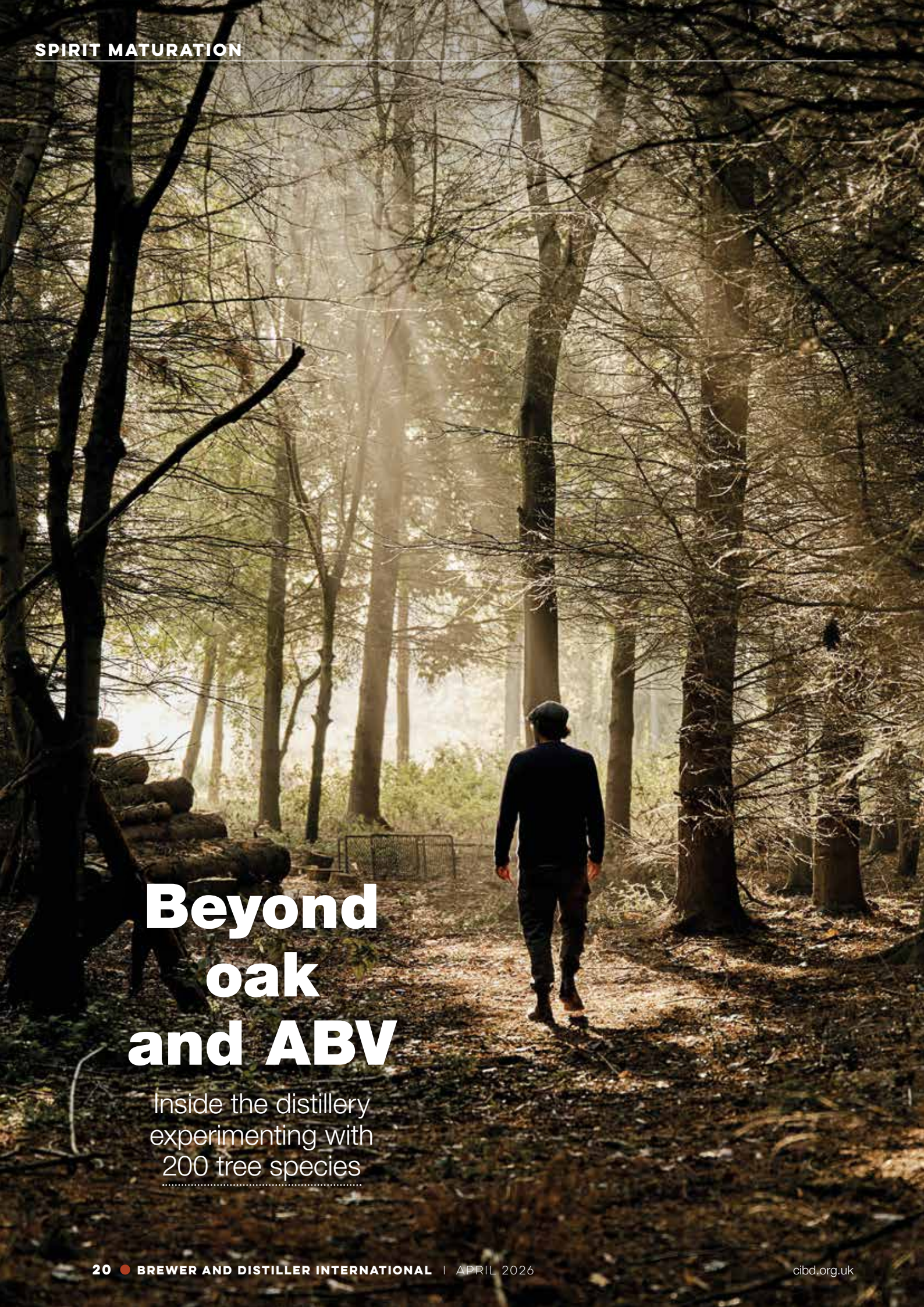

# Beyond oak and ABV

Inside the distillery experimenting with 200 tree species

BY ANTHONY GLADMAN

**Having pioneered the clear non-alcoholic spirits movement with Seedlip, Ben Branson is now venturing into the woods. His latest project, Sylva, leverages ultrasonic maturation to extract complex flavours from non-traditional tree species – challenging conventional wisdom on wood ageing and redefining the dark non-alcoholic category.**

Rows of small glass bottles line the shelves in Ben Branson's lab, each with an aluminium cap numbered by hand in black marker pen. He pulls one down and unscrews it to nose the aroma then passes it to me. "Reindeer moss," he says. "It's a lichen from Scotland."

A print-out taped to the nearby wall lists the bottles' contents which range from deepest mahogany through chestnut and amber to pale gold. Torrefied wheat. Heavily peated malt (60ppm phenol). Chocolate malt. Amaranth. All manner of wood chips and grains and seeds and strips of bark – 10g of each carefully weighed out – sit suspended in 50ml of 40% ABV ethanol.

Branson is making non-alcoholic spirits. The ethanol is just a solvent – a way to extract flavour compounds that water alone can't reach. It's technical, methodical and utterly liberated from the regulations that bind producers in other spirits categories such as Scotch whisky.

He passes me another bottle filled with a reddish web of decayed… something. "Dead leaves," Branson says. From a tree called Sweet Gum. "Its leaves go very red as the chlorophyll goes. We distil them when they're red and that's what we get." A distinctive impression of the forest floor, of bottled autumn.

Branson has a good claim to have created the modern non-alcoholic spirits category when he founded Seedlip in 2015. That began with an interest in herbs, a book from 1651 called The Art of Distillation, and a tiny tabletop copper still – the sort you'll find at make-your-own-gin classes. He quickly secured backing from Distill Ventures, accounts in high-end bars and retailers, and eventually sold to Diageo in 2019.

His new venture, Sylva, has a similar feel to it yet differs in key ways. Its non-alcoholic spirits are dark rather than clear. The batches remain very small but are now made in a six-litre rotary evaporator (rotovap) rather than a copper still. And its impetus flows from Branson's deep fascination not with herbs this time – but with trees. Hence the name; sylvan means 'of the woods'.

## Beating the bounds

Sylva is based in the Colne Valley, the Essex one, not Yorkshire, on the site of a former Benedictine priory. The estate includes about 1.5 hectares (four acres) of woodland – not the ancient fragments like nearby Chalkney Wood, but younger trees about 40 years old.

"This would have been parkland. You've got clumps of trees like hawthorn that sheep can sit under," Branson says. "We've probably got about 20 British native tree species here."

Branson knows the trees' ages just as he knows what type each one is, what its growing habits are, its likes and dislikes for water or soil type, and – increasingly – the flavours waiting to be unlocked from its wood. Or its bark. Or its leaves, or seeds, or roots.

His enthusiasm is evident even on a drizzly February morning. Dressed like a craft brewer (plaid overshirt, nose ring, greying curls spilling from a woollen docker cap), he leads me deeper into the woodland to show me two of his top-three favourite trees – by which he means individual specimens rather than species.

In at number three is a lightning-struck oak, 500 years old and still going strong despite the deep tear, scorched in places, that runs down one side of its twisting trunk. With its gnarled branches bare, it looms like a monster that might come to life at any moment to snatch unwary children up into its boughs.

"England has the highest number of ancient oaks in Europe," Branson says. "There are 600 types of oak. When you put this in whisky and barrel terms, there are half a billion barrels in the world. And in order to make those half a billion barrels we had to cut down a billion hundred-year-old oak trees. That's pretty crazy, isn't it?"

I concur. Pretty crazy.

"And then get this: 90% of those barrels are one species."

We both know what he means: Quercus alba, American white oak. Just one among over 73,000 species of tree in the world. And a single tree like this can support more than 2,300 species of birds and bugs, moss and lichen. But just as we seem to be spinning into a dizzying micro-macro whirl of scale and possibility, Branson zooms in again on the lightning strike.

"So typically for barrels, you char the inside," Branson says. "And this is obviously naturally charred, which is brilliant. It makes me wonder how you can engineer lightning to char trees. It would be amazing."

That's a solid third-favourite tree. His number one, grown from a cutting from Sir Isaac Newton's Flower of Kent apple tree, is at the Botanic Gardens in Cambridge. It is a descendant of a tree

**Ben Branson and his third-favourite tree, the five-hundred-year-old lightning-struck oak** (Photo: Anthony Gladman)

which grew in Isaac Newton's garden at Woolsthorpe Manor. Yes, the one that dropped that apple.

Branson hopes one day to make a limited release using this tree and his lightning-struck oak. But for now we move on to the runner up, holder of his number two spot, a bolshy black walnut that secretes a toxin called juglone to bully other trees and shrubs out of its growing space.


## Sipping the orchard

Branson has experimented with over 200 different types of wood so far. About 50 of these he has gathered himself from the woodland outside Sylva's back door, including elm, sweet chestnut, hazel, and silver birch. Others come from around the UK – particularly apple, plum and cherry wood from orchards that are being grubbed out. Some come from further afield: he has used West African padauk, olive wood, sequoia.

My visit comes shortly after the launch of Sylva's first permanent stock keeping unit (SKU), called Sylva Orchard. This combines plum and apple wood with cherry wood. Some of this cherry wood was smoked over cherry wood coals. It also has distillates of cherry blossom and English regenerative pale malt barley.

As well as ethanol (diluted to roughly 20% ABV), Branson uses glycerin as a solvent while preparing these components. It also contributes to the texture of the finished drink. In the glass, it looks slightly hazy and its colour – amber with orange highlights – is reminiscent of a richly sherried whisky. Served over ice, it tastes like licking the inside of a wooden cigar box that until recently held an oozing banoffee pie with custard.

Branson prepares the recipe in small batches, no more than a couple of dozen litres each. He uses the rotovap to distil grains and botanicals under a vacuum – this allows distillation at lower temperatures, preserving the more delicate volatiles that might not survive in a traditional pot still.

Once they're ready, he combines them in an intermediate bulk container (IBC). Evidently, they need some encouragement to marry together as there is an awful lot of stirring going on during my visit. Fabio, one of Sylva's handful of employees, does this by hand – five minutes stirring, ten minutes rest. You can hear him clonking away, banging the sides of the IBC's hard plastic bladder. It marks the passage of time. I wonder how long this must go on before it's time to send it all to the bottler. This single IBC of concentrate will become 3,500 bottles, many destined for Ocado.

**Sylva distillery and maturation lab, Colne Valley, Essex UK**

## Ultra sound

One of the methods Branson employs at Sylva is sonic maturation, or to be precise a version of this that uses ultrasound, sometimes also called ultrasonication. Sonic maturation isn't new – apparently it was first used in 2001 by the Tuthilltown Distillery in Hudson Valley, New York. And indeed, I have seen it used for myself at a sake brewery just outside Kyoto.

When it pops up in articles like this, the focus is usually on what sort of music to use. Does bourbon prefer heavy metal? Will sake enjoy Chinese music? Branson's approach is more science than whimsy. Rather than rely on sick beats he uses blasts of specific frequencies for defined durations.

He takes the day's distillates and puts them into a keg – these kegs range from the very small (two litres) to the merely small-ish (23 litres). He puts wood chips into the keg also, which may have been toasted or smoked or charred, or any combination of these.

Then he finishes the keg off with food-grade oxygen, pressurising it to the equivalent of 20m underwater or about 1.98 bar if you prefer. Depending on what he is experimenting with that day, the pressure may go higher – perhaps as much as 3.4 bar or 35 m underwater. "We are consistently testing different pressure to understand what works best extraction-wise," Branson says. "And what is also most efficient. We don't want to use more oxygen than we need to."

He pops his kegs into a water bath housed within an ultrasound generator. Three of these unassuming-looking steel boxes are about the same size and shape as a microwave oven. A third is closer to a domestic radiator: longer, taller and thinner. The water within these is heated to 80°C. So far so pleasant. Then the screaming begins.

The inside of the machines may be ultrasonic, at 28 kilohertz, but the outside – and the rest of the large room in the barn where they are kept – is not. It is filled instead with a grating metallic


**Inspiration from Sylva: A Discourse of Forest Trees and the Propagation of Timber in His Majesties Dominions (second edition), 1670**

shriek. It's bad enough when just one is turned on for a few seconds to demonstrate. What it is like when all four are going for a 30-minute stretch I dread to think. No wonder Branson keeps them out here rather than in the main production room attached to the office.

The machines keep this up, 30 minutes on and 30 minutes off, for anything from three days up to a week – sometimes even longer. At one point this meant physically pressing buttons to cycle the machines on and off, but Branson has very sensibly delegated this task to some microelectronics. Imagine the sort of home-automation jiggery-pokery with Arduinos and such that you might find explained in the depths of YouTube.

This works fine as long as the 3V batteries on which it all depends are kept fresh. Branson tells me he discovered this the hard way; a machine stopped working, seemingly for no reason and he went through a week of baffled frustration before landing on this particular point of failure.

So why go through all this rigmarole? Branson says it allows him to rapidly extract flavour, colour and character from his ingredients. The oxygen creates a favourable environment for reactions to occur. The ultrasonic waves inside his kegs cause microscopic cavitations that push the liquid into the wood chips and out again thousands of times per second. This, Sylva claims, gets the same flavour from its ingredients in a matter of days or weeks that would take traditional processes years to accomplish.

## The sceptic's take

Matt Burgess works at Speyside Cooperage. He has spent his career, much of it with Diageo, researching casks and maturation. The man knows wood. He even worked closely with Branson on Seedlip and later with Sylva, looking at wood extracts under ultrasonication. "I had an entire bench in my lab allocated to it for months," he says.

**Selection of different wood in various species, form and ages**

To a scientist, all maturation can be explained as a series of reactions. Reactions require energy, of which your typical cask in a warehouse has very little. They don't move. They're not hot. No one's plugging them into anything. Low energy. Very low energy.

"What ultrasonic provides is a huge dump of energy," Burgess explains. "Through acoustic cavitation, you can create high localised pressure and temperatures, accelerate reaction rates and stimulate chemical reactions."

Crucially, with Sylva, the precursors and extractives are the same as you would expect with traditional maturation. Its use of ultrasonication adds nothing except speed, removes nothing except time. In that respect, Burgess says, traditional and ultrasonic maturation ultimately reach the same end point.

And yet… and yet… Burgess has seen a great many maturation experiments in his time, either alone or in combination: bell jar trials, ultrasound, electrolysis, catalytic ageing. "They all do a good job of creating a simulant but fall short of the full experience of, say, a 12-year-old single malt," he says. He acknowledges it could be romantic bias – but that's what we love about drinks, isn't it? The romance? "It's like Jimi Hendrix or Kurt Cobain being fed to an AI model to

## INSIDE THE MATURATION LAB

**A tree company that makes drinks: Woodchippers, desiccators, ultrasonics and 10g samples in 40% ethanol**

produce new songs. It sounds like them, sometimes scarily so, but still just isn't."

## Not 'sober' anything

Except Branson isn't trying to make a non-alcoholic whisky. He's not interested in the sort of product that positions itself as a straight swap for booze, virtue for vice. Branson sees that as a losing proposition.

"People's expectations of dark non-alc, and their experience of it, are really bad," he says. Branson collected 10,000 reviews of 10 dark non-alcoholic products on Amazon and found the average rating was just 2.3. "And the most common feeling in the reviews is anger. So many drinks brands expect everybody to come to them, and for the occasion to be about the brand. It's not."

Branson wants Sylva to slot into occasions that dark spirits drinkers will already recognise – the transition from work to leisure, or social connection at the end of an evening. He asks himself: how can we be where people are slowing down? "If I go to an off-grid cabin, I'm probably not going to take a glass bottle with me," Branson says. "But what am I taking? Do we need to do a Sylva hip flask?"

Ultimately, Branson is most interested in showcasing what wood can do – especially species other than oak. "We talk about being a tree company that makes drinks," he says. "It so happens that we started with drinks. We could make chairs. It could be we make incense from the forest, or candles."

## Practicality gets a look-in

"The biggest impact on spirit will be down to wood quality and toasting temperatures," says Stuart MacPherson. As a former Master of Wood for Macallan, he knows wood chemistry intimately.

MacPherson's perspective isn't just about the nitty-gritty of hemicellulose and lignin, maltol and furfural and lactones. He also understands what it is to work with wood at an industrial scale. He started in the industry in 1979 as a cooper and went on to manage cooperages for Edrington.

"Being able to play about with different toasting temperatures, different maturation periods, different wood types, that gives you an indication of what would work," he says.

MacPherson's assessment of Sylva? "I think it is great, to be quite honest with you." He notes that many companies already use wood chips or toasted rods for spirit development where regulations allow. The limitation isn't technical, it's regulatory.


**Ben with a selection of plum wood**

"I just wish the Scotch Whisky Association (SWA) would open up some of the boundaries," MacPherson says. "I think we're becoming quite restrictive. You'll see other countries being more imaginative and creative about different wood types. Unfortunately, a lot of Scotch whisky companies are restricted in what they can do."

When I mention that Branson suggested cherry wood might work well in whisky, MacPherson doesn't dismiss it. The question isn't whether cherry would work, it's whether it would be commercially viable. Availability of the species, sawmill practicality, wastage levels. "Is it going to be feasible and practical and justifiable to use?" he asks.

## Local roots, global reach

Branson is no slouch. Consider his pedigree: out of more than 35 companies that Diageo invested in via Distill Ventures, Seedlip was the first to be acquired – an achievement only five others could match. This experience informs his approach at Sylva. Despite starting production just over a year ago, he has already secured a place in high-end retailers such as Selfridges and Berry Brothers & Rudd. Sylva is stocked in eight of the ten restaurants in the UK that boast three Michelin stars. It is also carried by top bars in Copenhagen, London, New York, Chicago and Los Angeles.

Sylva is already expanding production beyond the UK, too. Branson says he wants it to become a "global local brand". In the USA, Sylva has taken a lease on a barn on a 500-acre farm, two hours north of Manhattan. This gives Branson access to 100 hectares (250 acres) of woodland to work with.

He has already begun fitting out the equipment and interviewing for staff. Production should begin later in 2026, and will enable Sylva to create US-specific releases using local species including sugar maple and apple wood from the state's abundant orchards. He has his eye on Japan as well. "We are holding that tension of global brand, local footprint. And we can do that because we don't have the same regulations," he says.

Branson wants to bring new wood flavours to the world – and if they happen to be non-alcoholic, that's almost unimportant. Certainly, he doesn't consider it to be Sylva's unique selling point. "Launching Seedlip, the number one most important thing about it was that it was non-alcoholic," he says. "Now I want to move beyond ABV."

I ask Branson how he would define success for Sylva if he were to look beyond sales and profit. He says it would be inspiring in others a love of trees similar to his own. He tells me that fifty people have visited Sylva's lab so far. The most common feedback: that they will never look at trees in the same way again.

As I'm preparing to leave, Branson hands me a small illustrated book entitled How to be more tree. That evening, I read it with a glass of Sylva Orchard over ice. Every other page shows a life lesson attributed to a different species of tree. These are set opposite drawings of the trees in their habitat, or of their leaves, or the birds and insects that frequent them. For the Japanese maple, the lesson is that beginnings are always small. For the hornbeam, it's be authentic. For the London Plane, it's dare to branch out.