

- Here we are.

We are the first and only
organic mushroom farm

in the state of Hawaii.

Now I'm gonna show you
what we got in here.

First, when you come to a mushroom farm,
you will smell a lot of compost smell.

That's the smell of money
to a mushroom farmer.

This is the first stage of our production.

This is 10,000 pounds of organic waste
that we collect from true Schumer.

And we collect them and then we use them
for mushroom farming.

You can see the big pile right there.

The temperature right now
is 135 degrees Fahrenheit,

and it's going to get hotter and hotter.

And every few days,

we take the compost out
and wet them and mix them.

We leave it like this for five, six days,

and then we go to the next phase.

And this is a phase one
decomposition stage.

And this step is called
in vessel decompositions.

Everything's contained.

Mainly, no run off, no water run off.

For composting to happen,

you need heat, you need oxygens,

and then also you need
the microbes to help.

So right here is plenty of microbes.

Underneath, we have PVC tube

buried into the cement floor.

In the back of this unit, there is a pump.

We pump fresh air into this compost.

So we, we keep supplying with
fresh air to keep the compost

temperature between hundred and eighty
to hundred eighty five degrees Fahrenheit.

You can see those metal device on top,
that is a temperature probe.

And then when this compost
getting too hot or too cold,

they will adjust the air pump accordingly,
to keep that temperature

one hundred and eighty
five degrees Fahrenheit.

So we keep this here for
about seven days to ten days.

And then so, after it's completed,

in this process we basically
we're cooking the compost

at a very, very high temperature.

And then, so that way we
accelerate the process

by making it easier breaking
down the organic matter

quicker and easier with the
help of high temperature.

So, after this process,

and then we're going to second phase.

The second phase is called pasteurization.

This is a pasteurization tunnel.

Inside this tunnel, we will bring that material in here.

And then the goal of pasteurization is to kill off

all the harmful pathogens, bacteria, insect

and anything else that we don't want them to be

in a mushroom.

All this is a shipping container, insulated,

but, we also have an aerated floor,

same thing like the face one, the floor has a cement floor,

and then it has pipes buried underneath,

and the pipe is connect to a pump,

and the pump will pump air out to regulate the temperature.

We will keep the compost in here for about seven days.

During the same seven days,

we will keep the temperature

between 130 to 135 degrees Fahrenheit.

And that in this process,

we keep it for first 12 hours.

We keep that at that temperature,

and that will kill off

99% off those harmful pathogens and bacteria.

And then we keep it here for another six days,

lower the temperature, one

degrees, every few hours,

to down to 110 degrees Fahrenheit.

And we keep it at that temperature because

there's a certain bacteria
we want them to thrive.

We want them to grow.

And that bacteria only thrive

at about 110 degrees Fahrenheit.

And then we keep it at seven days,

and by the time we open this
tunnel, pasteurizing tunnel,

all the other harmful bacteria is die off,

and then all we'll have is
always beneficial bacteria.

So that is the second phase

of a mushroom production
process called pasteurization.

You eat the top of the mushroom,

and then we just, this part,

we just take them off this
part, we don't need them.

We put them back here and recycled them,

and useful mushroom farming again.

This is a mushroom grow room,

that's where we grow our mushroom.

And this is where the magic happen.

Let's see what's in there.

After pasteurization,
and then we will bring

all those substrate where
the substrate already mixed

with mushroom mycelium.

And we let them sit here for 10 days.

So let mycelium to colonize the substrate.

And then, because mycelium is like the roots of mushroom,

we need that to colonize all the substrate

because mycelium will bring nutrients to the mushroom

where they will need the mushroom to grow bigger and bigger

and eventually for us to eat.

So we wait for about 10 to 12 days here

until the mycelium colonized the substrate.

And then we put a layer of casing layer.

A casing layer is mixture of peat moss and agriculture lime.

So mixture of that basically has no nutrients,

we just put it on top.

So let the mushroom mycelium knows that on top of it,

it has no nutrients,

and then, and they will grow into it,

and eventually they realized

nutrient is depleting in this area for us to survive,

we have to reproduce.

We will have to get our offspring out there.

Their process of getting the offspring

out there is using mushroom.

Mushroom actually is a sex organ,

a reproductive organ of this micro-organism.

The mushroom compost
substrate will stay here

for another month and a half.

The first 15 days, it just
like growing the mycelium,

and then the second and
the rest of the time,

it's just like harvesting time.

So the mushroom will
grow every seven days,

we cut them all up,

harvest them, put in the
storage and sell them.

And then we wait for seven days,

and they will come up again

for another seven days.

So eventually after two
or three times of harvest,

the nutrients in a substrate
will become less and less

for mushroom cultivation.

So we will become not economically
viable to keep them here

because we have to chill them,

we have to send people
in to take care of them.

Then at that point we
will empty this room out.

And then the one that left behind

is called spent mushroom substrates.

That's the one that a farm,

a local farm use as some amendment,

or like a residential home owners,

we use that for planting
and it's full of nutrients

for plants and vegetables.

But it has absolutely
very little nutrients

and very little use for our
mushroom production here.

So that is the entire process

of mushroom production, in here.