the cleanliness of everything without having to remember any particular instrument. It just makes everything much simpler.

Alcohol Sterilization

The psilocybin mushroom grower's workspace should be very much like a surgical theater, in that everything must be scrubbed to a high sheen and sterile. Just as doctors use rubbing alcohol before inserting stitches, so should a decent grower clean all work surfaces before working with anything.

Alcohol is a great option because there are many things that can't be exposed to a naked flame like a Bunsen burner. It's also useful in terms of

timesaving because while the pressure cooker is great for sterilization, it does take a long time to properly use. Rubbing alcohol can be seen as your third major tool in the war for cleanliness!

There are several kinds of alcohol that can be used, and we recommend that you keep two basic types in your arsenal. Firstly, having a general hand sanitizer on your workbench or table is advisable. Make sure that it's alcohol-based, and that you can use it to sterilize hands, surfaces, and larger items.

Then, you should keep some sterile wraps as well. These come packed into special sachets to ensure total sterility and can be very helpful for doing the more sensitive items like needles and spore insertion caps (depending on the methods you select). There's a lot to be said for using alcohol wipes after each and every action you take, to avoid any crossing of contaminants.

Remember, everything should be treated as if it were a surgical space. If you wash your hands with sanitizer and then touch your pants, your hands will be reinfected. You should probably wash them again and try to keep everything you do as free from possible sources of contamination as humanly possible.

Keeping Up General Cleanliness

As we've often mentioned earlier, maintaining a clean and sterile workspace is important. This includes the sterilization methods above, but it also means a certain practical element of working practice as well. Your fingers carry contaminants, and so does your breath. It is not excessive to consider these sources of contamination in addition to the sterilization practices.

Wearing latex gloves is a really good idea, and these can be found online easily. You can find several types, although it's worth mentioning that not all of them are properly sterile. Some are just powdered, some are plain, etc. Try to source latex gloves that indicate a sterile marker on the package itself.

It may also be a good idea to get yourself a mask to wear while you're in open contact with any area that may become contaminated. It doesn't have to be a full N95 surgical mask, but a mask that acts as a barrier between

you and the growing mushroom crop is a good idea.

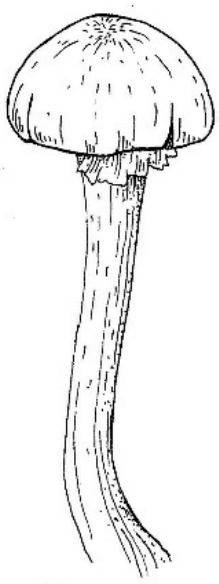
While it may seem obvious to many people, it's worth saying that having a dedicated clean room is a major winner here. It makes a lot of difference because it changes our approach to things. If you have a clean room, it means that there will be fewer chances of cross-contamination from all kinds of sources.

For those of us who have more limited space, it might not be convenient or possible to dedicate a whole room to growing psilocybin mushrooms. That's a common problem, especially for those who live in major urban centers where rent is high, and rooms are small. In this case, it could be beneficial to cordon off a section of a room for this purpose. Every little effort helps in the cleanliness war!

This approach helps in two distinct ways: Firstly, when we fully cordon off a space in which to work it tends to remind us to take precautions. That way, we know that there's a clean space that requires certain actions. Secondly, it prevents accidental contamination by other means because you'll avoid mixing items around your grow area and causing an infection that way.

Another really good idea is to have certain supplies in particular areas. So, if you're using a workbench, you will naturally tend to do certain things in specific areas. Making this a sort of rule in your mind can really limit the amount of cross-contamination as well, and just ends up making life easier for you.

If you haven't used a specific item, you will know this right away just by seeing where it is on your bench. You then just collect everything from your current working area and place it in the area where you sterilize things. It's one of those habits that people develop to speed things along and make everything that much smoother.



Chapter 4

Grow Kits

You might have looked at the preceding chapters, or glanced ahead at the coming chapters, and immediately thought that it seems difficult. A lot of people have this response when you begin to tell them about all the tricky work involved. Some folks are completely put off, in fact.

It seems totally true that some people are just better at cultivating things than others, and this seemingly holds true for roses, petunias, and our topic of discussion–mushrooms. It's undeniable that cultivation from scratch can be hard at times and does take a lot of determination and concentration. However, for those who start panicking about the technical stuff, there is another option out there!

As we briefly mentioned, you can obtain grow kits that are very simple to use. For someone who is thinking about growing for the first time, it might make sense to go for this option initially. The major advantage of many of these kits is that they're really, really easy to use. Some require only regular doses of water to produce a crop.

Now, that's clearly an advantage in terms of ease and certainty, but there are some setbacks to this approach too. Like everything in this adventure, we call life, there are pros and cons to the world of the grow kit, so let's consider the options!

The Pre-Inoculated Kit

A pretty solid way to approach the issue is to ask yourself a simple question: What is it that you're after? What do you want to take away from your mushroom-growing experience? Once you have a handle on exactly what you're looking for, then you can decide more easily. Remember that

this question doesn't commit you to anything in the future but is really only about what you want to gain in the short term.

So, if you get to the stage of asking yourself what you want to gain from the experience of growing psilocybin mushrooms, things get a little bit simpler. There are a variety of reasons why folks get interested in mushroom growing, and it helps to know which of these camps you're in.

A Note of Caution!

Just a word of warning here, before we proceed. There are many places online that market certain grow kits, but they are actually not grow kits in the sense we mean it here. They are kits to set up one of the fuller techniques, whereas in this section we are talking about the *ready-to-go* options. If you're looking for this pre-inoculated kit, you should be certain that's what you're buying.

Therefore we're including this chapter on grow kits. While there are many products out there that market themselves as grow kits, they can, in fact, be very different things. For that reason, we have divided this chapter into two sections. In this first section, we specifically mean only those kits that are pre-inoculated and arrive at your home already producing mycelium in the substrate cake.

In the second section, we will give a brief account of the kits that are intended for the fuller growing techniques discussed in the following chapters. It's true that in the English language the word *kit* can refer to almost anything, so it's important to be specific. If you're looking to buy a kit such as the types described in this first section, it's a good idea to shop around until you find the correct type.

You can purchase a *kit* for PF Tek or Monotub Tek methods, but these aren't what we mean in this initial section. In this context, a grow kit is only those kits that are already alive and growing when you receive them. Otherwise, you're getting a kit to grow your mushrooms from start to finish, which we'll deal with at the end of the chapter. Also, we'll deal with the techniques themselves in the chapters to come.

The Keen Tripper

For many people, the main reason they get into growing mushrooms is to personally consume them. So, for people who encounter psilocybin

mushrooms at a party or festival, it may seem like a great idea to actually build up a little stock of them for the purpose of using them in the future. Sort of like a stash if you like.

If this is where you are at the moment, and you're looking into the cultivation of psilocybin mushrooms for the first time, it may make sense to at least take a look at your grow kit options out there. They're incredibly simple to use and almost impossible to mess up. In summary, they're a really great shortcut to a decent little harvest!

It can be a little daunting to go the whole hog on your first effort, and the grow kits will definitely make everything simpler in that sense. You simply make the purchase from the many online sites available, and they arrive at your door! Easy as that.

That way, you will have the shrooms you're looking for. You just follow the particular instructions on your chosen kit, and your crop is almost guaranteed. All that remains is for you to dry them out and store them safely for use at a later stage.

This definitely makes a lot of sense for mushroom fans, especially those who have never grown them before. You get your crop, while still having the satisfaction of having grown them at home. You will probably end up saving a bit of cash as well, depending on your location and circumstances.

The Budding Home Growing Guru

There's a second sort of mushroom fan here, too. This is the kind of person who likes to grow things themselves but might be a little nervous about all the fuss and hassle of the full growing techniques, at least initially. Well, the grow kit is probably a really great place to start off if this sounds like you.

The single biggest advantage of the grow kit is exactly that. You get to grow your psilocybin shrooms at home, but with minimal effort on your part. There are also far fewer problems that can arise with these kits because they are normally very self-contained. All that's needed is to follow the instructions included in the kit.

There's also something to be said about using grow kits as a kind of stepping stone. You may feel a little overwhelmed by the full techniques at the outset, but once you've grown a crop or two with the kit, you might

feel up to the challenge! So, it can be a fantastic resource for the home grower who feels a little shy at the beginning.

What's really nice about the grow kit option is that you aren't committed to anything with it. You can take a shot at the kit, maybe two or three crops, and then decide you want to try out the fuller methods. Or you might enjoy the convenience and ease of the kits so much that you just keep going! That's completely up to your preference.

Given the choices available out there, you can get a really decent harvest from these grow kits. Not only that, but you will likely save a buck or two, especially if you're someone who enjoys consuming shrooms on a regular basis. Most outlets nowadays will also feature a fair range of mushroom choices, too, so there's no need to miss out on the variety.

Some Comparative Advantages and Disadvantages

It's really all about preferences, in the end. There are a great many reasons people have for doing things, and trying to list these here would be impossible, not to mention silly! However, there are some major considerations that are likely to impact pretty much everyone, so it makes sense to look at some of these beforehand.

Remember that most of these comparative differences will also be impacted by where you live and other personal circumstances, so you will have to factor that into your thinking as you go along. These are simply general distinctions that will apply in a very broad way. Let's start with some of the advantages.

Advantage: Growing Multiples simultaneously

One of the often-overlooked advantages comes down to the size of the kits. Typically, the kits will arrive at your door as a medium-sized parcel, not much bigger than a foot in any dimension. Some are considerably smaller than even that, being sent in tubs only a few inches across.

While this clearly limits your overall harvest size, it does also mean you can have a whole row of kits sitting on a counter if you want to! This means you can go to a renowned supplier online and purchase one of every variety they provide. This is not really something you can easily do with

the fuller growing methods unless you have a lot of space available to you. Not many people have that luxury.

If you're someone who also loves to eat culinary mushrooms, you can also get these in grow packs. This means you could grow multiple varieties of both psilocybin and culinary mushrooms at the very same time! After all, there's little or no difference in how they're grown in the kits.

Advantage: Saving Time on Harvests

Another major bonus with the kits is the time saved. In most cases, if not all, the way the kit works is that it arrives at your door as a block of substrate. There are several major variations on this theme, but the substrate typically arrives already in the mycelium stage of growth.

This means that all the preparation, sterilization, and inoculation have already taken place. So, once you've opened up your package and followed the basic instructions, you're already a few weeks into the grow. Depending on the type of kit you opt for, the beautiful little mushrooms will begin to show their faces within days of showing up at your door! That's a real time-saver there.

When you add in all the time involved in gathering all the supplies, sterilizing everything continually, the time taken after inoculation, and so forth, it's a heck of a lot simpler and faster to go down the grow kit route.

Advantage: Saving Money

Depending on where you live, the grow kits could be saving you some serious money. Most people rely on a supplier for their psilocybin adventures, and we all know that it's not cheap. It varies from place to place, but it's typically not cheap. You'll find that the kits will produce enough to completely validate the price you pay at checkout.

Another thing that many people don't seem to realize is that most kits will provide several harvests, not just one. Again, this depends very much on the type you go for; but with most kits, you can get several flushes from the same block of substrate. So, even the smallest of the kits can actually produce a fair number of mushrooms, making it even more economical for your pocket.

Additionally, there's no need for all the supplies. When growing from scratch, there's a lot of equipment you can't do without. With the pre-

inoculated kits, you have everything right there in the same box, so there's no requirement to get all the other stuff. That's another clear saving.

For those of us who are living in areas where wild foraging is possible, that's wonderful. The thing is, most of us live in cities where it's impossible. In any case, there's always the risk of misidentifying a mushroom if you're not properly skilled at spotting the good from the bad. This can be a serious problem!

Also, there's a limit on the times of year you can forage for wild shrooms, as well as a limit on how many you're likely to find. They tend to be harder to find than many culinary varieties, so you're only going to find a few here and there for the most part.

Disadvantage: Lack of Scope

There are definitely quite a few advantages to the psilocybin grow kits, there's no doubt about it. The ease, the cost saving, and more. For growers and trippers who want a cost-effective and fast way to get a supply, there's a lot to recommend this route. It's especially true for those who are just starting out on the grower's journey.

However, there are some basic downsides too. In the first instance, there's the issue of scope when it comes to the typical kit. They're small, by necessity, and this will limit how much you can ultimately harvest. With both other main techniques, we discuss later on, there are far fewer limitations here.

With the fuller techniques, particularly the Monotub approach, you're limited only by the specific tubs and initial amounts you select to work with. The sky's the limit, basically. So, if you feel you're the kind of grower who wants to do a single big grow per year, then the kits might not be what you need.

Disadvantage: That Pre-Packaged Vibe

It's the same with a lot of things; when it comes pre-packed, it feels pre-packed. This is also the case with the grow kits, for many people. There's a sense in which you really haven't done any actual growing, having chosen to purchase live mushrooms instead. There's something to this criticism, although it will mean less to some than to others.

Many of us are growers. This may include other types of narcotic plants,

or it may just be plants in general, but there's a sense of great accomplishment in succeeding! This is something you definitely forego with the kit method, although this is also likely to be less important to some folks than others.

If you're reading this book because you're basically a grower at heart, then the grow kits will likely leave you feeling a bit unsatisfied. While it's a very useful and effective process in many ways, it's unlikely to provide that start-to-finish pleasure that many of us are looking for out of the psilocybin mushroom harvest.

If you're into witnessing and taking part in every phase of your mushroom growth, then the other techniques are likely the better choice in the longer term. This, however, does not mean you can't also enjoy the ease and speed of the grow kits. You might choose to use them for your first run, or you may even choose to use the kits in addition to your main procedure. There's no mutual exclusion at all! Do them both, if you like.

So, You're Opting for a Pre-Inoculated Kit

It may be the case that you're strongly considering getting a grow kit, but you just want to know a bit more about them before committing. That's certainly a pretty good place to get going on your kit-based adventure.

The grow kits are a more recent innovation in the world of psilocybin magic mushroom cultivation, and for that reason, there are only a few basic types available. They use the same basic format for their product, but the differences usually come down to slight variations in the container type.

Having said that, there's quite a lot of choice when it comes to the actual mushrooms you can cultivate, which is probably the main thing. When it comes to culinary mushrooms, there are more options available. For now, the main type of psilocybin grow kits seem to be of one basic type with some minor differences.

Pre-Inoculated Grow Kits

For our purposes, what makes a kit a kit is precisely its ease of use.

There’s no need for sourcing spores, no messing around with supplies, and no requirement to sterilize tools. That’s the beauty of it! It just couldn’t be easier.

So, the basic thrust is that you avoid all the tricky stuff pertaining to the full procedures for growing your psilocybin mushrooms. To put it another way, the kits are there to provide an alternative to the more laborious and technical side of growing.

Some kinds will arrive in a small tub, while others arrive in a rigid bag, and there are some other methods as well. However, the main gist of the product is that once you’ve ordered it online, it will arrive at your door already producing mycelium in its substrate cake.

With this option, you ordinarily just have to ensure that the kit receives adequate watering throughout the day. Then, you just have to wait until the mycelium begins sprouting into what we call “pins”. These pins are just the beginning of the fruiting stage of fungal growth, meaning that your mushrooms are popping their heads up!

What’s absolutely great about these kits is that literally all you have to do is monitor the moisture levels in the kit itself and wait until your chosen mushrooms fully fruit. Then, you just harvest them and allow them to dry. Nothing could be easier!

Another great recent innovation with these kits is the species choice. It used to be that almost every psilocybin mushroom you could find would be of the *Cubensis* variety. This is because they’re usually considered the least fussy to grow and are also quite potent. For those reasons, they were pretty much ubiquitous in the psilocybin world, with many sub-varieties and strains.

Now, however, you can purchase a grow kit that’s been pre-inoculated with a range of spores, including *Mazapatecs*, *Colombians*, *Thai*, and many others. On some specific sites, there’s even an option to create a mixed batch that you can select to your tastes. This really does up the game quite a bit.

Grow Kits for the Major Techniques

As we saw above, when it comes to the grow kits available online (and

elsewhere) there are two major types. There's the type that arrives pre-made and growing, and then there's the type that's essentially just an inventory of supplies. With the first type, you're basically just going to be watering regularly with a misting spray. With the second type, you're purchasing the equipment and supplies to set up your own full grower's laboratory. These are very different conceptions of the word *kit*, which is why we went to the lengths of dividing them into two sections for this chapter. Now, we are speaking about the supply kits for the fuller methods.

Most people who get into psilocybin cultivation likely start out by scrounging materials from all sorts of places. A bucket here, a Stanley knife there, and so forth. You will see later in the chapters devoted to these techniques that many of the supplies needed are pretty regular household items.

With a bit of effort and planning, the home grower can generally come up with most of the items required. Where the exact tool isn't available, growers tend to innovate with whatever they have available to them. This spirit of innovation is a fantastic one in general, but you might not want to get involved in all that fuss and bother.

If that's your situation, then the prepared kits might be the right choice for you. However, it's worth being careful when proceeding down this road because not all kits are the same. There's no standardized view of what these kits should contain, so you will have to do your homework on any kit you want to purchase.

The first thing to bear in mind is that there are two full growing techniques. The packaged kits will be applicable to one of these two techniques and may even be a kind of blend between the two. This is really something you should be aware of in advance. It's highly recommended that you do a little research on products and methods.

What's fortunate for you, since you're reading this book, is that you will find a detailed explanation of both the major methods in the chapters ahead, and we strongly advise that you take a look at those chapters before you lay out any cash online. The two methods are called PF Tek and Monotub Tek, and they have different requirements.

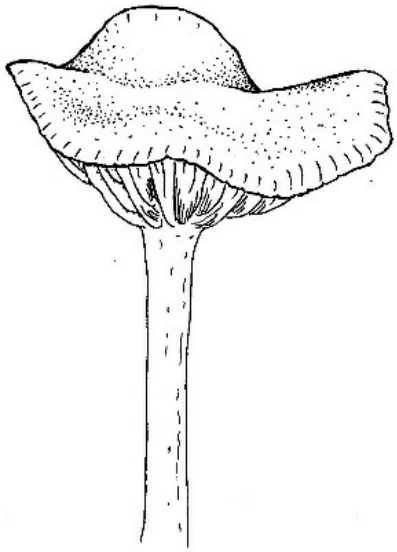
For that reason, it makes sense to select your preferred method first and then make the decision about the kinds of materials and supplies you'll need. Also, it's worth noting that there's some *bleed-through* between

these techniques, and some of the kits available online will be somewhere in the middle.

The really big benefit of the prepared supply kits is that you will have some version of the process already set up, meaning that you won't have to do the drilling, taping, stuffing, and cutting yourself. For example, if you opt for a Monotub kit it will arrive with the breather holes already in place, along with enough stuffing and tape for a few grows.

The best advice for these supply kits is to make a checklist. We will supply some checklists at the back of this book, and you can use such a list to check with the online supplier to see what is in the kit. The last thing you need is to purchase a kit, only to find that it doesn't match the procedure you were hoping to follow.

So, once you've read through the next chapters, you will have to decide which approach suits your circumstances and tastes. From there, you can make a list of what you will require and then match it up with a kit.



Chapter 5

PF Tek Technique

The PF Tek method is the oldest of the indoor growing methods, being the first workable technique developed back in the day. When you look at the system, it's not that difficult to see why that's the case. It's a cheap and effective method, and it neatly sets up your cultivation process into two basic phases. It's pretty straightforward, really.

The first basic phase of your PF Tek grow will be the mycelium phase, while the second phase could be called the fruiting stage. Simply put, those are the two phases with the most difference. In the first phase, you'll be injecting (inoculating) your substrate with the spores and allowing them to colonize it. In the second phase, the spores will have grown into mycelium and begin to produce the fruiting buds (pins) that contain psilocybin. That's what we're after!

So, let's take a step-by-step walk through the entire process, taking care to point out what you'll need at every step in order to get the best results out of your home grow. It can't be said too often: Sterilize everything you use at every step and ensure that all your surfaces and hands are likewise cleaned. It's very important.

What makes this technique different from the Monotub version is that there's a jar phase first for inoculation, and then a larger tub phase. The Monotub phase replaces the initial stage with a different method, which we will get to in time. Either method works brilliantly, when given adequate care and attention, though.

Phase One: Inoculation and Colonization of Substrate

First things first, it makes a lot of sense to get all your ducks in a row before doing anything so you can avoid getting muddled and making errors. Once you're more familiar with the procedure, these things will become second nature to you. In the beginning, though, it really does make sense to be very conscious and meticulous about each step. Here's a bullet list of what you'll need for this technique:

- substrate
- vermiculite
- mason jars (or equivalent)
- container for mixing
- spores/syringe
- aluminum foil
- clean water
- sieve
- pressure cooker (or equivalent pot)
- sterilizing flame (Bunsen burner works best)
- marker pen
- misting spray bottle
- spoon

Preparing Your Jars

As with growing any kind of mushroom, cleanliness is key. It's usually a good idea to use mason jars for this project, as you will need to have jars with wide mouths. This is to enable you to remove the substrate cakes as required and just for general access purposes. Some growers adopt slightly altered practices with many of the supplies, but the mason jars are a real winner for this task and are widely used.

Determining the amount of substrate needed can be a little tricky at first, but a great rule is just to go a bit over the needed amount. You can always find a way to use the extra substrate at some later day. You will definitely get a feel for this over time, in the same way a chef learns about cooking amounts!

Once you've determined the amount of substrate you're looking to use, you can figure out how many jars will be necessary. Ensure that they are clean before use, even though you'll be sterilizing them later. Keeping everything perfect is the name of the game! So, once you've got your jars

in a row, we can proceed to the substrate preparation step.

Preparing Your Substrate

While there are many kinds of potential substrates that you can use, trial and error over the years has shown that brown rice flour is probably your best bet. When mixed with vermiculite, it produces the best results time after time. It's highly recommended that you adopt this recipe for your substrate too, at least at the beginning. If you want to experiment later on, that's also great.

Some growers will tell you that a grain-based substrate is the way to go, and it certainly is with the Monotub version. However, the consensus really seems to be with the brown rice flour for this method, as it seems to yield the results. These kinds of things can be ironed out over time, and you will find your method soon enough!

A handy rule of thumb when it comes to substrates is the 2:1:1 ratio. That means two parts vermiculite, one-part brown rice flour, and one part water. Together, these will form the cake that your psilocybin mushrooms will be eating once they begin to grow. The first step is to mix your 2:1 ratio of vermiculite and flour. Some growers use a 3:1 ratio, and you might choose to do so yourself after a few grows, depending on your preferences.

The thing is mushrooms can and will feed on a huge range of things. That's basically the biological niche they inhabit in the wild since they are responsible for a huge amount of decomposition and composting in our world. However, there are some established practices that simply seem to work the best. The more we experiment with this practice, the more we will know in the end!

Using a tub or container, you can simply mix these two ingredients thoroughly, ensuring an even and uniform blend. Once again, it pays to make absolutely sure about the cleanliness of your tools at every step. Use only a properly cleaned container. Then, having made your mix of flour and vermiculite, you can add the water. Some growers prefer perlite over vermiculite, but the majority go with vermiculite. It has the right sort of water retention for the purpose. Again, you can cast your vote either way in time.

The idea with this mix is to have all your substrate moistened, but without any excess water around. A good rule here is that there shouldn't be any

runoff water when you gently squeeze the mixture in your hand, but there also shouldn't be dry spots. Everything needs to be as uniform as possible. So, a good moistening is what you're looking for, rather than an overflowing abundance of moisture. Less is more.

Excess water can encourage bacterial infection (or other contamination) of the cake, whereas dry spots will essentially become dead spots in your growth. Neither of these options are desirable, so it really pays to make certain that it's a uniform dampening throughout. The good thing is that via capillary action and osmosis, water will tend to travel slowly and uniformly through any substrate, given enough time to do so.

Once you've done this step, ensuring an even moisture to your substrate, you can move to pack your pre-cleaned mason jars! While you will be sterilizing them with the substrate later, don't forget that chemical contamination can't be sterilized. It must be completely removed beforehand, hence the need to clean and then sterilize.

Sterilization of Jars and Substrate

Remember that the number of jars you require will be directly related to how much substrate you intend to use, so you will have to figure that out beforehand. It's probably a good idea to start out pretty small on your first try, so around 6–8-pint jars will normally suffice. If you want to go bigger, that's totally up to you!

Here, the general advice is to aim for around ¾ filling for your mason jars, although some growers prefer a lower level at about ½. Once again, this is an area for trial and error on your part, and you'll soon enough find the level that's right for you. Using your clean spoon, gently place your substrate mix into the jars, shaking the jars to even the mix properly in the jar.

It's best to just shake the jar to allow the mix to settle because you should avoid pressing the mixture down by hand. Ideally, the mixture should settle in a way that allows aeration in the substrate. This is crucial for the growth of the mycelium. Pressing down on your substrate will result in similar dead spots as those caused by dryness, so it should be avoided.

Now, some growers insist on specialized growing lids for their mushrooms, and these can easily be found online. These are usually fitted plastic lids that have an injection port built into them for the syringe to

pass through during inoculation. However, we're going for the alternative method because it's simpler and cheaper. Also, you can quite easily make your own ports in any lid you choose and use a stopper where needed.

Later, you may decide that the special lids are the right option for you, but for now, a lid of aluminum foil works very well. Alternative methods, such as using pierced metal lids, can also work very nicely if you prefer. The best idea is to have two layers of aluminum foil for your lids. The bottom one with stoppered ports, and the top layer to seal and enclose the jar. This works brilliantly and costs next to nothing.

Taking your ½ to ¾ filled mason jars, you can now affix the aluminum lids. At this stage, certain growers like to place a cap layer of vermiculite over the top of the substrate cake, although this is not a necessity. Size some aluminum to cover your jars properly, ensuring that the tops are pretty firmly on there. Remember that you're going to remove and replace them during the inoculation step later on.

Now we get to the pressure cooker step. It's not totally necessary to use a pressure cooker since a regular pot will normally do just as well. However, the pressure cooker is the superior option, and if you have one, it just makes a lot of sense to use it. The regular pot will clean the substrate, while the pressure cooker completely sterilizes things. When in doubt, go for sterile over merely clean!

The typical pressure cooker on the market will operate at 103 kPa (about 15 psi), and this is just about the kind of pressure you're going to need for decent sterilization of your jars and substrate. Remember, higher pressure equals higher temperature, and this is what does all the sterilizing work for you.

Place your mason jars into the pressure cooker and distribute them as evenly as possible inside the pot. It's important that you place them into cool water to avoid cracking the glass. They should rise in temperature along with the water and should also be allowed to cool slowly afterward. So, after about 90 minutes of sterilization, you can let them gradually cool overnight. Now, you have sterile substrate ready to go!

Inoculation and Colonization of the Substrate

Having allowed your jars to cool overnight, you can now begin with the next step. It is time to put your chosen spores into the brown rice flour

(BRF) cake, using a sterile needle and syringe. Some folks may wonder why the inoculation process is necessary, rather than merely sprinkling the spores over the top of the BRF cake. After all, this might seem to be the easiest method.

This is down to the way all fungi operate, and it's a little different from the growth of plants. The mycologists among us will know that fungi are neither plants nor animals, but instead form a unique group all their own! Plants throw a root from the seed, and then immediately head up toward the light. These biological processes are called geotropism (roots) and heliotropism (budding stem and leaves).

Fungi operate differently. The bulk of the fungal mass lives below ground, with only the fruiting heads appearing above the surface. These are the mushroom-shaped parts that we commonly see, and what we use for all sorts of purposes. For the fruiting buds to appear, the secret underground work has to be done first. This means that the BRF cake first has to be fully colonized by mycelium, which is a network resembling the roots of a plant.

That is why we shouldn't just sprinkle the spores if it can be avoided. Instead, we inject (inoculate) them directly into the substrate, always trying to spread the spores as evenly as possible throughout. For those who adopt the method of placing a layer of vermiculite over the top of the substrate, you will have to get the needle below that layer.

So, you need to ensure that the needle and syringe are properly sterilized before you continue. In most cases, you will receive your spore in a pre-sterilized pack. In that case, you can just proceed to the inoculation. If you have sourced these items separately, you should take care to sterilize the syringe with alcohol and sterile water. For the best results, treat the needle with the open flame method.

Give the pre-loaded syringe a vigorous shake to spread the spores evenly in the mixture. Then, remove your choice of lid cautiously. For those who opt for the specialized lids, there will be a port for the syringe. Others will make their own ports. Either way, you insert your syringe into the available gap and reach the needle down past the capping layer of mycelium. Try to ensure an even spread as you go.

A regular spore syringe will contain enough for 10 jars of this type. In other words, a 10 ml syringe will make 10 mason jars, because an

inoculation of 1 ml is perfectly sufficient for a single mason jar. It takes some caution and care, but you can get a great spread with 1 ml. Don't worry if you've put in a little more, it won't harm anything!

Having done this, you should replace your covering lid with aluminum over the top of your lid choice. Now, it's time to place your mason jar into a warm, dark place to encourage the mycelial growth phase. This should be a temperature of 23-28 ℃, and you should try not to allow the temperature to go outside that range even briefly.

If you successfully achieve this stage and maintain the conditions correctly, you should start to see some mycelial action within the first week. If the temperature is on the extremes of that given range, it will slow the progress. If your temperatures are beyond that given range, you may lose the crop entirely. The first thing you will see is a few white spots appearing. Congratulations to you! That's the right stuff.

Once the mycelium properly inhabits the cake, then the fruiting will begin. You will begin to see your white spots growing through the medium until it fills the containers fully. This section of the process is usually referred to as incubation because things are getting ready to burst forth into the world! There will be differences between mushroom types, but within a month your spores will have perfectly colonized the whole jar.

Phase Two: Pinning, Fruiting, and Harvesting

If you have reached this stage, then congratulations to you once again. You have done pretty much all the hard work, and you're getting ready to reap the rewards of your diligence and patience! There are still some things to be done, of course, so it isn't quite the right time to kick back and relax. The main thing is that from here, you will be able to see the wonderful progress you've made with your very own eyes.

At the outset of this stage, your jars will still be in the warm area of low light that you selected for them. The mycelium has by now taken over the entire substrate within the jar, which you can tell by the white threads running through it from top-to-bottom and side-to-side. In all likelihood, this means you are about 3-4 weeks into the incubation stage of mushroom development.

It is possible that it has taken a little longer than that, particularly if your

ambient temperature was on the fringes of the range (stipulated at between 23-28 ℃). This is not a major problem, but probably more of an annoyance. It may also slightly affect the overall yield, but nobody will get absolutely everything right every single time. Especially not on the first attempt. What matters is that you're at the next stage.

Now, it's time to effect some changes that will trigger this new stage of mycological development. There are still some clear stages to pass through before you can enjoy your wonderful psilocybin mushroom harvest, but they are normally considered to be the most rewarding of all. Not to mention exciting to watch!

The Pinning Phase of Mushroom Growth

This is where we arrive at the term 'pinning'. This term is used widely by growers around the world and refers to the very first change between the colonization of the substrate and the final harvest. These pins are little dark spots that might resemble the heads of pins used by tailors and other garment makers. That's the reason for the term, anyways.

These are actually the very first signs of the developing fruit heads that we call mushrooms. Don't forget that in the world of fungi all the real action takes place hidden underground, and the structures we see above ground level are just the reproductive fruiting bodies of the fungus. So, these pins are the initial signs of the fruiting stage that all mushroom fans are looking for.

To trigger the mushrooms to move from the colonizing phase to the pinning phase, the main change we need to make is the amount of ambient light. Up to this point, your jars have been in the dark. Now, it's time to let them out into the light of day so that they spring from the mycelium base you've created.

Setting your jars out in a place with regular ambient light will normally be enough to initiate the pinning process. It requires only low light to achieve this, and you definitely shouldn't place them in any direct sunlight. If you do, they will quickly dry out and be damaged. All you are trying to do is trigger the pinning by transitioning from dark to light.

Many growers have been turning to the use of artificial light for their grows, most especially the LED options that are available nowadays. However, most growers are on a budget and prefer to use the good old-

fashioned sun instead. Again, do not place your mushrooms in full, direct sunlight. Dappled ambient light is absolutely the right kind for these special little mushrooms.

A second difference between the colonization and pinning/fruiting stages is that you can go lower on the temperature. Somewhere in the range of 20-23 ℃ is the ideal range to induce the pinning process, as well as for encouraging the fruiting stage afterward.

After a few days, depending on the varieties grown, you will begin to see these little pins throughout your jar because of the light. At first, these will be very small. All you'll see are these little dark spots. After a few more days, these tiny dark spots will begin to fatten up and very soon, they will start to look like miniature mushrooms. That's your signal to move to the next step of fruiting your crop.

The Fruiting Phase of Mushroom Growth

For this part of the process, you will need a container that admits light, preferably from above. All the tools and supplies are used in the initial steps, barring this larger container. For this purpose, some growers use a simple bucket with a clear lid. Other growers opt for a larger container, such as a cool box.

Really anything large enough to hold the colonized substrate cakes will do just fine, provided they allow a low amount of light into the fruiting chamber. If you have made several jars of mycelium substrate, you may wish to put all of them into a single container. If so, remember to make the container large enough so that there's about an inch (roughly 2 cm) of space between them to allow the mushrooms to grow and enlarge.

At the bottom of this container, you will be placing a layer of a moisturizing substance that will act as the water supply for your crop. Some growers use perlite, others use vermiculite or even paper towels. The idea is simply to have a layer of something below the fruiting BRF cakes that will allow the mushroom mycelium to draw up sufficient moisture.

Having laid down your moisture supply layer, you can gently place your BRF cakes inside the container. Remember to clean and sterilize everything you use during this transfer, including hands and surfaces. Place your cakes gently down on top of the moist layer, and then replace the lid tightly again. They will begin to fruit properly now.

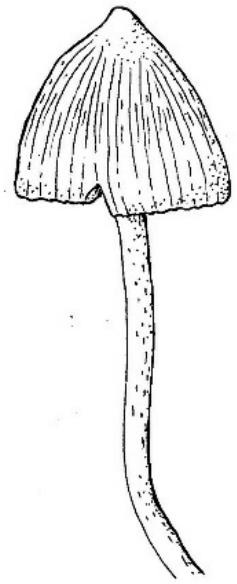
It’s inadvisable to directly water the BRF cakes themselves because this can lead to areas becoming rotten. Worse, it could introduce a contaminant into your final stage, which would be a tragedy! This is the reason for the moistening layer. It provides a controllable source of water but prevents the total saturation effect that would harm your outcomes.

Whichever substance you prefer for your moistening layer, you should ensure that it doesn’t become dry. So, you’re trying to get a good balance between too wet and too dry. It should be always moist to the touch, but never actually have pools of standing water anywhere in the container. Conversely, if it’s too dry you will have to add some water.

This can be done very easily. You can gently lift your BRF cakes with a clean and sterile hand and spray the moistening layer with a mister of sterile (boiled and cooled) water. Once you have a nicely moistened layer again, simply replace the fruiting BRF cake. Remember to always use only pre-boiled and cooled water, for the sake of sterility. Then, replace your lid once again.

With each passing day, you ought to open your tub to check the moisture and general progress of your mushrooms. Some growers go to the lengths of installing aeration systems, but for those of us on a tighter leash with cash, a gentle waft of fresh air every day will do perfectly well on its own.

As with most things in this life, you can always get more and more toys and devices as you go down your personal journey. There are many innovative ideas surfacing all the time and no doubt that in the future there will be even better ways to do things.



Chapter 6

Monotub Tek Technique

This technique is a firm favorite with serious psilocybin mushroom cultivators and offers a slightly different take on the original PF Tek version. In one sense, you could view the Monotub technique as simpler than the PF Tek version because there's no transfer stage between jars and such.

On the other hand, there's somewhat more that goes into the process as a whole. The really big bonus of adopting this method is the radically increased yields it offers the grower. You can quite easily triple the sorts of harvests you might get with PF Tek, and often a lot more than that!

So, there's probably a bit more complexity and work than in the previous procedure, but the outcome is extremely worth the effort you put in. Also, since there's less transferring of things from one place to another, things are a bit more stable with this approach. What really does make this a great method is the amazing crop yields when compared to the other methods. Let's get right into the process!

The Procedure Phase

The outline of this section is based on certain assumptions, such as utilizing purchased grain spawn rather than making it yourself. If you're planning to make your own grain spawn and inoculate it yourself, then that should be your first step. However, for the sake of explanation, we will place the directions for making your own at the end of the procedure phase.

Here, we have the most standardized version of the procedure. The reason for this is that there are many ways to achieve great results, and we simply can't list all of these without losing the thread. So, we're putting down the

most core procedures in the hope of making things more sensible and accessible. Once you get the basic gist, you can go in any number of directions and variations on that theme.

Preparation of Your Monotub Container

For this process, it's essential to get your Monotub just right for those great results. Since the entire growing procedure will take place in this single tub, it couldn't be more essential that you put the effort in ahead of time. It would be very aggravating if a small error were to put a curse on your whole crop!

For the purposes of the example, we're using here, we have stipulated certain sizes, weights, and amounts that you can use to get going. Clearly, you can choose to go bigger or smaller with your own tub. Just ensure that you're staying within the bounds of the ratios we're using, to get good outcomes. Here is a concise list of the core items you will need for the Monotub:

- 60-liter tub or container (your Monotub)
- large oven bag
- large pot
- black trash bag for lining
- marker pen
- Stanley knife or scalpel
- micropore tape for sealing
- tape measure
- Polyfilla stuffing

In our example, we are using a 60-liter tub as our main container. This makes sense for the amount of substrate in the example, which is a commonly used standard among many growers. If you want to change the sizes, you can easily do so at any time. In the tub we're using, the first thing to do is get your breathing holes (ventilation holes) inserted into the side of the tub.

There is a lot of wiggle room with regard to the aeration and ventilation of the Monotub. It's one of those areas where there's no solid rule of thumb, and growers seem to vary a great deal on this point. Initially, though, it

might be better to be more conservative at the outset and make changes as you go along.

Going for two 1-1 ½" holes on each side is a pretty good bet. These should be spaced evenly in thirds along the side of the tub, at a height of approximately 12-15 cm above the base of the tub, when measured from the inside. A neat trick here is to pour water into the tub while measuring the height, and then use the waterline as your guide. That works very well!

The height of the holes is based on the need for ventilation about 2 cm (roughly an inch) above the surface of the growth substrate. This will allow the air to travel around the fruiting heads of the psilocybin shrooms as they grow, which is important for healthy growth. The oxygen supply is crucial for your success at harvest time.

Having drilled or carved your initial four holes, with two holes on either side just above the substrate level, you can create the last two. These should be on the opposite walls of the Monotub, as close to the top as possible. The aim of these holes is to allow for airflow through the container to provide oxygen to support fungal development.

It's very important to get this airflow, but it is just as critical to govern the flow. If you get too much of a draft coming through your crop, it will tend to dry the substrate and the mycelium within it. If this happens, it not only directly weakens the mushrooms but will invite infection and contamination of the substrate as well. This, of course, can be totally fatal to your entire crop. Not great!

This is where Polyfilla stuffing and micropore tape come into the picture. Growers tend to have their own preferences here; but it's safe to say that with a little experimentation, you will find your perfect balance. A decent starting point is to use micropore tape for filling smaller holes, and the Polyfilla for larger ones.

Once you're done with the breathing vents, and you've figured out roughly how you want to deal with the airflow governance, it's time to think about the lining. Remember, you will have time during your grow to closely monitor the airflow and adjust your tactics accordingly.

Using the black trash bag, you can line the inside of the Monotub. This is a step that a lot of growers take, although it doesn't actually have any effect on the yield or quality in any way. The only real purpose for the lining is

to prevent what is called side pinning, which is when your mushrooms begin to fruit along the edges of your substrate when it shrinks.

There’s nothing wrong with side pinning, per se, although some folks find it either unsightly or inconvenient. Placing the liner in the tub prevents this, by adhering to the side of the substrate. So, the only pinning (fruiting) you will see in your tub will be on the top of your substrate.

Again, this may seem like an aesthetic choice rather than a major problem, but it can lead to problems when you’re handling your crop. It may just end up being an annoyance, so it’s best to get the liner in there since it’s pretty easy to do anyway. Also, the liner can be useful when it comes to lifting one side or the other, so that’s a good thing!

These little things are everywhere in the growing world, and they’re the kind of thing we develop personal tricks to deal with. No doubt, you will be doing similar things within one or two grows and have many of your own personal traits that you like to add to the process. This is exactly how we develop better practices!

Preparation of Your Substrate

With the PF Tek approach, we saw that the go-to option is typically brown rice flour to form the BRF cake. This isn't your sole option with this technique, but it’s very much the tried and tested one. It makes sense to adopt it, at least initially. With the Monotub Tek approach, the preferred substrate changes a little, although you’re likely to succeed with a BRF type of substrate too.

The most widely used substrate for this technique is a blend of cow manure, vermiculite (preferably coarse), hydrated lime, and coco coir. As with much of our guidance and suggestions, it is important to note that these are not firm requirements. Mushrooms can feed on a very wide range of things since this is literally their natural function, but some ideas do tend to work better than others through trial and error.

Similarly, you could very easily use this particular substrate for the PF Tek version, but the issue is that it tends to be a bit labor-intensive for the smaller amounts required by that technique. As always, once you have a handle on what you’re doing, you can change things up to your heart’s content! So, here’s a short list of requirements for Monotub substrate:

- a ½ brick of coco coir (each brick is roughly 500g or a little over a pound)
- vermiculite (roughly 5 liters, preferably coarse)
- hydrated lime (you'll use about 10 ml/2 teaspoons)
- your mushroom spawn (around 5 liters)
- cow manure (roughly 4 liters)
- clean water (around 2 liters)
- tote bag or canvas sack for mixing
- large bucket
- aluminum foil
- large spoon

With those ten items, you can set up a fantastic substrate for your Monotub. It's worth stressing that these items are all in a ratio to each other, and therefore you can simply increase or decrease the amount as it suits you. Just remember to retain these basic ratios when you do, so that you keep the proportions similar. If you scale up one item, scale the others to the same degree, and keep the ratios!

So, the basic plan here is to create a simple substrate. To do this, we've found that it makes a lot of sense to get the coco coir ready while you're moving along with the next step. To do this, you simply take half the brick of coco coir (about 250g worth) and place it in a large bucket. Ensure that it's visually clean beforehand because not all contaminants can be cleaned with sterilization. Chemicals are a good example here.

Breaking up the coco coir by hand, you can introduce two liters of boiling water, stirring as you go. Make sure that you have a nice, consistent mix, and then allow it to stand while you get on with some other stuff. It will take a while for the coco coir to fully absorb all the water, which is why this step comes first. At least an hour will be needed, possibly more, to get it fully damp.

In your prepared tote container, you will then place your cow manure along with the 10 ml (two teaspoons) of hydrated lime. The purpose of the lime is to give the manure blend a quick and easy pasteurization. This is called "cold water pasteurization" and it's best to look for a type of hydrated lime with a low magnesium content (under 10% is ideal). This will give extra assistance to the cause of sterility, and the more help we can get, the better!

To this, you add your five liters of coarse vermiculite, which has the function of both aerating and saturating your blend to allow the mycelium to flourish properly. Stir this blend together in your container until it's evenly mixed. Once your coco coir is fully hydrated and has sucked up all the water, you can add this and stir it all up once again. You need to have everything blended as evenly as you can get for the best results.

Then, transfer the evenly mixed substrate into your oven bag(s) for the pressure cooker sterilization step. With your hands, gently press out any air from your oven bag and then pierce a couple of holes into the bag, near the top. Remember to be very gentle with this, since you don’t need hard patches to form. Over these holes, you’re going to place your micropore tape, ensuring that you seal each one properly. Ready to go!

Sterilizing Your Substrate

Now you can place the large oven bag (or multiple smaller ones, but these are less ideal) into your pressure cooker with some water. For best results, use the 103 kPa (15 psi) pressure cooker for 1 ½ to 2 hours, before turning it off and allowing several hours to cool off. Overnight is a pretty good measure for the cooling process, so about eight hours at least. It just makes sense to have it cool while you’re fast asleep since it’s less annoying that way and you won’t be filled with anticipation.

As with everything else, the sterility of your substrate is very important. You need to create an environment that contains only the psilocybin mushrooms and their nutrients, with no other biological matter whatsoever being present in the Monotub. Likewise, whenever you use water in your mushroom grows, it should be boiled for at least ten minutes beforehand.

There’s really no such thing as too clean when it comes to growing any sort of mushroom. Unsurprisingly, the same is true for the cultivation of psilocybin mushrooms as well. Boil or flame-treat everything made of metal, soak cleaning rags in rubbing alcohol, wash hands frequently, and use sanitizer on surfaces too. Even using an apron can be useful here, for somewhere to safely and cleanly rub your hands.

Introducing Your Spores to the Substrate

Once you’ve got the cooled and sterilized substrate ready, you are primed to move on to the next phase of the project. Here, you will be introducing your psilocybin mushroom spawn into the feeding substrate. Like all the

other products on the requirement list, spawn bags are widely available online. However, you should check for availability in your area, just to be safe.

In certain areas, you can get these bags with your chosen spores already inoculated into them. However, it's likely easier to find the clean bags, and inoculate them yourself. You could also make your own spawn and inoculate that yourself as well. There are several options available to you here. Again, be sure to check the laws in your area to stay on the safer side of things.

Alternatively, you can forego the spawn completely and simply inoculate the substrate that you've already prepared with your pressure cooker. This is a riskier and less successful procedure, overall. The whole reason for the grain spawn is to allow your mycelial growth stage to take place in a tightly controlled environment. The spores love the grain because it's so nutritious, and this makes it very hard to beat.

The spawn certainly is the better option, overall. By this time, you will have emptied your substrate into your main growing tub or container. Take the inoculated spawn, and place it evenly throughout your substrate, being careful not to put downward pressure on your mix. You want the mycelium to be able to breathe well during growth, so an even effect is ideal, and no pressure is a good pressure for this job!

Your tub should be perfectly filled to the right level now, so just make sure it's all evenly distributed and level throughout. Take some aluminum foil and cover the whole thing from end to end, snugly. Then poke a few holes in the foil, and carefully reseal these with some micropore tape. Do the same for the holes you created in the growing container itself and place the lid over the whole thing.

Now you're waiting for the spore to work its magic! All you need to do next is just make sure the temperature stays constant between 25 and 30 ℃. The ideal would be 27-28 °. This will let the mycelium fully colonize your substrate mix throughout, and after a period of around 10 days, you should start seeing the results. It will be an exciting period of waiting albeit a little nerve-wracking for some folks. It will be worth it in the end!

Most growers like to add a capping layer of substrate over the top of the fully colonized layer you already have because it seriously beefs up

production. Most growers will just use saturated vermiculite for this purpose, but you can add a little feed (various) if you wish. The layer should be around 1-2 cm in depth across the top, no more. More than that, and you will start to suffocate things below, which is not the best plan.

Then, your final step is to give the container tub a light misting of water, and tightly replace the lid. Place your entire container in a room where there's only ambient light, and never directly in sunlight. This stage needs a slightly lower temperature (around 20-22 ℃), and after a few days, you should start to see the beginning of the pinning stage of fruit growth. It's what you've been waiting to see!

Making Your Own Spawn at Home

As we said above, the more standard way of going about this technique will involve buying your spawn pre-bagged and pre-sterilized. It's relatively cheap and a lot of folks prefer to do it that way. It's even possible to obtain grain spawn that's already inoculated and producing mycelium, which you then just add to your substrate as is. Most spawn will not be of this kind, though, and will be plain in the bag.

However, there are also many people who like to prepare their own spawn at home. This comes with its own advantages, such as being even cheaper. You can also have a bit more control and choice over what you're doing this way. So, remember that making your spawn would be your first action for the Monotub Tek process, rather than proceeding directly to the substrate and container.

Making grain spawn is quite a similar process to making the BRF cakes in the PF Tek method, in that you're preparing a base for the mycelial growth to take place. This time, though, we are not using brown rice flour. Instead, most growers will go for the various grain types out there, in whole form.

There are basically four steps to this process. There's the rinse/soak step, the cooking step, the drying step, and finally the sterilization. Let's take a quick walk through the basic process!

Rinsing and Soaking Your Grain

There are no hard and fast rules about which grain to use for your grain spawn, although there's a strong preference with many growers for rye

grain or something similar. The basic point is just to have a kind of germinating substrate for the mycelial growth phase of your psilocybin mushrooms.

Take your grain and place it in a large pot. The size of the pot you need will obviously vary with the amount you intend to make, but you'll always need a large pot. Fill the pot with cold water and then add your grain to the water, so that the water covers the grain.

Then, swirl your grain around in the pot to lift whatever little bits of extraneous matter is on the grain itself. Pour off the water, and repeat, if you think it's needed. Once you have the grain looking nice and free of any junk materials that were in there, refill the pot so that the water covers the level of the grain.

Place the lid onto the pot, and let it stand for at least half a day. It's preferable to extend this for a whole day's cycle, to get the best results. This not only softens up your grain but can also trigger unwanted contents to begin sprouting, which makes them easier to kill during sterilization.

During this soaking period, it might make sense to go back to the top of this chapter to begin making your tub and substrate. It will be a good use of time, for sure. After the day's waiting period, you're ready to go to the next step!

Cooking the Grain

The purpose of cooking the grain is similar to the soaking step, in that it will further soften and swell your spawning grain. This will render it much more accessible to the mycelium when they begin to eat away at it, and therefore, makes it much more nutritious overall.

It will also add an extra layer of sterilizing defense against any unwanted infectious or contaminating substances still lurking inside. The idea is to give the grain a short burst at boiling point, no more than about 15 minutes. Much longer than this, and you're in danger of bursting the grains or even breaking them down totally, which essentially defeats the point.

Just a short while on the boil, and then take them off the stove heat. Allow the grain to cool for as long as it takes to become easy to handle. Some people prefer to let it cool completely, while others like to use the heated grains to steam dry. The choice is yours.

Drying the Grain

Pour off all the water you can from the pot, leaving only the grain behind. Alternatively, you can pour the whole mixture through a sieve to get rid of the water. If you're planning to use the heated grains to steam dry, the sieve (or colander) is a must! There's no sense in burning yourself.

Once you've removed the bulk of the water, you can allow the grains to dry properly by spreading them over a flat surface. You could use a paper or fabric towel at this point to dab the moisture directly off the surface of the grains. Then, you simply wait until the drying is properly done, which could take an hour or more.

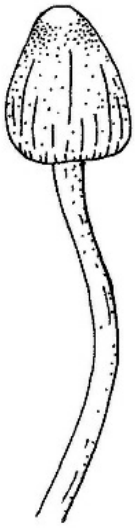
Test the grains by hand to see if you detect any moisture there. If so, it needs a bit more time. Once everything is properly dried, you can move to the next step.

Sterilizing the Grain

This step is almost exactly like the sterilization step for the BRF cakes in the PF Tek approach. Fill up your mason jars to about the ¾ level, at most. Then, place your jars evenly within a pressure cooker, and boil at a standard pressure of around 103 kPa (15 psi).

Just like with the BRF cakes, the mason jars should have a two-layer lid attached. The lower lid should have a hole to enable you to inoculate your grain with spores, while the top lid acts as a sealant to prevent any water from the pressure cooker from getting inside the mason jars.

Begin your timing only once you are up to full pressure, and then sterilize for a minimum of 1 ½ hours. Once you've reached that point, all you have to do is take the cooker off the stove and wait until it's cool enough to handle. Now, you have your grain spore ready and waiting for inoculation with spores! Easy as pie.



Chapter 7

Outdoor Cultivation

Often, growers tend to see mushroom harvesting as being divided into two parts: either harvesting indoor crops or in the sense of wild foraging. There's not that much attention paid to the idea of outdoor cultivation when you think about it. This is a bit surprising, given that personal outdoor cultivation is a halfway point between these two domains.

You have the outdoor element, which is not unlike the wilder setting, but you still have the aspect of human intervention. You could even say that it's the best of both worlds in one place! Certainly, there are many modern growers who are looking into the whole realm of outdoor cultivation. It's really something worth thinking about, with a lot of similarities to other forms of cultivation.

After all, indoor techniques are basically distillations of the natural world in which these wonderful fungi live and thrive. It makes all the sense in the world that there should be these connections, while it is still very interesting to note the ways in which the two domains differ. Let's take a look at the burgeoning world of outdoor psilocybin mushroom cultivation and see what it might have to offer you!

Heading Into the Wild, or the Garden

If you have ever had the pleasure of foraging in the wild for psilocybin or culinary mushrooms, you have probably noticed something. These mysterious and pretty little fungi live in some of the most beautiful places in the world. They live in woodlands, near gurgling brooks and streams, in grassy pastures, and on picturesque mountainsides.

In short, they live in nature. Not all of them can live anywhere, of course,

because one of the impressive things about mushrooms is just how specialized they are. Yet, they are all found in these gorgeous natural settings, and this is part of what makes the forage such a positive experience, even when you don't manage to find exactly what you're looking for.

Not all of us have outdoor spaces attached to our homes, particularly those living in large urban areas. This is just a feature of modern life. Still, with a little effort, some of us can get out into the wilderness every now and then. Here's where the outdoor cultivation method can be a massive benefit to the city and country dweller alike.

You don't have to have a large garden to get into the cultivation of mushrooms in the great outdoors. For those of us who are fortunate enough to have such a garden space, or who live in a nature surrounded area, this method for growing psilocybin magic mushrooms is even more accessible.

It's worth mentioning here that mushrooms will not grow in all climates, so if you're in the middle of the Sahara, it's just not going to work. Similarly, for those who live in Alaska, the only way of cultivating this is indoors. The outdoor grower definitely needs to make this assessment before putting in any effort or stand to face disappointment. That's just the reality of the situation.

Inside and Out

Given our hectic lives and the facts of modern existence, it's not very surprising that the vast majority of psilocybin mushroom growers operate indoors. There's also an element of secrecy to the whole process, at least in most regions, for the time being. So, instead of growing these special little mushrooms in the places in their natural habitats, we simulate these places inside our own homes.

Here's the thing, though: Growing your psilocybin mushrooms, or at least some of them, in the great outdoors is actually easier than you might think. Additionally, you can greatly bolster your yield by taking the opportunity to do so. Most growers are probably not aware of these facts, but for many people out there it's totally true.

Further, it's very useful that the tricks of the grower's trade can be taken

back to the outdoors to get some seriously good results! That's an amazing feedback loop. The things we learned by imitating natural conditions can be taken back into those same conditions whilst providing good yields.

Most readers of this book will by now have read the instructions listed in previous chapters, dealing with the various techniques of the trade. You will have seen how we move from the spore to the fruit for harvest, and these skills are tailored for the indoor context of mushroom growing. As customized as they are, however, there are some areas where the outdoor grower will get the same results in the indoor environment.

In some cases, though, the outdoor specialist will deviate from some of the specifics. The basic process remains the same in most of the broader details, but sometimes it helps to change things slightly. So, as we saw with the indoor grow, you have a basic linear development that goes something like this: spore into grain spawn, then spawn into substrate, and finally the entire substrate into your specific growing chamber.

Something very similar is also true of outdoor cultivation. In fact, in ideal circumstances, those conditions will already exist to a greater or lesser degree in the outdoor grow setting. If you're thinking about an outdoor grow, you must think somewhere along these lines.

Simply put, you will be trying to create an area (of whatever size) that is conducive to mushroom growth and development in pretty much the same way the indoor kits and methods do. So, where are you thinking about putting your special mushrooms? In your own garden space? Or perhaps you're considering an even more natural setting? We've got good news for you, either one of those can work very well for you.

We have stressed the importance of sterilizing at every step of the indoor cultivation process, and this is most especially true in the initial stages. Your psilocybin crop is at its most vulnerable at the time when you are moving from the spore to the mycelium, which means that the inoculation and colonization stages are critical here.

The same can be said for the outdoor cultivation method. In the natural world, mushrooms release countless billions of spores into the air, and only those very few that find a perfect and uncontaminated spot have a chance of growing. When we are cultivating mushrooms, we artificially create these perfect and uncontaminated spots.

Once the mycelium is strongly in place, fungal development is much more stable. This means that your outdoor grow requires a similarly sterile early phase, but the later growth will normally flourish much more easily. Having established your small patch of the great outdoors, it will carry on developing naturally on its own. So, let's consider the ways in which outdoor and indoor grows work together.

That Fragile Early Phase of Growth

Beginning with the spores, the first steps will be pretty much the same for both indoor and outdoor grows. You will need to create your choice of grain spawn regardless of the wider context, so that remains unchanged. As an alternative, using the pre-inoculated substrate contained in a ready-to-go kit will also work well here. The main thing is to get the initial growth going strong.

For outdoor grow, this is where the first difference comes in. The reason grain spawn is so popular in the mushroom grower's world is the fact that it's highly nutritious. That's what gets the results, but it can also be a serious weakness when you're not working in a sterile setting. The high nutrition content of the grain spawn also makes it attractive to everything else.

This means grain spawn is extremely prone to infection from bacteria and competing for fungal spores from other species, and growers try to avoid that. The solution is to take one additional step, moving the early mycelial growth from the grain to something less vulnerable to contamination from a range of sources.

You have several choices open to you in terms of secondary substrate, but the grower's consensus is that straw or sawdust are the best. The mycelium will be able to eat the straw and sawdust substrate, but far fewer contaminants can. So, you start out your colonization in the regular grain spawn and then transfer to the sawdust or straw.

If you're using a pre-inoculated kit, you can simply transfer that directly into the secondary substrate. If you're growing from spore, you will need to first colonize a standard grain spawn and transfer that. The method is quite simple, so there's not too much hassle involved.

As always, you begin by sterilizing the sawdust or straw. This can be done

by boiling it for 10-15 minutes and allowing it to cool in a clean place. The amounts you choose will depend entirely on how much you want, although when you transfer, it helps that you don't overwhelm your initial spawn. You can go more than 50/50 on this, but not by a whole lot. A little more than a kilogram per square meter of outdoor grow will work nicely.

Then, take a clean container such as a bucket. Using alternating layers of grain and sawdust (or hay), begin with a base of sawdust less than an inch deep. After that, just layer the mycelial grain with the bulking substrate until you have the desired amount, taking care not to place pressure on the mix. For best results, you need to allow air to move through as easily as possible. Then, you just seal up and wait! Be sure to let in some fresh air daily.

Soon enough, you'll start to see the mycelium colonizing the entire bulk of substrate. You'll have a nice, big batch of psilocybin mushrooms to graft into your special outdoor spot and you're ready to go! If you haven't already, it's time to select and prepare the site where you want to let your special crop grow and thrive.

Your Chosen Mushroom Spot

If you're lucky enough to have a lovely garden, that will definitely make things much easier in terms of labor. You won't have to walk far or carry stuff around too much. On the other hand, there's something to be said for picking a site out in a nearby wooded area or shady pasture. Either way, it's clear that you ought to be discreet about the location without making it difficult for you to access it.

When you are choosing the location, remember that nearly all mushrooms enjoy damp environments with a decent amount of ambient light. It should have light, but not directly because that will dry them out fast. Often, you will find wild mushrooms growing on the fringes of a wooded area, and these are good spots to choose due to the dappled sunlight.

At your selected place, you should clear the desired area of your grow. Remove all materials from the surface area until you get down to the soil, without any plant matter or anything else. Then place a barrier layer of cardboard across the whole area, wetting it thoroughly once it's laid down. At this point, many growers choose to bulk up once again with a coarser substrate, such as wood chips.

On top of the cardboard layer, place the bulkier wood chips in a layer and wet the layer thoroughly. Then, a layer of the colonized sawdust substrate goes over that. Repeat the process until you've used up all your materials as required, ensuring that your substrate layers are moist without being drenched. It may be a good idea to add an extra layer of protection by placing straw over the whole site at the end.

The additional straw may seem like overkill to many folks, but when it comes to cultivating psilocybin mushrooms, you can't be too cautious. At this stage, you're very much on top of the game, and all you have to do from here is keep a routine check on the dampness of your site. Remember that living mushrooms are around 90% water, so you can't get away with letting them dry even for a day or two.

In the Northern Hemisphere, most psilocybin mushrooms begin fruiting during the time of year when fall gives way to winter. When you add in the fact that you should ideally give the mycelium around six months to fully colonize your patch, then you probably ought to have things done around March. Add in the time preparing your bulk substrate, and it starts to look like a project that begins in late January.

Certainly, starting off in January is a great way to do it, and will give you plenty of time to iron out any problems along the road. What makes the outdoor option such a wonderful way to grow psilocybin mushrooms is that it doesn't interfere with anything else you might be doing. You colonize a patch and let it do what it does naturally. Then, after all your hard work you have a tremendous supply going forward!

What's even better is the fact that your patch is now a natural feature. If everything is going well, your mushroom site will continue to propagate itself exactly as they do in their natural setting. All that's required is to keep an eye on things over the months, to ensure that everything goes perfectly. You could even use your outdoor grow to generate future indoor grows! Imagine that.

Harvesting can be done exactly as you would with your indoor grow, so there's no difference to note there. However, this is a good place for a serious word of warning to anyone planning to harvest outdoors like this. Given the location, it is entirely possible that other species of mushrooms have popped up alongside your beautiful psilocybin. After all, it is a mushroom patch.

Please take great care to be certain of what you are picking, when it comes to harvest time. You should take an extra moment to inspect each mushroom you pick so that you’re absolutely sure it belongs in your crop. It could turn out very badly if an unknown mushroom species somehow got into your dried batch and got accidentally consumed!

Chapter 8

Common Questions and Problems

Given that psilocybin mushroom cultivation takes part in the scientific study we call mycology, it's not that surprising that it generates so many questions. After all, isn't that exactly what all scientific activities are supposed to do? It's all about setting up parameters, codifying results, establishing improvements, and so forth. That's the basis of all of this.

While it's true that growing psilocybin shrooms isn't the uppermost pinnacle of mycological study, it nevertheless has a tendency for producing frequent queries. That's why there are so many message boards, tutorials, and articles available for you to draw from. Most people are trying to figure their way through the mire of information in the best ways possible. Candidly, it's also the reason for this book!

So, we've compiled a list of some of the most common problems growers face, and the questions raised through these problems. There's no way to produce a completely exhaustive list, but the idea is simply to get to grips with the more common ones. At the end of the book, you will find a full list of references for further study, and each of these will also link you to yet more information. So, if there's something we've omitted here, you can still find it!

Is it Possible to Collect Spores Myself?

A lot of growers simply buy spore syringes or pre-inoculated substrate for every grow they make, and this does certainly come with its own costs attached. While growing your own crop is much cheaper than buying mushrooms from someone else, it still has these basic financial outlays. Here's a bit of great news, though, you definitely can collect your spores to generate the next batch!

If you're one of those growers with an outdoor patch, you can nurture your grow in such a way that it continues to propagate itself year after year. This is what mushrooms do in the wild; so, if you are doing it right, you should get similar results. For purely indoor growers, the case is obviously different. You will be using a different *bed* for each crop, so you will be unable to keep a propagation cycle going in the same way.

However, your crop will still produce spores every time they mature, so it's just a case of figuring out how to collect them for later. That's where a technique called "spore printing" comes into the picture. It's relatively easy to do and means that you're going to have a limitless supply of your favorite mushrooms in perpetuity. Let's have a quick rundown of the method.

The Spore Printing Method

As you probably know, spores are the very tiny seeds of many forms of fungi found across the world. They're so small that we can only see them properly when they are bunched together, and this method of collection does exactly that. It's quite simple to achieve this collection, although there's a little bit of effort in the next stage. This method is for gilled mushrooms, but since all psilocybin are gilled, this is a perfectly acceptable way to go about it.

So, you've got your harvest of psilocybin magic mushrooms ready. All done and finished for the current grow cycle. Well done! If you're among the many growers who want to harvest not only your crop but the spores as well, you're at the perfect stage to do this. All you need is a few supplies to collect the spores for later use.

For this simple method, you'll need one of your mushroom caps as a source. It doesn't matter how fresh or dry, really. Then, you'll need a smooth and clean sheet of paper, a sharp blade (a scalpel is best), and a small glass bowl. That's all you require for this procedure, and it's not hard to do at all.

Taking your mushroom and a scalpel, gently remove the stem directly below the flowering cap of the mushroom. Get as close in as you comfortably can. Then place the cap on the clean sheet of paper, with the gilled side down, facing the paper. Some people suggest placing a drop of water on the top of the cap to speed things up a little, but this is not a necessary step.

Once your mushroom is gill side down on the sheet of paper, you place the clean glass bowl over the top of it and leave it. Depending on how fresh or dry the mushroom cap is, it will take around a full day to achieve the best results for the collection. After this period, you can remove the glass bowl from the mushroom cap. Then, remove the cap itself, and you should see an almost iris-like print on the paper.

These are spores that you're looking at, and they form the iris shape as a print of what the gill structure looks like from below. That's all it takes to gather the spores for as many grows as you could possibly want! There are millions and millions of spores in that single print, so you aren't going to be running out anytime soon.

Making a Spore Syringe

It's all well and good having the spores, but what do we do next? Well, the best course of action is to make a spore syringe, if you plan to inoculate another batch of substrate. The great thing is that you can keep these spore prints almost indefinitely, provided they are kept dry and cool in a safe place.

When you decide to use them, then it's time to get out the syringe. You can scrape the spores from the clean sheet of paper quite easily with a scalpel and collect them in a small container of water. Please remember, as with everything connected to psilocybin mushroom cultivation, absolutely everything must be sterilized with every use, and even between continual usages.

Boil and flame treat everything. When in doubt, boil it again! So, with your sterile water in the container, scrape the spores from the paper into the container to mix. Then, you can take a sterile syringe and needle from their pack and suck up the blended liquid. You now have a fully functional spore syringe made from scratch, and ready to inoculate your new batch of grain spawn!

These can easily be stored, given the right conditions. Placing the syringes in a sterile bag in the fridge can prolong their longevity considerably, although the longer you wait the more likely an infection or contamination could occur to the spores. It's far better to store the spore print than an active spore syringe. If you're planning to use the syringe right away, then it's best to give the solution inside a little time to hydrate the spores first.

Why Are My Mushrooms Developing Blue Patches?

Of all the questions first-time growers ask, this one is probably the most common. This is likely due to the high incidence of the *bluing* effect when we cultivate mushrooms, and it's an almost unavoidable result for most growers. The reason for this is the high sensitivity of the mushrooms. This bluing could also prove to be a hard condition to cure.

The blue spots on the mushrooms are basically a form of bruising, not unlike the bruising we see in mammalian tissue after a blow. When we get a hard knock, it damages the tissue and the capillaries within the tissue, producing that dark color beneath the skin. It's much the same with mushrooms, except more so.

The mushroom's tissue is considerably more fragile than mammalian tissue, so it takes far less to produce a bruising result. There are some secondary questions attached to this initial one, so let's investigate the *bluing* phenomenon in a little more depth.

Why Are These Blue Spots Appearing?

The blue spots are very common in psilocybin mushroom crops and can appear on the stems and caps of the fruiting bodies of any psilocybin mushroom. They can appear on the mycelial structure of the mushrooms as well, demonstrating that the effect seems to have something to do with the psilocybin varieties themselves.

There are many theories in this area, although in truth nobody knows exactly what happens on the microscopic level. What does seem to be the case is that the mushrooms that display this bruising are often the most potent ones, and this gives us a clue to get started with.

The most widely held view is that the *magic* molecules themselves have something to do with it. As we'll delve a little deeper into this in the next chapter, it will become obvious that all magic mushrooms have certain molecules in common. There are three of them, in fact. They are psilocin, psilocybin, and baeocystin.

In varying ratios, these three molecules are present in pretty much all the magic mushroom varieties and are responsible for the psychoactive effects of the shrooms. They are the molecules we're cultivating when we grow

these wonderful fungi. Since the psilocybin are the only mushrooms that really produce this bruising effect, it's been hypothesized that they must be involved on the molecular level.

Therefore, the widely held theory is that psilocin is the specific culprit behind the blue coloring of the bruises. When the tissue of the fruiting bodies or mycelium is slightly damaged, the cells are exposed to oxygen. The theory is that psilocin is broken down in response to this oxygen, producing this blue color in the flesh.

Another view is that copper may be involved in the chemistry of the coloration, and this may go some way to explaining why other mushrooms can also bruise, albeit in a different hue. It's possible that the combination of copper and psilocin create the unique blue shade found with psilocybin mushroom bruising.

What Causes the Bruising?

It is thought that a combination of things may be at work here. Certainly, mushrooms of all kinds prefer not to be handled during their growth and are very susceptible to damage from many sources. It appears that the main problem is the combination of being handled and then subjected to a source of oxygen.

There may also be a role for copper in this reaction, and the full truth of the matter is probably a lot more complicated. For example, not all psilocybin mushrooms bruise in exactly the same way, and some bruise far more easily than others. Not all the coloring is the same, either. Some bruises are a vivid blue, while others are almost green.

Clearly, there is a lot of chemistry taking place with this phenomenon. What many growers have noticed, although it's still unconfirmed, is that the crops which bruise the most readily also tend to be the strongest in terms of potency. This does seem to suggest that the psychoactive molecules are somehow involved in the process.

Will the Bruises Ruin My Harvest?

While it's unlikely that your crop will be ruined by some bruising, there does seem to be a suggestion that the result will not be one of a great outcome. If the theory regarding cilocin is correct, then it's very likely that each bruise represents the breakdown of at least some parts of this

molecule in your mushroom.

Given that we would prefer all the molecules to remain intact throughout the entire process, this must be seen as a loss of sorts. However, it's not even a certainty that psilocin breakdown is responsible for the color, let alone how much of it is lost. So, we really can't be sure about this point yet.

It's probably enough to say that you should avoid handling the mushrooms directly, if you have any choice. This holds true for the whole procedure and should be a rule of thumb with psilocybin mushroom cultivation in general. Be always as gentle as possible, just to ensure that your crop will be great!

How Can I Be Sure It's Bruising?

Not all the blemishes that can occur in a grow are bruises. Some are far worse! If your crop is showing a sort of generalized blackening, you might have a contaminant inside your grow. It's tragic when it happens, but it certainly does happen. There's a simple way to figure out what the cause of discoloration is though.

You can take an ordinary Q-tip, and gently rub it over an affected area for a few seconds. If there's a darkening on the tip when you inspect it, then you have a contamination issue at play, rather than bruising. You might be extremely lucky and get away with just removing the affected areas, but the likelihood is that your whole crop is a goner.

It's terrible news, but that's the reality. It's really way better to have a bruise than an infection, but in a perfect world, we'd have a crop without either of them! If you've got a contaminant, it does demonstrate just how easily they can get into your grow, and therefore, how important sterility is in this game.

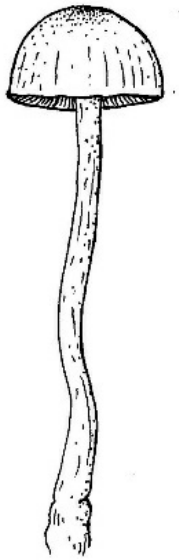
How Do I Harvest My Mushrooms?

When it comes to harvest time, nothing could be easier. You just wait for them to reach the right sort of size and appearance, just as if you were to find them in the wild. Then, pick the mushies close to the base of the substrate, and remove them from your grow.

If you are in no rush, then you can simply place the wet mushrooms on a

drying rack in a nice clear spot. Keep them out of direct light, in a dry place. After a few days, you will see that they take on a shriveled look as they dry. Before too long, they will be completely dry to the touch, and are ready to go!

If you are pushed for time, you might want to go for a little assistance from a gentle fan. This will seriously speed up the process, and within a day or two, your mushrooms should be dry when you touch them. Remember that some mushrooms are better when consumed fresh, while others are better when dried. Check to see which is the case for your variety, and you’re well on your way.



Chapter 9

Dosage and Consumption

Now we arrive at the other end of the procedure, the part that is most exciting and enjoyable of all. Ultimately, every form of cultivation culminates in the final product itself, and it's undeniably true for the psilocybin mushroom grower. It's all in service of the crop itself! For the seasoned explorer, you will already know most (if not all) of the preceding information, and you probably also know all about this section too.

Still, it doesn't hurt to take a refresher course. There will be many of you reading this book who are only beginning your experience with these wonderful magic mushrooms, and the book as a whole is mostly intended for these particular type of readers. It's quite normal for people to wonder about the consumption of psilocybin mushrooms, and be concerned about issues such as dosages, and so on. That's the reason for this specific chapter.

We will be relying on the wisdom and experience of those who have gone down this road before, in order to gain some guidance. We will cover some handy basic knowledge, to ensure that your relationship with the psilocybin mushroom is as beneficial and enlightening as can be, while also keeping you safe. First off, we'll begin by looking at how to measure dosages of your favorite little fungus. Let's take a peek!

How Do Dosages Work with Shrooms?

The first thing to note here is that the natural world doesn't care very much for units of measure. For example, there's no unit for a birch tree. Some are small and skinny, while others are very large and tall. The exact same thing is true of mushrooms. There is no unit of measure for *mushrooms*.

For this reason, we tend to fall back on the metric system of unitary measure, so that we can get a handle on this issue. Even so, there's quite a bit of wiggle room here, and an element of doubt should always remain in your mind regarding this question. The basic unit of measure for the psilocybin magic mushroom is the gram because it's a precise amount of measurement that gives us some certainty.

Additionally, the potency of psilocybin mushrooms is such that the difference between one and two grams can be very large. In fact, it could literally be the difference between a life-affirming trip and an unpleasantly overwhelming one. It really does make sense to be very cautious here if you wish to gain the maximum benefits from your psilocybin mushroom experience.

Another thing to be very aware of is that these mushrooms can vary greatly in their potency, and this holds true not only between particular species but also in the quality of the grow itself. So, two similar doses of the same mushroom can also differ quite a bit. Once again, caution is the name of the game!

The Gram

So, we measure the doses of psilocybin using the gram. For the archaic, note that there are about 28 grams in an ounce. While there's still quite a bit of fuzziness around the measure, it's about as precise as we can be. For the most part, it does quite well as a unit and gives us some certainty about what we're consuming. It's definitely better than just knocking back the mushrooms and hoping for the best!

So, in most instances, a gram of psilocybin mushrooms has a fairly predictable and standard effect on an adult human being, which is good enough to get us started here. It's worth noting the words are fairly *predictable* because there's really no factual way to know how strong any mushroom might be. Some elements of guessing must always remain when taking from a new batch for the first time.

As we covered in previous sections, there are three main compounds known to be psychoactive in the psilocybin mushroom varieties. They are psilocybin, cilocin, and baeocystin. There are actually a host of others as well, but they are considered to be less impactful in psychoactive terms. These will be in varying amounts in any psilocybin, and it's not possible to

know exactly.

Unfortunately, we have not yet developed a way of quickly and accurately measuring the relative quantities of these molecules in any specific shroom. So, unless you want to take your magic mushroom off to a well-equipped laboratory, you're going to have to make some basic assumptions about its potency. The same rule will apply also to the duration of any specific trip as well.

Fortunately, we still have the old-fashioned way of knowing things. The trial-and-error approach means that so many people have taken so many mushrooms in the past, that we now have a pretty solid idea of what to expect from them. We basically know what a given mushroom is likely to do, and how long the effects will endure.

Dosages, Large and Small

There are many reasons why a person might like to regulate the dosage of psilocybin magic mushrooms. For example, the kind of dosage you would like to take in a festival setting may differ from the dosage you'd take at a family picnic. As they say, there's a time for everything!

Psilocybin mushroom growers have compiled a basic rule of thumb when it comes to dosages, in a very general way. Between 0.05-0.2 grams is considered to be a micro dose, 0.5-1.5 grams is considered a light dose, 1.5-2.0 grams is a moderate/medium dose, 2.0-3.5 grams is a strong dose, and anything above the 3.5-gram mark is considered to be a heavy dose.

Not only will different social environments likely warrant different dosages of your preferred psilocybin shroom, but there are a host of reasons why a beginner ought to try a light dose for the first trip. First off, many psilocybin will produce a feeling of nausea in some folks, or a sensation of heaviness in the limbs in others.

For those who are not used to them, sensations like these can be a little alarming at times. The biggest reason for starting on a light dose is, of course, the onset of the trip itself. The worst thing would be to get totally overwhelmed by your first experience of tripping with psilocybin mushrooms.

Often, when someone new to psilocybin takes too much, it can result in a

feeling of panic and even terror. Such a person will likely never try the beautiful little fungus again, and this must count as an awful loss! It's much better to start off gradually so that you can become accustomed to the effects and be aware of what's occurring.

What is Micro dosing? Why Micro dose?

Micro dosing is a relatively new phenomenon in the psilocybin world. It's not known when the practice started, but it is practiced all around the world now and has even taken on a psychiatric aspect for many people. The likelihood is that it began with folks deciding to take small amounts in everyday social contexts, but without being noticed by anyone around them.

This works really well, and many still do it for that reason. What the micro dose fans noticed, though, is that by taking these very small amounts of psilocybin mushrooms they remained effective at ordinary tasks, while also experiencing a positive lift in mood. Once several members of the psychiatric community took notice of the mushrooms and their positive effects, this method of consumption began to take on a medicinal side.

Medical practitioners and laypersons alike began to see the way that small doses of psilocybin could have genuinely remarkable results for people with chronic mental problems, such as depression and anxiety. This is how the widespread practice of micro dosing took off. It's no longer just a way to feel a little buzz at work but has actually become a form of self-medication for many people.

Since the advent of micro dosing, many additional benefits have been reported by many practitioners. It has been shown that psilocybin dosages can be wonderfully effective in the treatment of several mental disorders, including PTSD, depression, anxiety, OCD, ADHD, and more (Coppola et al., 2022). This means that the psilocybin magic mushroom may potentially be the most useful medicinal plant around!

Certainly, those who engage in the practice of micro dosing pretty much universally report a sense of general well-being, creativity, happiness, and openness to experience. These are just some of the wonderful and life-affirming qualities of this magical and mysterious little fungus, and a brilliant reason to grow them yourself!

Staying On Top of Your Dosages

Not all doses are intended for the same purposes, so it really does make sense to be sensible about what you want for any particular trip. For instance, if you're at a social event in which you are expected to participate, it doesn't make sense to consume a large dose; you will be far too intoxicated to usefully partake in ordinary social interplay.

Conversely, if you're at a festival and planning to be a bit spaced out, then the lighter doses probably won't cover the required bases. There's an appropriate dose for all occasions, and it's a broadly good idea to stay on top of your dosages to get the most out of the psilocybin magic mushroom.

Fortunately, there's a pretty easy way to apportion your psilocybin doses, based on the rule of thumb for micro, light, moderate, high, and heavy (sometimes called 'heroic') dosages. Here's a brief rundown of how many consumers of psilocybin shrooms categorize the various benefits of dosage regulation, for best results.

Micro Dosage

As we saw above, the micro dose is proving to be an effective tool for many psychiatric and psychological problems commonly experienced by sufferers. Among these conditions is obviously the big two: chronic depression and anxiety. Together, these two constitute the vast bulk of all psychological suffering in human beings, and their alleviation would be a tremendous victory for us all.

In addition, there's a growing body of evidence to show that the practice of micro dosing can help with ADHD, PTSD, obsessive compulsive disorder, and some others. This is definitely a bonus, even if the dosing can only temporarily relieve certain symptoms. Even certain social phobias fit into the bargain.

Outside of this strictly medicinal use, there are more general uses too. These tiny doses boost the creative impulse in many people, as well as being conducive to a general sense of happiness and wonder. Many have reported a heightened ability to focus and concentrate as well, which is great!

Light Dosage

For those people who are interested in trying a psilocybin mushroom trip,

the light dose is the best route to try. It's a dose that provides the trippy sensation you're looking for, but without the intensity of higher amounts. It's the perfect way to enjoy your surroundings, without being highly intoxicated.

With the light dose, it's very easy to go and see friends at the bar and enjoy a night out, for example. Most shroomers report heightened creativity and energy at this level of dosage and a general sense of wellbeing and happiness. It's the perfect way to use psilocybin in a highly social way.

Moderate/Medium Dosage

With the medium dose, you begin to experience the intensity of what folks often call 'tripping'. It's at this dosage that many people begin to report visual and other forms of the psychedelic experience, and a more spiritual and religious kind of experience as well. It's also the dosage where you will be visibly intoxicated.

For that reason, at the moderate range, you will probably have to begin to be selective about the contexts and locations. It's probably best to use this kind of dose in the kind of environment where others will also be tripping, for example. It's a dose that's quite well suited to festivals, for instance.

High Dosage

Here is where things get pretty hectic and intense. The high dose is best reserved for the intensely personal and internal trip and is very incompatible to any everyday social situation where we might be expected to be attentive and responsive. A person on a higher dose will be obviously observed as intoxicated to anyone looking, so choose your location wisely for this one.

What's great about these higher doses is the spiritual and transformative nature of the trip. At this dose, things get very introspective and cosmic, so this is the kind of trip you might seek out if you're battling some personal or private challenges. Many folks find this trip to be a life-changing kind of event.

Heavy/Heroic Dosage

This level is very much for the long-term psilocybin fan. To cope with the intensity of this dosage, you have to be sure of what you're doing. It's

totally inadvisable for a beginner to go anywhere near this amount in a single dose since it will certainly overwhelm anyone who hasn't tripped before.

These doses are deeply spiritual and cosmic for anyone who dares to go this far. Those who have dared it report intense hallucinogenic experiences, including a profound connection to the world and a broader deep spiritual and religious connectedness to the universe.

For this tremendous dose, it's generally advised that you stay in the safety and comfort of your own home. It's also advisable to have a trusted and sober companion with you at home, to ensure that everything is proceeding well and without any undesired incident. Very much one for the seasoned veteran, this dosage!

Some General Thoughts on the Psilocybe Experience

While there are many ways to engage in psychedelic experiences, they're each very different in their own styles. The same is very true of the psilocybin magic mushroom trip, and more seasoned travelers can easily distinguish between varieties of shrooms. However, when compared to the others, psilocybin fans will normally agree that the magic mushroom is the greatest of them all.

Whether you're in search of a meaningful experience or just looking for a little fun, the mushroom offers this at different doses. It's something that can be used from very tiny doses to improve your general mood, all the way to complete and utter psychedelic levels. Whichever level you choose, there's something for you!

When opting for the bigger journeys, it's important to bear certain things in mind. For the best outcomes, it's very much advised that you remain in familiar surroundings so that you never have the sensation of being lost or adrift in any way. Most folks feel that this gives them the freedom to explore the trip itself because they have the safety of that familiarity.

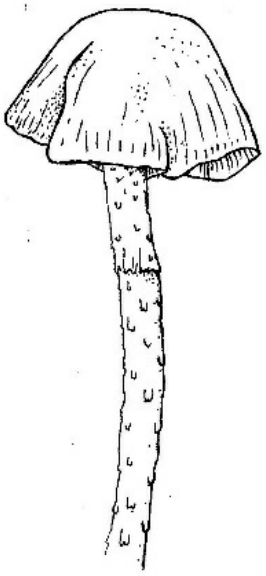
Feeling alienated and unsure of your surroundings can make things go awry on your trip, and this spoils the fun. To feel really liberated and able to enjoy your experience, it does help to have that firm foundation. Similarly, on larger trips, it's a great thing to be around good friends. It can be unnerving to interact with strangers when you're really buzzing and

seeing faces you know can be a real benefit if you begin to feel a little panicky for whatever reason.

It’s really all about that sense of security. If you know that you’re in a secure environment with safe and wonderful people, this gives you the freedom to focus on your internal journey without any nagging doubts or concerns. Obviously, for more experienced folks, that’s going to be a matter of personal taste, and there are people who like to explore strange places while tripping hard. At first, though, it’s not a very good idea.

Another thing to think about is the addition of other intoxicants. Many first-time trippers make the mistake of combining psilocybin mushrooms with the heavy use of alcohol. Again, this should probably be avoided, at least initially. Very often, the booze will simply detract from the trip itself, leaving you disappointed. On other occasions, heavy drinking with psilocybin mushrooms can produce confusion and lead to very bad outcomes. Lighter drinking will not do either of these things, so it’s best to go easy!

It should also be noted that when you’re on a stronger dose, you should never attempt to operate any kind of machinery. Most people won’t have any desire to do so in any case, but it’s a mistake to try. Similarly, avoid loud and busy places wherever possible. With these few bits of advice, you should have the time of your life! That’s definitely the whole meaning and intention here.



Chapter 10

Mushroom Grower Checklist

For your Monotub grow you will require the following supplies:

- 60-liter tub or container (your Monotub)
- large oven bag
- large pot
- black trash bag for lining
- marker pen
- Stanley knife or scalpel
- micropore tape for sealing
- tape measure
- Polyfilla stuffing
- a ½ brick of coco coir (each brick is roughly 500 g or a little over a pound)
- vermiculite (roughly 5 liters, preferably coarse)
- hydrated lime (you'll use about 10 ml/ 2 teaspoons)
- your mushroom spawn (around 5 liters)
- cow manure (roughly 4 liters)
- clean water (around 2 liters)
- tote bag or canvas sack for mixing
- large bucket
- aluminum foil
- large spoon

For your Monotub grow procedure:

- Make up grain spawn or purchase pre-made.
- Inoculate, unless pre-made.
- Allow to colonize.
- Make your Monotub.
- Sterilize your substrate (various).
- Layer your colonized grain into sterile substrate.

- Place your aluminum cover on and lid.
- Place in ambient light.
- Check daily and oxygenate.
- Harvest and dry when ready.

For your PF Tek grow you will require the following supplies:

- substrate
- vermiculite
- mason jars (or equivalent)
- container for mixing
- spores/syringe
- aluminum foil
- clean water
- sieve
- pressure cooker (or equivalent pot)
- sterilizing flame (Bunsen burner is best)
- marker pen
- misting spray bottle
- spoon

For your PF Tek procedure:

- Prepare BRF or other substrate.
- Place into mason jars and sterilize.
- Inoculate your jars.
- Allow colonization in a warm dark place.
- Once colonized, trigger pinning in ambient light.
- Place a moisture layer in a tub.
- Place BRF (or other) cakes into the tub.
- Place in ambient light, with a translucent lid.
- Check daily and oxygenate.
- Harvest and dry when ready.

For your outdoor grow, you will require the following supplies:

- shovel or spade
- cardboard, to size of patch
- sawdust, to size

- wood chips, to size
- straw
- grain spawn
- spores
- large bucket

For your outdoor procedure:

- Prepare your grain spawn.
- Allow time to colonize.
- Source and prepare your patch (clearing, etc.).
- Layer grain spawn and sawdust.
- Layer resulting sawdust spawn to bulk.
- Sterilize wood chips.
- When the spawn is colonized, take to site.
- Lay cardboard on the cleared site and water.
- Lay a layer of wood chips.
- Layer bulked spawn and repeat layering.
- Cover the area with straw and moisten.
- Check daily and keep moist.
- After several months (about six) harvest and dry.

Conclusion

Well, we have reached the end of our little mycological journey together. At this point, the hope is that your own magical journey has just begun and that it will bring joyful blessings to you as time goes by. For those who are more experienced, hopefully, there were one or two tips and hints to further strengthen your understanding and resolve to starting your own grow.

The purpose of the book is a simple one: to provide a straightforward and simple structure from which you can build your own unique approach to growing psilocybin magic mushrooms. It is a world all its own, and when we treat the process with respect and attention, there's no limit to what we can gain in return.

It is an antidote to the madness of the human world that surrounds us, a balm for the scrapes and blows of our modern lives. This obviously applies to the use and consumption of our special little fungi friends, but there's also something very rewarding to the cultivation side of things. There's a Zen-like quality to all the cautious monitoring, the strict hygiene, and also the mystery.

Above all, growing psilocybin mushrooms can be seen as a mystical activity, one that is full of unanswered questions. That's appropriate, given their magical status. It's really a fascinating area of study, and even though our world's entire ecosystem is dependent on mushrooms and other fungal species, we are only scraping the surface of what we might learn from them. The more this kind of knowledge gets out there, the better it will be for everyone!

That's really what makes the world of the magic mushroom such a special

one. It’s a marriage between the scientific and the mystical worlds. It demonstrates to us just how interwoven these aspects of life are; how mystical the pursuit of science is, and conversely, how scientific the mystery of existence itself is. That’s the nexus of the psilocybin mushroom and us; it’s science and mystery rolled into one!

It is also why we should never let ourselves be hemmed in by strictures and rigid thoughts, but always try instead to expand our thinking. If the cultivation and consumption of these remarkable lifeforms show us anything at all, it is that we must broaden our minds. The world is gradually coming around to this understanding too. Gradually and incrementally, folks are being persuaded by these silent and magical mushrooms.

We, as two species, have such a long and winding history together that it seems only natural for us to work together. There’s so much more to learn, too. We are at the very cusp of understanding when it comes to the magical properties of the mushroom. Let’s hope we can open ourselves to that experience.

For that reason, and many others, the directions and instructions found in this book should be viewed as a kind of demonstration, rather than a set of hard and fast rules. They are intended as a kind of way marker, a compass to show the basic approach to take when caring for a batch of psilocybin magic mushrooms. That’s all it really is.

Alternatively, it may be helpful to consider these instructions and items of information as a foundation from which to build your own structures. Taking the advice offered here, you can begin to build your own methodology, your own series of experiences, and wisdom. That’s the intention behind everything contained here, so please don’t ever feel limited by restrictions.

It’s quite true that these beautiful little fungi can be very fussy, but this does not imply that there’s no room for innovation and self-expression. Far from it! Given the array of procedures and tactics on the wider topic of mycology, it’s clear that there’s room for growth and abundance in the future, and a great deal that we haven’t figured out yet.

For now, we know some limited things and work within our human limits to try to grasp more about the magic mushroom. This actually applies just as much to the other forms of mushrooms too, whether they are culinary,

medicinal, or other varieties. Since the enlightenment, there has been an increasingly mechanical view of the workings of the universe, and it is only now that we are beginning to soften this description to include the more fluid aspects of existence.

Not only will this change in approach help us to better understand the mushroom, but there's every reason to think that the mushrooms themselves may accelerate this process of understanding within us! That's a fascinating and hopeful binary feedback loop right there.

The more we get to know about the psilocybin, the more they can teach us! It is this kind of interrelatedness that has always been the natural way of things; and the more we open ourselves to this wisdom, the better it will be for everyone, and everything involved. As a final word, it should be said that this book aims to be a very small and humble building block in that great constructive work.

For those of you who are totally new to the world of psilocybin mushroom cultivation, there is probably a lot of information to process and digest. For those who've been around the block a few times, hopefully, there was at least one little nugget of information or inspiration to be found in these pages.

If anyone reading this book goes on to develop better techniques later on in their journey, that would be the most beautiful and profound outcome of all! Who could hope for anything more than that? As always, it's the most sincere and simple aim of this book that folks embark on a voyage of their very own. Or maybe even a series of such voyages, bringing the magic and mystery of life itself to everyone around. That, more than anything else, would be the perfect outcome.

To every reader of this book, may the road ahead rise to meet you, and may the winds of fortune always be at your back. Blessings to all.

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