**66** For some it's more valuable to grow grapes per hectare under contract than sugar beet or wheat. 99

# Grape minds think alike

## **Alternative crops**

With international winemakers buying land in England to produce sparkling tipple, could viticulture prove the ideal diversification exercise for arable growers looking for something different? CPM reads between the wines.

By Tom Woolman

#### The greatest obstacle to running a vineyard is often the last thing to be considered, as Hutchinsons' Rob Saunders summarises: "The most difficult thing is selling the wine."

However, Little Wold Vineyard in East Yorkshire has tailored a solution to this problem, creating a wedding venue overlooking their vines. "It works extremely well," says farmer and founder Henry Wilson. "The weddings are only allowed to use our own wine and we can sell up to 100 bottles in an evening."

Henry first sparked the idea to start his vineyard after hitting a golf ball into one while on holiday in South Africa. "It was one of those surreal moments," he says. "A beautiful day with beautiful scenery, with row on row of vines filling up with grapes."

The home farm had some steep and chalky ground which tended to dry up

in the summer and never yielded well with cereal crops, he explains. So the initial idea soon developed to plant a small vineyard, which happened in 2010 with 2000 plants covering 0.7ha.

#### **Top terroir**

As luck would have it, the combination of soil, climate and topography, known as 'terroir' to those in the wine trade, produced an excellent product and Henry soon found himself unexpectedly winning prizes with his wine.

"We were told our vines were too young and too far north, but there we were winning bronze medals with everything we put in," he says. "Now we're disappointed if we don't get a silver."

UK viticulture has seen some spectacular growth during the past 10 years, with a 450% increase in hectarage, according to Dr Alistair Nesbitt of Vinescapes, a consultancy which specialises in viticulture and wine production.

And despite an estimated 4300ha of land under vine in the UK, there's room for expansion, according to Rob. He highlights that winemakers from other countries are buying land in England to produce their sparkling wines and claim they can see the 'writing is on the wall' for their own production regions.

While the UK drinks an estimated 5M bottles of wine a day, 2023 UK production hit a record 20-22M bottles a year according to industry body Wine GB, leaving plenty of headroom for import substitution.

In fact, many farms may have an area where a vineyard could be planted and parts of southern England have similar soils to those in the Champagne region of France, meaning equivalent varieties can be grown, explains Agrii's Matt Greep. But he pauses to celebrate the innovation of English wines, which aren't constrained by the same rigid regulations that continental producers often are.

"You have great contract winemakers who are doing a wonderful job of making exquisite wines from a real mix of grapes and breaking the rules," he explains. "The Champagne guys can only use three varietals in a very specific ratio."

The first step for anyone aspiring to enter viticulture is deciding what sort of business model to follow. Growers can



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# Autumn<br/>Arable<br/>Alternatives

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## **Alternative crops**



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produce as an estate winery, with the growing, winemaking and marketing of a brand all under one roof. According to Alistair, operations like this can often command a premium for their tipple, with the provenance of the product superior to more commercial winemakers.

Otherwise, options include growing on contract for a winemaker, selling on the spot market, or a combination of the two.

"So much of it depends on why someone is going into this and what they want to get out of it," he continues. "If you're really passionate about wine and have the drive to grow grapes and produce your own product, then thinking about your target market, production scale, economics, skill set etcetera is absolutely critical before you even start the land hunt.

"For some people, they're growing the crop because it's more valuable to grow grapes per hectare under contract than sugar beet or wheat," comments Alistair.

Although vineyards are a longterm investment and will yield for 30-50 years, commercial contracts are typically 3-5 years and therefore every grower requires a plan B, he says.

While many different soils are suited to growing vines, the most important characteristic is they must be free draining. As well as sustaining the plant with the water and nutrients that it requires for production, research suggests different soil types have a pronounced effect on taste parameters and the wine's eventual 'style'.

It's imperative, therefore, that soils are fully understood and improved before any attempt is made at planting rootstock, stress experts.

Furthermore, a pH of 6.0-6.5 is ideal,

although for high alkaline or chalky soils different rootstocks must be sourced to avoid the risk of chlorosis. Lower pH soils should be limed in accordance with requirements, as with other crops.

The topography of a potential site is something that requires careful consideration, as it has a major impact on the productivity of the crop. And depending on location, the elevation should be no more than 130m above sea level with under 100m being highly desirable, says Rob.

"With every metre above sea level you get 3.4 fewer hours at 7°C over the course of a year. Given the parameters of good drainage, avoidance of excess wind and undue altitude, there can be a whole load of sites which work well."

Rob adds that sites should ideally be south facing and away from frost pockets as vines can be susceptible to damage in the cold. "A gradient on the site can help in this respect, with between 2-12% advantageous in allowing cold air to drain down slopes in times of frosty weather. An incline also has the benefit of creating a higher degree of solar incidence on the ground, meaning more sunlight reaches the crop."

Once a suitable site has been selected, varieties should be chosen to suit the environment and wine style that's desired, says Alistair. "However, the capital required to plant is substantial, with vineyard set-up costs being around £35-40k per hectare. Given the investment, it's critical that the preparation and planting is undertaken correctly," he says.

"We've seen some appalling cases of poor quality vineyard establishment in the

UK. The vines, in some cases, won't take or perform optimally. This can be due to poor quality sites, field or soil preparation, sub-quality planting or a grower could be given diseased vines to plant which as a novice it may be hard to be aware of."

### **Establishment methods**

Young vines are highly intolerant of weed competition and plastic tubes are commonly fitted to young rootstock so herbicide can be easily applied around the plant. This also gives further protection from rabbits or deer.

Trellis should be erected for the rows of vines and setting the distance between rows is a careful management consideration – a higher density brings greater yields per hectare but also increases disease pressure.

Little Wold initially planted white grapes, but now the vineyard includes red varieties too, with red or rosé making up 25% of output. Today the business produces 10 different types of still and sparkling wines.

"Most of our wines are blends," explains Henry, adding that having a number of varieties spreads the options depending on the season. However, the likelihood of record breaking yields are far from certain.

This is because in terms of output, the two years following planting can expect to yield around 20-30% of the crop's full potential. But by the fourth year, yield should rise closer to 80%, with full yield obtainable from the fifth year onwards.

These outputs can be notoriously variable, highlights Rob. He notes that out of a five year period, the rule of thumb has been average yields



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## **Alternative crops**



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for three years, bumper yields for one, and nothing for the final year.

Alistair, who completed a PhD in climate change and viticulture, adds that the changing climate is something which doesn't necessarily spell good news for harvest reliability.

"The warming temperatures we've seen during the past 20-30 years have contributed towards the success and growth of the industry, yet at the same time the climatic variability we see adds to the challenges which growers face in the UK and beyond," he says.

Alistair points to the sensitivity of vines to rainfall, with excess moisture increasing disease pressure, making access difficult and reducing successful flowering.

#### **Ripening requirements**

"When you have a greater amount of rainfall you also have a greater amount of cloud cover. When you have more cloud cover you have less direct sunlight and your ripening ability is reduced in the vineyard."

He cites 450mm as the upper end of rainfall he'd want to see during the UK growing season of April to October.

Vines also don't require a huge amount of nitrogen, and depending on the previous land use, they may even grow for several years without further applications, says Rob. "Phosphate and potash can be managed much like any other crop, with soil sampling recommended every three years and appropriate adjustments made."

When it comes to disease, the UK's damp climate means downy mildew is a constant threat, particularly as many grape varieties have been selected predominantly for taste and bred for the drier conditions

of continental Europe. This could mean growers find themselves spraying regularly during the growing season.

However, as vineyards are longterm projects, growers will have to deploy cultural control methods too, as they'll be unable to change variety or pathogen pressure for decades.

"You're left manipulating the environment to make it less favourable for disease," explains Rob. "You have to manage the herbage in the vineyard so it doesn't restrict airflow in the alleyways. There's also manual work to be done in manipulating the canopy, tucking it in and thinning it out so you can maintain air movement, reduce humidity and facilitate spray penetration."

Will Robinson from Hutchinsons agrees. "You have to manage the canopy to open it up and get sunlight and air

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in to reduce the mildew," he says.

According to Will, growers should top the vines once they grow above the trellis to prevent shade and leaf strip the fruit zone to get more sun to the grapes. "All we're trying to do is harvest sunlight," he suggests.

Looking to the future, interest in regenerative production methods are increasing globally adds Alistair, but it's not simply managing a vineyard without chemical inputs, due to the cool and humid UK climate. "There's more support within viticulture now for people who wish to farm more sustainably, particularly as the synthetic chemical toolbox is rapidly emptying," he says.

"With vines only taking up 10% of a vineyard, there's lots of scope for using grazing livestock or cover crops as part of a system."

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With all of this in mind, it likely won't come as a surprise that vineyard work is labour intensive and securing a skilled workforce is one of the greatest challenges for an enterprise. "A good and loyal team is gold dust," says Will, who suggests growers should make every effort to retain quality workers.

And although labour gangs are available in some parts of the country, as with other parts of agriculture, these people are often in high demand.

"Regardless of opportunities for mechanisation it's a highly reliant production system. Pruning can't be done well by any robot, it requires skilled people to do it," adds Alistair.

Having secured a labour force locally, Little Wold is looking forward with their business. After using a contract winemaker for the early years, they took the decision to start making their own wine in 2020 which Henry describes as one of their biggest challenges to date.

"We have to get it right now," he emphasises. "You can have perfect grapes but if the slightest thing goes wrong in the winery that can really mess things up."

Yet demand for Little Wold's products currently outstrips supply and they continue to invest - production



According to Rob Saunders, the topography of a potential vineyard is something that requires careful consideration, as it has a major impact on the productivity of the crop.

is planned to triple once new vines reach maturity and the winery expands.

Even so, growing larger isn't easy, stresses Henry. He warns not to underestimate the amount of time it takes to educate lenders – with a long period between investment and sales, banks have to understand cashflow in detail before backing a project.

"We have half-made wine in tanks that's no use to anybody, but in a year's time it'll be a worth lot of money. You can't shortcut the process," he concludes. ■



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