



7

PIECES OF COVERAGE:

607M

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60

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## Interview: the company growing mushrooms on used coffee grounds and whisky grains

12 mins ago • by Nick • Add Comment



Green Grow is an innovative new business that has developed sustainable techniques for growing mushrooms on used coffee grounds and whisky grains, which are then used to produce ready-to-cook meals. We caught up with Business Development Manager Dr Isabella Guerrini de Claire (pictured with Director Iain Findlay) to find out more about the project and how mushrooms can play a key role in creating a more eco-friendly future...

### You grow mushrooms using coffee and whisky grains. How did the idea for this come about?

The idea is originally from the [Blue Economy](#) work of [Gunter Pauli](#) but in our case, we wanted a showcase to help companies understand the principles of the circular economy which we mentor start-ups in, and promote to other organisations, both private and public. Re-using bio-resources like coffee and grains is a necessary step to make better use of resources without depleting natural systems. The mushrooms grown on coffee seems to be an effective way to demonstrate these principles so that people quickly grasp the idea more generally. I was cycling past a distillery one day and just watched as all that heat went to waste. I thought it would be a perfect match-up and we approached the distillery who were happy to let us try.

### What are the techniques you use to grow the mushrooms and what are the advantages of growing them this way?

We use fairly standard mushroom growing techniques but have adapted some parts. For example, we're re-using captured waste heat from a distillery as well as growing on the grains. The low grade heat in the water is normally allowed

### Welcome...

...to the website of Two Thirsty Gardeners. Follow their fortunes digging and swigging their way through the seasons.

### Awards



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Sometimes we are offered products or services for review on this site. We only feature such items if we genuinely think they're of interest or benefit to our readers and, as a result, turn down more requests than we include. Our verdicts and advice are our own personal opinions and are always written by us, no matter how much PR companies might try to persuade us otherwise. Even when they offer us beer.

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## Two Thirsty Gardeners

FEB 13 2019

(IMAGE 1 OF 4)

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as growing on the grains. The low grade meat in the water is normally allowed to disipate into the atmosphere before the water is released into the environment. We re-channelled the water into shipping containers to create the necessary warmth and humidity to make the mushrooms grow. The advantages are that we save on fossil fuels and make better use of the used bio-resources to create at least two more products, mushrooms and mushroom compost.

We collect sawdust from a local sawmill to use as a fuel source. We also re-use plastic containers thrown out by a local bakery as our growing containers. These can be re-used multiple times, rather than the single use plastic bags that are used in oyster mushroom production. Our new system uses some pretty fancy engineering to create good growing conditions and we can control this remotely using feedback from the system. And finally, the ready-to-cook meals are plant based so that encourages people to eat a healthy diet. The mushroom compost is then added to the soil to re-build natural capital, a prime goal of the Circular Economy.

**Does the growing medium affect the flavour of the mushrooms?**

Ha. If only that were true. No, the mushrooms digest the lignin in the growing medium and all they taste of is really lovely mushrooms.

**What type of mushrooms do you grow?**

We grow oyster mushrooms on the bio-resources. Mushrooms inhabit an enormous variety of niches in nature as decomposers and are adapted to those materials only. We will likely start to grow other kinds, but on the coffee and distillery/brewery grains we stick to grey oysters.

**Where do you get your whisky grains from?**

We get them from a Speyside distillery. We have signed a non-disclosure agreement and can't tell you their name. We also use coffee grounds collected from a local Costa cafe, but also sawdust from a local sawmill at Logie Estates near Forbes, who power their machinery using renewable energy sources.

**Where do your mushrooms get used?**

We are using them to add to our vegan ready-to-cook meals, but we also sell some locally through a vegetable box scheme.

**You've launched a crowdfunding campaign. How can people get involved in the business?**

Yes, the crowd-funding campaign is aimed at helping us to understand potential customers but also to fund raise for the equipment we need to develop some of the really interesting aspects of mushrooms. We want to use the roots, the mycelium, to develop bio-degradeable packaging for our products – mushroom meals wrapped in their own roots. People can visit our website [www.greengrowfoods.shop](http://www.greengrowfoods.shop).

They can also follow us on twitter @GreenGrowFood or on Facebook for updates and fascinating fungi facts. We need to get access to some machinery and also fund the R and D. Most people are now aware of the danger we are in because of plastic packaging. Mushroom based technology can play a part in developing alternatives that are bio-degradeable, compostable and even nutritious if a passing turtle or fish comes across a piece.

**How do you see your business developing over the next few years and are there any plans to try other sustainable growing mediums?**

We want to expand the number of people growing mushrooms using our system. They can then sell the product themselves or sell them back to us for inclusion in the ready-to-cook meal boxes. This allows them to focus on growing the mushrooms without having to put in lots of effort to sell them. Our system, developed with a renewable energy company, allows for the growing

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**Two Thirsty Gardeners**

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system, developed with a renewable energy company, allows for the growing conditions to be monitored and controlled making it easier for people to be successful, but it also allows for product traceability which is important for some of the higher end applications we want to explore, like medicines and packaging materials. We are working with some very cool groups in Belgium, including a PhD, to develop the mycelium packaging. If we can do it for ourselves, then we can develop transformative solutions for other companies who need eco-friendly packaging.

We're looking into other sustainable growing mediums but need to focus on what we know works for the moment. There are a lot of grains and coffee out there that can be re-valorised and turned into healthy food, exceptional soil conditioner or new packaging materials.

**Finally, can you recommend a mushroom-based dish and a whisky to have with it.**

I would have to go with our mushroom lentil meal. The lentils are grown at 1,000m in Italian co-operative farms and are really delicious. If I was drinking whisky with that meal I would probably have to go with a Bowmore 12 year old. And yes, I would add a wee dash of water too.

For more information on Green Grow visit their website at [www.greengrow.club](http://www.greengrow.club)

You can donate to Green Grow (and receive mushroom meal boxes as a reward) on their crowdfunding page at [www.crowdfunder.co.uk/green-grow](http://www.crowdfunder.co.uk/green-grow)



#Coffee #Meet the Professionals #Mushrooms #Whisky



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FEB 4 2019



Good Morning Scotland

04/02/2019



The nation's morning news programme, with Gary Robertson and Hayley Millar.

Programme Website

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04/02/2019

180 mins



Good Morning Scotl...

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11 mins

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5 mins

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95



1

“ Interview with Iain Findlay is at 2.45.46



# BUSINESS

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## Aberdeen energy service firm wins exporter prize

**Award: Wood named Scottish exporter of the year for innovation in China**

BY KEITH FINDLAY

Energy service giant Wood has won an award for its commitment to exporting engineering expertise to China.

The Aberdeen-based company was named Scottish exporter of the year at the China-Scotland Business Awards in Edinburgh.

Organised by the China-

**"Wood utilises our engineering expertise beyond the local market"**

Britain Business Council, the awards recognise innovation and export successes among Scottish firms doing business in China, and the role they play in encouraging other firms to seize opportunities in the Far East.

The winners were announced at the Chinese Burns Supper 2019 in the Waldorf Astoria hotel.

Wood chief executive Robin Watson said: "Wood's history in China can be dated back to the

early 1930s. This award recognises not only our business success to date, but our commitment to expanding our portfolio in the region in future. "Wood provides

full asset, life cycle services in the refinery, petrochemicals, chemicals and power industries in China, utilising our global infrastructure and engineering expertise to

leverage our business in the local energy market and beyond."

Wood, which employs about 60,000 people across operations in more than 60 countries, has worked

on a string of projects in partnership with Chinese businesses.

It is currently working with China General Nuclear Power Corporation, which aims to build a Chinese-

designed reactor at Bradwell, Essex, in a joint venture with EDF Energy.

In petrochemicals, Wood has managed four coal chemicals projects in China during the past decade.



SUCCESS: Wood's business development manager for nuclear Shengke Zhi and senior vice-president for business development Alex

### REDUNDANCIES

#### Prosafe to shed up to 150 workers

Offshore accommodation vessel owner and operator Prosafe has revealed it will shed up to 150 jobs through voluntary redundancy.

The move is aimed at cutting operating costs and thought to affect mainly British workers.

Prosafe is headquartered in Cyprus, with European operations in Aberdeen and Stavanger, Norway. It also has a presence in Singapore, Mexico and Brazil.

The Oslo-listed firm is believed to have issued notices to staff last week.

Its redundancies affect crew on the

#### "Employees can apply for voluntary redundancy"

Safe Caledonia, Safe Scandinavia and Safe Zephyrus fleets.

Union bosses in the UK and Norway plan to meet Prosafe next week in an effort to safeguard jobs.

Jake Molloy, regional organiser with the RMT union, claimed Prosafe was trying to "move full-time staff out and agency staff in at significantly lower rates".

A spokeswoman for Prosafe said: "As part of the ongoing initiatives to support further operating efficiencies, the company has commenced implementing alternative marine crewing profiles. Prosafe has offered a number of its offshore employees the opportunity to apply for voluntary redundancy."

## Green Grow the mushrooms for new Moray enterprise

BY KEITH FINDLAY



Iain Findlay

A Moray company which grows mushrooms using used coffee grounds and whisky grains has launched a crowdfunding campaign to help it scale up production.

Forres-based Aurora Sustainability hopes to raise £60,000 for its

Green Grow mushroom enterprise.

The cash is needed to achieve its ambition of making its gourmet meal boxes available to consumers throughout the UK.

It is hoped the project's success will demonstrate the circular economy in action.

Green Grow's mushrooms are grown using by-products from whisky distilleries and other local food, drink and agricultural industries.

It is no coincidence Aurora chose to launch its crowdfunding drive on the day Scotland celebrates the life of its national bard - the mushroom

project takes its name from Robert Burns' 1783 song Green Grow the Rashes.

As well as the used coffee grounds and grains playing a key role in production, the whole operation is powered by heat recovered from local whisky-making.

Director Iain Findlay said: "We hope people will

help us to show the food industry that there are ways in which waste can be eliminated or reimagined as a valuable resource."

He added: "Everything is re-used, so it's a working circular economy solution and we can't wait to take the product to market in the coming weeks."

WEEKLY READERSHIP:

48.2K

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Sectors Crowdfunding Food &amp; Drink Angle Funding

## Crowdfunding campaign launches to grow mushrooms using whisky heat recovery

25th January 2019



Green Grow Business Development Manager Dr Isabella Guerrini de Claire and Director Iain Findlay

A company which grows mushrooms using used coffee grounds and whisky grains, and which can be powered by heat recovered from whisky-making, is launching a crowdfunding campaign on Burns Night in a bid to help it scale up production.

[adbutler zone\_id='297765']

Green Grow hopes to raise £60,000 in order to take its Scottish Gourmet MushroomMeal Box product across the UK direct to consumers. Each recyclable box will be delivered by post and contains six vegan-friendly meal portions, made from the gourmet mushrooms grown using by-products from whisky distilleries and other

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## Crowdfunding campaign launches to grow mushrooms using whisky heat recovery | High Growth Scotland

JAN 25 2019

(IMAGE 1 OF 3)

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479

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18



the gourmet mushrooms grown using by-products from whisky distilleries and other local food, drink and agricultural industries.

The mushroom-producing 'Green Grow' project aims to demonstrate the 'circular economy' in action. A circular economy keeps things useful for as long as possible by finding ways to process and re-use products. The company takes its name from Robert Burns' 1783 song, 'Green Grow the Rashes' and has been using by-products from the whisky and coffee industry to create the perfect growing conditions for gourmet mushrooms.

By pledging a £20 donation to the crowdfunding page donors receive one of the Scottish Gourmet Mushroom Meal Boxes as a reward ahead of the March launch. Thereafter the boxes will be available via the online shop. Each box contains delicious mushroom-based risottos, polentas and lentil curries ready in less than half an hour simply by simmering in hot water.

Director Iain Findlay said, "This Burns Night, and during Veganuary and beyond, we hope that people will help us to show the food industry that there are ways in which waste can be eliminated or re-imagined as a valuable resource, as well as growing food locally to create tasty and easy to cook nutritious vegan meals like our Scottish Gourmet Mushroom Meal Box.

"We take by-products from local industries, such as the used malt from whisky distilleries or spent coffee grinds, to create the perfect compost for mushrooms. We then grow the mushrooms in used shipping containers, heated by biomass boilers or using hot water recovered from the whisky-making process. After harvesting the mushrooms, we recycle the compost again for forestry projects. Everything is re-used, so it's a working circular economy solution and we can't wait to take the product to market in the coming weeks."

As well as producing mushrooms for consumption, Green Grow is carrying out research into a new type of bio-packaging which can be made from the compost once the mushrooms are harvested. The root system of the mushrooms – or mycelium – can be used to produce a recyclable packaging material which is an alternative to polystyrene. Working with Belgian partners, the company intends to make its own packaging from the mushroom mycelium and then use that packaging technology for a range of products, including the whisky which helped to produce the growing medium and the heat for the mushrooms to grow. Green Grow aims to make its low-cost techniques available to people all over the country so that they can work with local industries to reuse their by-products and grow mushrooms. The project has been part-funded by Highlands and Islands Enterprise, the Scottish Government's 'Unlocking Ambition Challenge' and Scottish Edge.

[yikes-mailchimp form="2" title="1" description="1"]



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By Emer O'Toole | [Twitter](#) EmerMOTOole



Iain Findlay with Dr Isabella Guerrini de Claire






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A SCOTTISH company that grows mushrooms using coffee grounds and **whisky** grains is launching a crowdfunding campaign to help it scale up production.

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