

Oyster mushroom farming: an affordable start-up

By Jay Ferreira February 19, 2018 11:02 am

Yolandi Joubert's oyster mushroom operation, launched just three years ago, is an important lesson in what passion and discipline can achieve in small-scale agriculture.



Yolandi Joubert harvests the mushrooms and packs them directly into the aerated punnets.
Photo: Jay Ferreira

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What started out as a hobby in 2014 has been transformed into a gourmet oyster mushroom business by Yolandi Joubert of Langebaan on the West Coast, and it all started with a basic mushroom-growing kit.

"My mother is crazy about mushrooms," she explains. "She used to pick them in the veld when she was a little girl. So I wanted to grow them for her. The first mushroom-growing kit I bought didn't work, so I bought two more and they worked well. I was hooked!

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"I quickly started reading up and doing research on growing mushrooms, as I've enjoyed growing plants since I was a child."

Determined to launch a small-scale commercial operation, Yolandi conducted trials in 2016 to establish how many mushrooms she needed to plant in order to supply local retailers. At the same time, she began building her growing room. Earlier this year, she registered her company, Dayora Oyster Mushrooms.

Starting out

"I'm passionate about growing mushrooms, from the Petri dish stage to seeing them pinning. I find it all so exciting," says Yolandi.

Using the salary she earns as a personal assistant, Yolandi has built up the business step by step. To save costs, she made the shelving herself, then bought two extractor fans, a chipper to shred the straw, and a steaming drum for sterilising it.

She now produces more than 8kg of oyster mushrooms a week, and sells these in 100g clear plastic, aerated punnets.

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"It took a lot of planning and careful consideration of what to buy and what not to buy," she recalls. "Information on growing gourmet mushrooms is very scant and mostly from overseas, but the specialised equipment used there is unaffordable for a start-up business here.

"So I had to think out of the box about what could be used in place of expensive equipment and huge growing rooms."

Choosing a niche

Yolandi says she decided to grow niche gourmet mushrooms as they are "clean growing" and use straw rather than compost as a growing medium.

Oyster mushrooms have an additional advantage: they can be grown indoors in natural light at room temperature, unlike most mushroom types, which require special compost and a cool, dark growing area.

They are also nutritious, tasty, visually appealing, and fast-growing.

Oyster mushrooms are often referred to as 'vegetarian meat' because of their fleshiness and firmness, she explains.

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They are also high in protein, vitamins such as folic acid, and minerals such as iron, zinc, potassium and phosphorus, as well as calcium. Yolandi currently grows grey (*Pleurotus ostreatus*), pink (*P. salmoneo stramineus*), blue (*P. ostreatus* var *columbinus*), brown (*P. australis*), and king (*P. eryngii*) oyster mushrooms.

In addition, she cultivates medicinal mushrooms, including lion's mane (*Hericium erinaceus*), turkey tail (*Trametes versicolor*) and reishi (*Ganoderma lucidum*).

These are consumed in a solution of either water or alcohol, but lion's mane can be eaten as is, and reportedly tastes like crayfish. Some of the benefits that have been ascribed to medicinal mushrooms include use as a cancer treatment, improved brain function, and lowered cholesterol.

Production

According to Yolandi, the production process for all types of oyster mushrooms, from cloning to harvesting, takes about 75 days.

However, if ready-to-use spawn is utilised, the production period can be reduced to between 15 and 25 days from planting in the substrate bag to harvesting. This also depends on the growing conditions and type of oyster mushrooms cultivated, as some grow faster than others.

With ready-to-use spawn, the first step is to cut the straw with the chipper machine.

This is then sterilised in the steaming drum for 90 minutes to destroy any bacteria. The straw used is pesticide-free and Yolandi uses no chemicals during the growing process, so her mushrooms can be considered organic. The clean straw is allowed to cool to room temperature and is then ready to be put into the transparent grow bags.

While Yolandi sometimes buys spawn from suppliers, she mostly clones her own for production.

"Yes, it's great to be able to buy ready-to-plant spawn, but it takes the adventure and fun out of the entire process. To go through all the growing stages gives me joy," she says.

Hygiene and humidity

Using a sterile blade, and wearing rubber gloves, a hair net and face mask to keep the environment sterile, Yolandi cuts out an inside section of the mushroom stem and places it in a sterile Petri dish. White spores start to form around it.

When the dish is well populated, she transfers the spores to a *sorghum*-filled bag that facilitates more spore development. When the bag is fully colonised, between 40 and 60 days from the start of the process, the spores are planted in the straw-filled grow bags.

These are tied at the top and punctured with a thick needle to allow air to infiltrate.

"A room full of mushrooms uses up all the oxygen in the air, so you need to keep it well oxygenated," Yolandi explains.

The growing bags also have to be checked daily for signs of contamination. Any contaminated bags are removed immediately and composted.

Meeting the challenges

"Mushroom farming may look easy, but there's a lot of hard work that goes into it, so you need to be passionate to be successful," stresses Yolandi.

According to her, oyster mushrooms are relatively easy to grow, but require a completely sterile environment.

"Most people give up growing mushrooms because everything has to be continually sterilised, from the gloves and Petri dishes to the straw they grow in. When I pack the straw, I wear gloves, a white jacket, hair net, mask and shoe covers. I don't even touch the inside of the bag while packing it. And I spray my gloves with alcohol after every two bags packed. You can't see contamination; your growing medium just goes green," she explains.

Yolandi says that creating awareness of the excellent taste and nutritional benefits of oyster mushrooms, and marketing her products, are ongoing challenges.

However, Dayora Oyster Mushrooms has received health and safety certification to supply Spar outlets on the West Coast and the West Coast Fruit and Vegetable Market in Vredenburg. Yolandi says supplying these outlets represents a great achievement for her, as her biggest challenge has been finding outlets to sell her produce.

Her medicinal mushrooms, even more of a niche product, will soon be available online from Zimzi Farms Produce.

As appealing packaging is essential for effective marketing and sales, Yolandi has spent much time ensuring that the labelling and appearance of her products are "just right".

"I'm doing what I think works best. Mushrooms are packed directly into the aerated punnets, and should last for six to 10 days in the fridge," she says.

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