

# PLANNING AND PRIORITISING FUTURE SKILLS, TRAINING AND BUSINESS SUPPORT NEEDS FOR RURAL BUSINESSES ACROSS THE SELEP REGION

*Talent is evenly spread – opportunity is not. Creating more opportunities relies on the ambitions and skills of all ages. Success requires close collaboration.*

Funding from SELEP is gratefully acknowledged to allow this work to take place.

Robin Gowers: Writtle University College  
Howard Lee: Hadlow College  
Ross Newham: NIAB EMR  
David Stokes: Plumpton College



## A6 Viticulture

### Introduction

The English and Welsh wine industry is burgeoning; revenue from wine sales in 2020 was £274m, generating £26m profit<sup>1</sup>, with new vine plantings reaching 3 million in 2019, up from 1.6 million in 2018<sup>2</sup>. Annual growth was 16.8% between 2015-2020, 1520 people were employed across 181 businesses producing sparkling white (67.3%), still white (30.4%) or red and rose (2.3%)<sup>1</sup>. A total of 15.6 million bottles of wine were produced in 2018, up from 5.9 million produced in 2017.

The United Kingdom is the sixth-largest wine market globally, and the second largest importer of wine by volume and value, surpassed only by Germany and the United States<sup>3</sup>. Accordingly, foreign-produced wine imports satisfied 92.8% of domestic demand in 2019-20; nearly 7% from home produced wines.

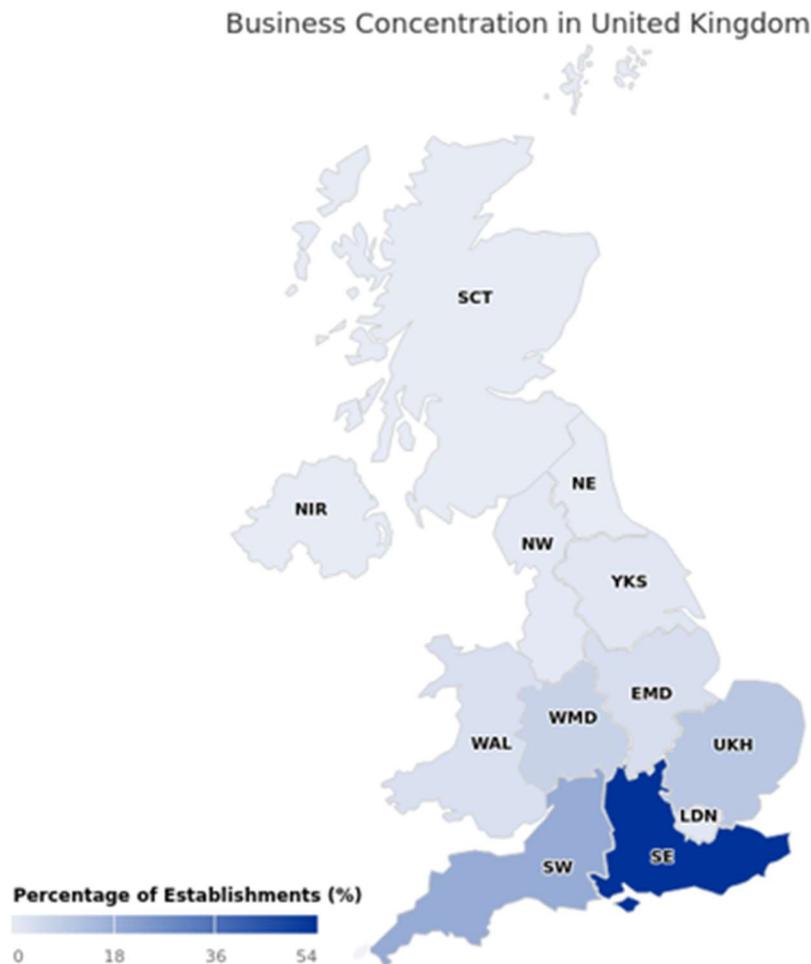
Wine is mostly produced in the South of England and with warmer-than-average weather, grape yields and wine quality have improved substantially.

<sup>1</sup> Falconer T. (2020). Wine Production in the UK. IBISWorld. INDUSTRY REPORT C11.020.

<sup>2</sup> Winegb.co.uk

<sup>3</sup> Wine and Spirit Trade Association (WSTA)

The South East accommodates circa 54% of industry vineyards and wineries. Owing to climatic and soil conditions in the region, the South East is considered well suited for producing sparkling white wine.



The counties of East Sussex, West Sussex, Surrey and Kent accommodate the majority of large vineyards and wineries. The Nyetimber Estate in West Sussex is currently the largest vineyard with 438 acres under vine, while the Denbies vineyard in Surrey is the UK's second largest, with over 285 acres. However, in September 2018, English wine producer Chapel Down struck a deal to lease a further 388 acres of viticultural land – the equivalent of 256 football pitches – adjoining its existing vineyards on the North Downs. The new site will be planted between 2019 and 2021, creating the largest vineyard in England with the potential to produce up to one million bottles of sparkling wine a year.

Recent analysis of potential expansion of the industry has been conducted by the NFU for the South East region and the results are summarised in their report<sup>4</sup>. The south east will provide some 21,000 viticulture and winery related jobs and a skills shortage as plantings are expected to reach 14,000 by 2040, up from 450ha in 2019.

<sup>4</sup> [https://issuu.com/ibretherton/docs/nfu\\_fertile\\_ground\\_final\\_single\\_pg](https://issuu.com/ibretherton/docs/nfu_fertile_ground_final_single_pg)



The average annual numbers of bottles produced (up to 2017) was around 5.5 million, with the 2018 harvest yielding 15.6 million bottles. Longer term, the target for the Board of Wine GB is to realise 40 million bottles per year within the next twenty years.

As the sector expands, the need for skilled viticulturalists will grow. Whilst many of those new sector entrants will go through the established education route, many new staff members can be expected to join from outside the sector. Over time, viticulture will face many of the skills and training challenges listed previously for commercial horticulture.

**Recommendation:** Training providers to work closely with industry develop a competency framework for the viticulture sector, setting out the competencies for specific roles and the associated skills, knowledge and behaviours.

### **A drive towards quality**

The rapid increase in output has significant important substitution opportunities if the UK can produce a consistent quality product. Leading businesses in the sector are committed to quality, but the wider industry is still challenged by reputation-damaging products reaching the market. Many of the contributing factors affecting quality will be specific to the terroir of the region, so looking overseas for solutions will not always be the answer.

**Recommendation:** Training and education courses in viticulture and oenology to have strong research informed components to assist the industry to adopt new technologies and approaches, including sustainability.

### **Looking overseas to address the quality perception**

Many leading businesses within the UK viticulture sector look overseas for their talent pool of skilled workers – this trend will continue while the sector expands. The impacts of Brexit should not affect the appointment of proven staff, as most should be able to gain enough points under the new immigration guidelines being proposed.

**Recommendation:** SELEP Rural Working Group to maintain close links with NFU and central Government to ensure the viticulture sector can import the right overseas labour (following the introduction of the new points-based immigration system) to support future expansion of the sector.

### **Weather**

The UK viticultural sector is potentially a climate change winner, though increasing extremes in the weather is leading to higher numbers of drought and flooding events. Spring frosts can have a devastating impact on production though frost protect systems of spraying water, adopted from other fruit crops, can largely mitigate this problem.

The wider UK climate is largely warm and humid, favouring the development of fungal pathogens. Key to the future commercial success of UK viticulture is the identification and adoption of varieties which have multigene resistance to key diseases in addition to desirable phenological traits, including late flowering (avoiding spring frosts) and early maturing (in the UK's short cool climate).

**Recommendation:** Educational and training skills delivery in the viticulture and oenology sector should maintain close links with relevant variety testing and associated research results to continually inform best practise.

Whilst viticulture is a beneficiary of the increasing temperatures of the cool climate region, other aspects of climate impact are rising in importance. For example, carbon footprint measurement, monitoring and evaluation are now becoming common

practices within businesses and vineyards and wineries are no exception<sup>5</sup>. The integrated approaches to crop management are now key<sup>6</sup> as well as the control and limitation of greenhouse gas production<sup>7</sup>. Sustainability is now a key theme within the viticultural sector and WineGB has established 6 key principles of good sustainable management.

The key objectives of Sustainable Wines of Great Britain are<sup>8</sup>:

- Protect our soils, conserve our environment, and promote biodiversity in our vineyards
- Manage our vineyards sustainably, with minimal pesticide and fertiliser inputs
- Use water wisely, and protect our watercourses from contamination
- Minimise our energy use, greenhouse gas emissions and carbon footprint, both in the vineyard and the winery
- Be economically viable in the long term
- Grow outstanding grapes and produce excellent wine for our customers

### **Brexit & Labour**

Like many other sectors of horticulture, the threat of Brexit reducing the number of European workers to harvest grapes is very real. It is considered unlikely that UK workers would be willing to harvest the annual grape crop, though as this is still a sector in its relative infancy and as grapes are considered a more 'romantic' crop, the challenge may not be as big a problem as other crops (such as brassicas).

**Recommendation:** SELEP are encouraged to communicate to central Government the extreme challenge that the viticulture sector believes it will face if there are insufficient low-skilled workers available.

### **Employment and training**

A very timely summary on employment and education was produced in May 2020 by WineGB<sup>9</sup> and this is reproduced below.

#### ***1 - Employment: creating 24,000 jobs in agriculture by 2040.***

- When WineGB completed its first trade survey at the start of 2018, it then began to consider how the industry might grow over the coming decades.
- As a reference point, it researched how other New World wine regions had expanded and grown. Using Oregon as a benchmark, production in the UK would equate to 40m bottles by 2040 with 45,000 acres under vine.
- Assessing the current employment numbers across a number of New World wine regions, then WineGB estimates that UK would have 24,000 FTEs by 2040.

---

<sup>5</sup> <https://www.winegb.co.uk/wp-content/uploads/2020/05/SWGB-bulletin-on-Carbon-Footprint-of-Vineyards.pdf>

<sup>6</sup> <http://adlib.everysite.co.uk/adlib/defra/content.aspx?id=000IL3890W.17YM1ATT5LQDB0>

<sup>7</sup> <https://www.oiv.int/public/medias/4521/publication-bilan-ges-en.pdf>

<sup>8</sup> <https://www.winegb.co.uk/2020/07/10/winegb-announces-industry-environmental-sustainability-scheme/>

<sup>9</sup> [https://www.winegb.co.uk/wp-content/uploads/2020/05/WGB\\_200521\\_APPG\\_Employment.pdf](https://www.winegb.co.uk/wp-content/uploads/2020/05/WGB_200521_APPG_Employment.pdf)

- Making an assumption that perhaps 95% of the growth will be in the South East, then based on current plantings, an estimate can be extrapolated across those counties.
- Before the current crisis emerged, WineGB estimated that these figures would be reached well before 2040, perhaps as early as 2030. Therefore, given the current crisis, and potential recovery time, 2040 would seem logical.
- Government involvement: most of these workers will probably live close to the vineyards, and the need for housing, plus health and education provisions for themselves and families in these rural settings is an essential component to enable this growth.

## ***2 - Seasonal Labour: an essential component in the industry's long-term growth.***

- The UK industry is heavily reliant on non-UK labour for various vineyard operations throughout the year that require specialist skills, absent in the domestic market.
- Traditionally these teams have been supplied through specialist contractors who can provide highly efficient Romanians to complete this task.
- WineGB estimates that there are approx. 1,000 workers in the UK who meet these criteria and have settled status.
- Around 10-15% of this workforce leave the market every year: need to be replaced by workers with the same skill sets.
- With the acreage of vines growing at a significant rate – doubling in the last 5 years – then the need for these seasonal workers is essential to provide the industry with specialist labour over the short- to medium-term.
- Government involvement: it is critical that this specific need is addressed as soon as possible to ensure this supply of labour continues.

## ***3 - Education: broaden the geographical availability of relevant courses to increase productivity.***

- Currently, there is only one college – Plumpton in East Sussex – that provides winemaking and viticulture courses. The College has a raft of options from City & Guilds Level 3 to a Masters Degree and an apprenticeship programme.
- Given the accelerated growth the industry is experiencing, then launching new faculties within existing agricultural colleges across the South-East would be essential. The employees listed in the table will need ongoing training.
- There are a number of colleges that could probably provide similar packages to Plumpton, and would provide an easier access point for many counties where vineyards are expanding.
- Government involvement: seed-funding to help establish these faculties in other agricultural colleges. This might be possible with funding from DfE, and matched by County Councils and LEPs.

### **Skills and knowledge requirements:**

Currently employers and business are telling us that they have difficulty filling vacancies in vineyards and wineries to meet the forthcoming expansion of the sector. Whilst there is a good supply at graduate level, the supply of workers at operator and supervisory level are in short supply.

### **Vineyard skills - basic**

- operate vineyard machinery
- cultivation, thinning, pruning, tying, canopy management, planting and replanting and harvesting
- grape diseases, their identification and means of control
- erosion control, trellis installation, frost protection, vineyard installation and fence installation
- vineyard pests and diseases, and biosecurity management
- follow directions
- work independently
- use good judgment and show initiative
- work well with others
- basic English skills

### **Vineyard skills - advanced**

- yield recording software
- monitoring of weather and climate conditions, and impact on yields.
- integrated crop management practices and decisions
- carbon footprint monitoring
- sustainable production
- identification of deficiencies and diseases of vines
- impact of the environment in the growth of grape
- pest, fungicide and herbicide management
- management of irrigation and fertilisation
- monitoring and making recommendations related to vineyard and fruit quality
- recommend successful strategies for the management of vineyards.
- identify the symptoms of major biotic and abiotic stresses in grapevines, and propose protection strategies.
- establish vineyard, including site assessment, site preparation and planting, trellis design and materials.
- analysis and evaluation of the internal and external factors that affect the quantity and composition of grapes produced in a vineyard.
- evaluate new practices and technologies for yield and quality management.

### **Winemaking skills - advanced**

- sanitation in the winery
- fermentation production and microbiology
- chemical composition of grape and wine
- perform a practical microbiological investigation, and then analyse, evaluate and communicate the results
- investigate complex problems in wine quality and make recommendations to mitigate associated risks
- develop winemaking plans to achieve a specific wine style and quality.
- evaluate current and emerging technologies for managing the winemaking process
- technological equipment and their application in wineries
- sensory testing of wine produce
- grape processing

- must amelioration
- fermentation management
- clarification and stabilisation
- packaging

### **Viticulturalists and viniculturists need the following generic skills**

- quality management systems
- laws and legal acts on winemaking
- organization of wine marketing
- listen to and perform instructions
- read and understand technical information
- give clear and brief instructions to others
- orally express creative ideas
- clearly and briefly speak about technical information
- write technical reports and e-mails
- positive working attitude
- self-motivation
- work in diverse conditions
- leadership and decision-making skills
- defend own views and ideas
- display a critical understanding of key management principles
- apply key management principles to a real-life commercial wine production scenario
- make recommendations to resolve wine production management problems through the application of formal management principles.

### **Wine tourism**

- identify, analyse and evaluate the strengths, weaknesses, opportunities and threats facing the English wine industry
- demonstrate how the UK wine tourism industry can implement best practice from a successful international wine tourism destination
- write features and other pieces about the wine making process
- give guided tours of the winery
- supplying technical information for managers

### **Future skills need**

- precision viticulture
- remote sensing and image analysis
- smart device applications relating to vineyard and winery management
- robotics and drone technologies
- pulsed electric field technology
- ultrasonic technology in winery operations
- nano-scale technology
- advanced biological additives
- potential role of GMOs in wineries and vineyards

## **Viticulture and wine case study – vineyard in Kent**

### **Unskilled labour supply:**

- Most current seasonal staff (mainly Romanian) have settled or pre-settled status.
- The challenge is going to be in 2-3 years' time as that pool of people give up coming to the UK for a variety of reasons.
- Will be advertising for locals in June – but often get people on the books and then they don't turn up or do a couple of days and don't return (sore-back syndrome!)

### **Technical**

- Not too difficult to get a new tractor driver
- Greater technical skills – using in-house expertise to train staff
- Have been stung a few times by training and then that person leaves
- Intensive courses (1 week) have been a useful mechanism
- Have used apprenticeships but have ended up putting lots in and then not keeping the candidate

### **Business Skills**

- Currently mainly done within office team – no current challenges and as business increases, greater specialisation will be (should be!) easier to recruit in to.

### **Business approach to employment**

- Mindset of employment – perhaps go for the more mature person (who's wonderlust has levelled out) and look after them.
- Business not suffering high attrition as employing the right attitude and character is most important, rather than pure knowledge
- Company approach is to: pay as much as possible; look after them (health scheme, wine allowance, etc); create a friendly team

### **Future**

- Can see the merit in a 'business training qualification' structure where different modules are attended by different staff, rather than solely focussing the training on one person.

## Viticulture and wine case study – vineyard in Sussex

### Recruitment:

- Challenging on all fronts

### Unskilled labour:

- We are in a very difficult predicament.
- Accessing non-EU labour is a huge worry.
- The demand will be for increasing salaries owing to constant increases in the cost of living.

### Technical skills:

- Even more challenging
- Students who have studied a degree for 3-4 years have put themselves into a pigeon-hole.
- They come with a great qualification so demand a high price, but arrive with little practical experience so need lots of bespoke further training.
- They don't think they need training, and when trained, they know they can go elsewhere.
- Having a caveat in their contracts (to recoup training costs if that staff member moved on) proved to be of little value and has been ceased.
- The business has to train regardless!!!

Note: the business looks for candidates who have "*horticulture in their heart*" – not someone who is already super-specialised, but someone who has an all-round horticulture qualification that can then be moulded.

### Business skills

- The business is big enough to be able to recruit specialist HR, Finance, Marketing staff

### Overall comment

- The agriculture sector (in the UK) is the hardest to attract people in to. Young people want the better-paid jobs in a less demanding environmental conditions.
- The value of agriculture is undervalued and we should look at pay structures.
- School education would be hugely valuable – getting kids to know where food and drink actually came from.