2023 HARVEST REPORT

THE BIG ONE

STEPHEN SKELTON MW

WINES OF GREAT BRITAIN
WINEGB
WINES OF GREAT BRITAIN

ABOUT THE AUTHOR

STEPHEN SKELTON MW

Stephen Skelton MW has been involved with growing vines and making wine since 1975. After working and studying in Germany, he returned to Great Britain in 1977 to establish the vineyards at Tenterden in Kent (now the home of the country's largest wine producer, Chapel Down Wines), and made wine there for 22 consecutive vintages. He now works as a viticultural consultant, setting up vineyards to produce both still and sparkling wines.

He is an award-winning author and has published over a dozen books, almost all on English and Welsh vineyards and wines. His latest book The Knight Who Invented Champagne is about the development of glass bottles in the early 1600s. He became a Master of Wine in 2003 and is a Liveryman of the Vintners' Company.

WINEGB

Wines of Great Britain (WineGB) is the national association for the English and Welsh wine industry. Our mission is to advance the interests of our 450+ producer members who represent the vast majority of the UK's productive hectarage, and establish Great Britain as one of the world's great quality and most sustainable wine regions.

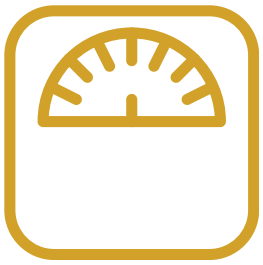
We are hugely grateful to the work of Mark Laughton in gathering and analysing the data. We thank Stephen Skelton MW for once again writing this important annual assessment.

We are also delighted to showcase in this report some of finalists of the Harvest Photo Competition. A full list of the photographers, vineyards and wineries is available on page 31.

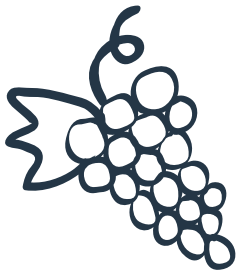
REPORT SNAPSHOT

LARGEST YIELD EVER

20 - 22 million bottles



30,000 total tonnes



4 MAIN GRAPES
10 tonnes per hec

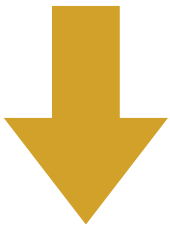
LARGEST YIELD AREA
10 tonnes+ per hec
(10.23)

PREVIOUS BEST YIELD

from **13.1** million bottles

VINEYARDS CONDITIONS

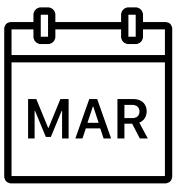
6% frost
29% in 2022

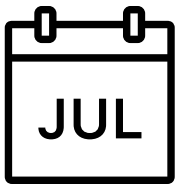


87% secured pickers needed
90% in 2022

13% machine harvesting
7% in 2022

RECORD WEATHER





x2 average rain

6th wettest ever

warmest month matching 2006

FINDINGS

SUMMARY

2023 will undoubtedly be remembered as a near perfect year. There was little spring frost, text-book flowering weather in June and after a generally wet and often dull summer (July and August), some very warm spells in September and October brought ripening on and most vineyards picked very large crops in good condition. Whilst crops were large, ripeness levels were lower than average, fine for sparkling wines, but not so good for still wines, although acids were lower than average, fine for still wines, but not so good for sparkling! The British climate always has a surprise to spring on vineyard owners.

DISCLAIMER

The report is based on a voluntary survey of WineGB members to which 132 vineyard owners responded, with a mix of smaller and larger growers and from the different regions. Between them these producers grow 2,000-ha of vines with 1,700-ha in full production. This is around 50% of the anticipated national cropping area for 2023.

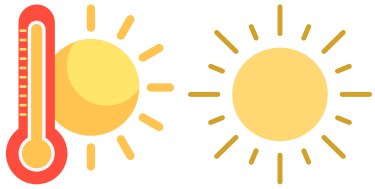
Whilst efforts have been made to ensure this is representative of the UK as a whole, it is the very nature of indicative studies that they rely on the information gathered. We anticipate the production figures will be modified as other statistics are published by Wine Standards.

THE WEATHER

THE WEATHER
JANUARY - MAY

The year started mildly with almost no frost and snow anywhere in Great Britain, and from the last week of January to the first week of March, there was little in the way of rain in the southeast of the country. February bought its usual mixed weather with cold days and warmer days, dry days, and wet days, but in general it was a relatively benign month enabling growers to get on with pruning in good conditions. March started with some very cold days and nights, and as the month proceeded, it became wetter and wetter with some parts of the country having much more than their usual rainfall. Cambridgeshire, usually a dry county, recorded 99mm of rain for the month, three times the average. England as a whole had twice the LTA (1991-2020 Long Term Average) rainfall for March, making it one of the wettest ever recorded. For viticulturalists, this meant that new sites were difficult to prepare, leading to a delay in the planting season. As April finished and May started, the wet weather continued, making planting new vines problematic and several planting machines had to stop working as soil conditions were just too difficult, something never known before in GB. Some new vineyards did not get planted until mid-June. Whilst this can be considered late, the new vines hit the ground running, and by the end of the summer had the same level of growth as those planted 4-6 weeks earlier. One of the benefits of a late spring (and therefore a late bud-burst) is that frost damage is reduced and 2023 will be remembered by most growers as being ‘frost free’.

THE WEATHER
MAY - JUNE



As May turned in June, the weather picked up and between 30 May and 30 June, temperatures of up to 32˚C were recorded in some regions. The five days between 10 and 14 June all reached 30˚C or higher, with 32.2˚C being recorded on the 12 June. According to the Met Office, it was the first time a temperature of 30˚C was reached on 13 June, and June 2023, with an average temperature of 15.8˚C (2.5˚C above the LTA), was the warmest June since records began in 1884 and almost a full 1˚C warmer than 1940, the previous June record holder.

This warm weather enabled flowering to get going on good sites and many varieties flowered between the 13 and 20 June, right in the middle of the hot spell. Camel Valley in Cornwall reported Seyval Blanc flowering on 13 June. In many vineyards flowering was over by the end of the month. Later sites and later varieties continued flowering into July when they encountered a wet and windy spell. (Wimbledon, which was played between the 3 and 16 July, was very much a 'roof on, roof off' year). In general flowering went very well, with the warm weather in the middle of June allowing the rachis of the bunches to elongate and expand, something which explains the above average bunch weights and heavy crops in many vineyards. This was the same as we saw in 2018, a record-breaking year, and 2023 looked like being another record-breaker. On later sites, there was some coulure and millerandage, which had the opposite effect and reduced yields.

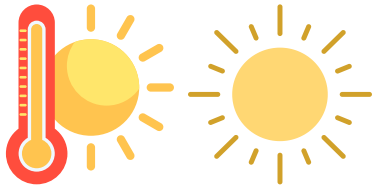
THE WEATHER

JULY - AUGUST

The summer continued in stop-start mode, and whilst the southern half of Europe fried and in some places caught fire, July in Britain was generally cool with plenty of rain in some parts (sixth wettest summer since 1884 and the Ashes were rained-off on several occasions) with below average temperatures. August wasn't much better and whilst a bit drier than July, was just as cool and nowhere in the country did the temperature rise above 30°C. In fact the Met Office reported that the maximum temperature on 5 August struggled to reach 15°C, a new record low for the date. August also had to contend with two named transatlantic storms, Antoni on the 5th and Betty on the 18th, which brought unseasonal wet and windy weather to many parts of GB. Despite this cool July and August, there were reports of 'earliest blackberries ever' – always a portend of an early harvest – and véraison, which most assumed would start a bit later than normal, started on some varieties (Rondo and Pinot Noir Précoce) around the 10 August. It was obvious by this time there was a heavy, even very heavy crop in most vineyards and many sites did some bunch thinning to control their yields. Another portend of things to come was a flurry of emails on the WineGB email forum from growers with grapes to sell and both the grape-sales websites were carrying a large number of offers to sell grapes, far larger than previous years.

THE WEATHER

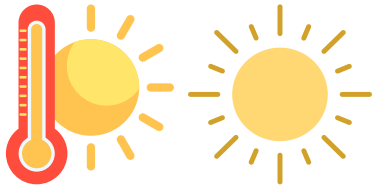
SEPTEMBER



As August turned into September the weather brightened up and despite some rain at the end of August, the beginning of September saw much higher temperatures, culminating with the highest temperature of the year on 10 September at Brogdale, near Faversham in Kent where 33.5˚C was recorded. In the seven days between 4 and 10 September, somewhere in GB achieved a temperature of 30˚C or higher, something that has only been seen in four previous Septembers: 1919, 1949, 1954, and 2016. This mini-heatwave, which lasted until around the middle of the month, brought the grapes on, and it looked like it was going to be a relatively early harvest, rather than the later one which it looked like in mid-August. In fact the first recorded harvest date in this year's Yield Survey was in the Thames & Chiltern's region on 2 September with the West region following a day later and the East on 8 September. By the 16 September, all regions reported picking, albeit on early varieties and those with lighter crops. Storm Agnes swept in at the end of the month and brought quite a bit of wet and windy weather, although by the time it had reached the south and east of the country, its strength had diminished. September turned out to be one of the very warmest months since records began in 1884 (matched only by 2006) with an average temperature of 15.2˚C, a full 2.2˚C (or 17%) above the 1991-2020 LTA.

THE WEATHER

OCTOBER



Picking of the major varieties in the larger regions (and where the crops were heaviest) didn't really get going until the beginning of October and continued for the first three weeks of the month. Some growers waited for sugar levels to rise as they were quite low when sampling started 2-3 weeks before the anticipated harvest dates and they hoped that by hanging on, these levels would rise. In fact they probably did rise but were in turn diluted by the rain which started around 13 October and then didn't really stop until well after harvesting finished. The first ten days of October were glorious with 26.1°C being recorded on 11 October at East Malling, Kent, a full 8°C above normal. The Met Office reported that it was the most significant spell of warm October weather since 2011. However, October as a whole was one of the wettest on record with England receiving 140% of normal average rainfall, the seventh wettest on record. The majority of grapes were picked by the end of the second week of October in the West region and the third week of October in the South East. For later varieties and later sites, picking continued throughout October and into November with the latest harvest date recorded by the survey as being 26 November.

FACTORS

As can be seen in the responses to the survey shown on page 30, there were a number of factors in 2023 which are of interest to vine growers in GB:

- Spring frost affected 6 ent of respondent' vineyards, compared to 29% in 2022.
- 13% of vineyards were machine harvested, compared to 7% in 2022.
- 87% of vineyards got the pickers they wanted, much the same as in 2022.
- Mildews and Botrytis were both worse than in 2022, a not surprising finding given the summer and autumn rainfall. Good canopy management and timely spraying was needed this year.
- Bird damage was minimal and less of an issue than in 2022.
- SWD (Spotted Wing Drosophila) was considerably worse than in previous years which is probably due to the lower acidities in 2023, especially in red varieties and the increased cropping area of red varieties such as Pinot Noir Précoce (Blauer Frühburgunder) which was 30ha in 2017 and now (2022) stands at nearer to 100ha

TABLE 1: ANOTHER VERY WARM YEAR

Growing Degree Days (2018-23)								
County	**Altitude in metres**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Average**
Essex	85	1,089	948	987	906	1,129	996	**1,009**
East Kent	43	1,125	968	1,051	940	1,127	1,073	**1,047**
West Kent	39	1,107	949	1,037	957	1,091	902	**1,007**
East Sussex	65	1,107	950	1,059	951	1,128	1,089	**1,047**
West Sussex	20	1,109	887	998	917	1,106	1,027	**1,007**
Hampshire	80	1,103	885	959	911	1,119	1,010	**998**
Somerset	33	1,040	912	969	962	1,087	1,041	**1,002**
Average		**1,097**	**928**	**1,009**	**935**	**1,112**	**1,020**	**1,017**
Data supplied by Agrii Weather stations.								

As can be seen from Table 1, the growing degree days (GDD) for 2023 were almost exactly the same as the average recorded over the last six years. Undoubtedly the higher-than-average GDDs for June and September pulled the average up and counteracted what was generally agreed to have been a dull and wet summer (i.e. July and August). With the exception of Essex and West Kent sites, which is apparently quite exposed, everywhere else recorded GDDs of 1,000 or above, something we have not seen since 2018.

YIELDS

TABLE 2: BEST YIELDS EVER

2023 Production - all varieties, all regions				
Vineyards 0.10 ha or larger and 4 years and older	Yield T/active ha	Yield T/ acre	Potential alcohol %	Acidity g/l tartaric
Top yielding 25% of vineyards	15.6	6.3	8.9	10.2
Middle yielding 50% of vineyards	8.5	3.4	9.2	10.1
Bottom yielding 25% of vineyards	3.4	1.4	9.4	9.1
Averages	**9.6**	**3.9**	**9.20**	**10.00**
Source: 2023 WineGB Yield Survey (averages not weighted by tonnes produced)				

TABLE 3: YIELDS 2016 - 2023

2016-2023 Average Yields - all varieties, all regions (T/active ha)									
Vineyards 0.10 ha or larger and 4 years and older	2016	2017	2018	2019	2020	2021	2022	2023	Average 2016-2023
Top yielding 25% of vineyards	8.8	9.6	10.5	9.6	7.6	9.1	8.8	15.6	10.0
Middle yielding 50% of vineyards	4.4	4.1	6.2	5.3	3.6	5.2	4.6	8.5	5.2
Bottom yielding 25% of vineyards	1.4	1.3	1.6	1.8	0.9	2.2	1.4	3.4	1.7
Av. All varieties, all vineyards	**4.5**	**4.7**	**7.1**	**5.9**	**4.2**	**5.4**	**5.0**	**9.6**	**5.8**
Source: 2018-20, 2022-23 WineGB-ICCWS Yield Surveys. 2016-17 and 2021 S. Skelton industry estimates (averages not weighted by tonnes produced)									

YIELDS

BEST YIELDS EVER

As can be seen in Tables 2 and 3, the yields in 2023 were very high, undoubtedly the highest ever recorded in the history of modern viticulture in Great Britain. As we saw in 2018, the previous record-holder, an absence of spring frosts and a good (perhaps great) flowering are the keys to large yields. For the top 25% of vineyards to record an average across all varieties of 15.60 tonnes/ha (6.31 tonnes/acre), which is almost 50% higher than the previous record year (2018), is quite remarkable and double what is generally considered to be an economically sustainable yield for vineyards in GB. Even the lowest yielding vineyards managed 3.4 tonnes-ha (1.38 tonnes-acre), which was over twice their 2016-22 average yield. One amazing result was from Chapel Down, GB's largest producer, who picked 3,811 tonnes off 304-ha, a yield of 12.54 tonnes-ha (5.07 tonnes-acre). To obtain this level of cropping over such a large area is a remarkable effort. Several exceptional growers averaged yields of 15.5 tonnes-ha (6.27 tonnes-acre) across a spread of varieties and sites.

TABLE 4: AMAZING YIELDS FOR THE TOP FOUR VARIETIES

2023 Top Varieties average yields T/active ha	Chardonnay	Pinot Noir	Meunier	Bacchus	Averages all varieties
Top yielding 25% of vineyards	16.6	15.1	20.0	16.7	**17.1**
Middle yielding 50% of vineyards	9.1	8.7	9.2	9.1	**9.0**
Bottom yielding 25% of vineyards	3.6	3.9	3.9	3.2	**3.6**
Average all regions	**9.8**	**9.2**	**10.5**	**9.9**	**10.0**
2023 WineGB Yield Survey (averages not weighted by tonnes produced)					

YIELDS

BEST YIELDS EVER

As might be expected in this year of miracles, the top four varieties, which account for almost 76% of the GB planted area (Wine Standards [WS] March 2023), performed amazingly well with the average of all vineyards almost reaching 10 tonnes/ha. The top quartile exceeded all estimates with an average across the four varieties reaching 15.9 tonnes-ha (6.43 tonnes-acre).

TABLE 5: YIELDS OF ALL THE MAJOR AND WIDESPREAD MINOR VARIETIES 2016-2023

Tonners per active Ha	2016	2017	2018	2019	2020	2021	2022	2023	Average 2016-23	Av. 2016-23 T-acre
Bacchus	3.07	4.21	5.48	7.14	3.48	5.91	6.70	9.92	5.74	2.32
Chardonnay	5.58	4.42	8.67	6.61	6.33	4.75	5.54	9.83	6.47	2.62
Dornfelder	No data	No data	No data	3.47	4.37	N/A	6.57	6.27	5.17	2.09
Madeleine x Angevine 7672	6.05	5.64	6.70	6.44	5.22	5.05	8.28	7.17	6.32	2.56
Meunier	5.88	5.24	9.53	6.23	5.36	4.66	6.56	10.49	6.74	2.73
Ortega	No data	No data	No data	6.53	3.38	3.75	6.30	8.41	5.67	2.30
Pinot Gris	No data	No data	No data	2.21	4.02	4.82	5.26	10.46	5.35	2.17
Pinot Blanc	No data	4.86	7.85	No data	No data	No data	8.88	7.60	7.30	2.95
Pinot Noir	3.00	4.31	7.93	6.18	5.25	5.70	6.01	9.20	5.95	2.41
Pinot Noir Précoce	1.81	3.50	6.62	4.32	3.55	5.34	5.59	6.97	4.71	1.91
Regent	No data	5.70	11.09	4.12	3.10	6.25	8.09	9.94	6.90	2.79
Reichensteiner	8.36	4.37	16.60	7.50	2.34	N/A	8.20	8.70	8.01	3.24
Rondo	No data	9.24	7.30	2.66	5.17	6.09	7.01	9.18	6.66	2.70
Seyval Blanc	6.40	11.24	9.38	3.36	4.61	7.39	6.73	9.13	7.28	2.95
Solaris	No data	No data	No data	2.66	1.99	4.39	4.90	6.45	4.08	1.65
Other varieties - see table	4.26	3.68	4.10	3.35	3.65	N/A	5.57	7.92	4.65	1.88
Average of above varieties	**4.93**	**5.53**	**8.44**	**4.85**	**4.12**	**5.34**	**6.64**	**8.60**	**6.06**	**2.45**

Source: 2023 WineGB Yield Survey (vineyards 0.10 ha or larger and 4 years and older - averages not weighted by tonnes produced)

As can be seen from Table 5, the major varieties (which account for almost 90% of the 2023 GB cropping area), all performed well with a few yielding over 10 tonnes/ha (4 tonnes/acre) and many others just under 10 tonnes/ha (4 tonnes/acre). The exceptions were Pinot Noir Précoce / Blauer Frühburgunder, Dornfelder and Solaris which only averaged 6.56 tonnes-ha (2.65 tonnes-acre), which in the context of a bumper year, must be considered poor.

YIELDS

BEST YIELDS EVER

The problem with both early ripening and red varieties was twofold: SWD (Spotted Wing Drosophila) and sour-rot. The survey returns showed that 49% said they 'were affected by SWD', with some growers losing all of their crop with some varieties. Others lost between 2 and 15%, whilst others were forced by the onset of sour-rot to pick early. Sour-rot is caused by wasps and other berry-piercing insects (including normal fruit flies and SWD) transferring acetic acid bacteria from bunch to bunch which leads to the distinctive smells of vinegar and rotten grapes wafting through the vineyards. Two other varieties which performed less well, and both less than in 2018, were Reichensteiner and Seyval Blanc. Reichensteiner cropped at almost half its 2018 levels, a very surprising result given the year, and Seyval Blanc, which is usually pretty reliable, only managed just over 9 tonnes-ha (3.64 tonnes-acre) which although respectable, is nothing special for this variety. Seyval can be biennial in its cropping and the yields since 2016 more or less bear this out.

Meunier, which was the best yielding major variety in 2023 with 10.49 tonnes-ha (4.25 tonnes-acre), escaped damage most likely because it was picked early for sparkling wine as acidity was dropping. Regent, another early red variety, which was picked before the wetter weather in the second half of October arrived, also did well. Another variety worth a mention is Pinot Gris, the second highest yielding of the more widespread minor varieties, which at 10.46 tonnes-ha (4.23 tonnes-acre) beat its previous four-year (2019-22) average of 4.08 tonnes-ha (1.65 tonnes-acre) by an increase of 255%.

YIELDS

BEST YIELDS EVER

TABLE 6: MINOR VARIETY YIELDS FOR 2023

Minor Varieties 2023 T /active Ha	Yield
Acolon	7.43
Alberino	8.64
Auxerrois	3.86
Huxelrebe	14.29
Kerner	2.40
Müller-Thurgau	12.50
Orion	5.68
Phoenix	10.87
Sauvignon Blanc	9.70
Schönburger	7.15
Siegerrebe	6.00
Others	6.55
Average	**7.92**
Note: Smaller sample numbers may give less reliable results	

Quite a mixed set of results for the minor varieties which, whilst they account for less than 4% of the total GB planted vineyard area (155-ha of the total of around 4,178-ha. Source: WS March 2023) are nevertheless worth taking notice of. For the cooler parts of the country, and for growers who want to spray less (or even not spray at all), early varieties such as Schönburger and Siegerrebe, and PIWIs such as Orion and Phoenix, are important and therefore worth recording. For those of a certain generation, for whom Müller-Thurgau and Huxelrebe were once mainstream varieties, their high yields in a good year do not come as a surprise. Two of the very newest varieties to be planted in GB vineyards, Albariño and Sauvignon Blanc, proved that they can yield well, but need a warm year and ideal flowering conditions to produce ripe, sustainable crops. For a comparison, the yield of these two varieties in 2023 was almost double the yield they managed in 2022. Phoenix did well this year (as it did in 2022), as did Acolon. The poor yields for some of the other minor varieties is probably down to a combination of the region they are being grown in, the quality of the sites, and probably a less effective spraying regime.

TABLE 7: MAJOR VARIETY YIELDS BY QUARTILE FOR 2023 IN TONNES-HA

Variety yields by quartile 2023	Bacchus	Chardonnay	Pinot Noir	Meunier	Pinot Noir Précoce	Madeleine Angevine	Ortega	Pinot Gris	Rondo	Seyval Blanc	Solaris
Top quartile	16.7	16.6	15.1	20.0	13.7	12.3	13.4	16.6	16.0	17.0	11.4
Middle 50%	9.1	9.5	8.7	9.2	6.1	6.7	9.0	11.2	8.1	7.6	6.0
Bottom Quartile	3.2	3.6	3.9	3.9	2.5	3.0	4.1	5.0	3.9	3.6	2.4
Average Yield	**9.9**	**9.8**	**9.2**	**10.5**	**7.0**	**7.2**	**8.4**	**10.5**	**9.2**	**9.1**	**6.5**

As can be seen by Table 7, yields by quartile of the most planted varieties showed that the top 25% of growers performed almost twice as well as the next 50% and over four times as well as the bottom 25%. And this is with vineyards in their fourth year after planting.

TABLE 8: YIELDS BY REGION SHOW CONSIDERABLE VARIATION

Major Varieties - 2023 Tonnes per Active Ha	East	Midlands & North	South East	Thames and Chilterns	Wales	Wessex	West
Bacchus	7.71		11.44	6.92		6.40	8.39
Chardonnay	11.24	5.31	9.89	10.05		10.44	8.19
Meunier	11.05		10.88	9.98		8.22	7.01
Pinot Noir	12.36	3.21	9.32	10.39	Insufficient data	8.64	8.48
Pinot Noir Précoce	8.16		8.44			3.85	6.71
Seyval Blanc	13.15	7.43	5.91	8.41	Insufficient data		9.50
Averages	**10.34**	**5.84**	**10.10**	**9.71**	**9.50**	**8.70**	**8.15**

Source: 2023 WineGB Yield Survey (vineyards 0.10 ha or larger and 4 years and older - averages not weighted by tonnes produced)

YIELDS

BEST YIELDS EVER

Regional yields for 2023 showed considerable variation, more so than in other years, highlighting the fact that varietal differences per region make a huge difference to average performances. Wales for instance, has 26 percent of its planted area covered with Seyval Blanc and Solaris, and the West region has 13% of its area down to Seyval Blanc. In comparison, these varieties are now very rarely found in the Southeast, Thames & Chilterns, and Wessex, where the four major varieties – Bacchus, Chardonnay, Meunier and Pinot Noir dominate. Unfortunately, there was insufficient data to show any yield figures from Wales. Table 8 shows the highest yields being achieved in 2023 in the East, the South East and Thames & Chilterns with an average yield of 10.30 tonnes/ha (4.13 tonnes/acre), helped it has to be said, by a massive Seyval Blanc crop in the East.

TABLE 9: REGIONAL YIELDS OVER TIME 2016-23

Yields by Region Tonnes- active ha	2016	2017	2018	2019	2020	2021	2022	2023	2016-23 t-ha	2016-23 t-acre
East	6.89	4.35	6.92	6.09	5.82	6.58	4.89	10.23	6.47	2.62
Midlands & North	N/A	5.22	N/A	3.82	5.82	4.63	6.07	4.61	5.03	2.03
South East	4.31	4.61	9.90	6.43	6.43	5.10	6.33	9.84	6.62	2.68
Thames & Chilterns	2.59	5.62	N/A	6.83	5.82	5.56	6.86	8.50	5.97	2.42
Wales	No data	No data	No data	No data	No data	No data	Insufficient data	Insufficient data	-	-
Wessex	2.08	3.44	9.93	5.66	6.61	5.09	6.75	9.53	6.14	2.48
West	3.95	5.82	5.52	5.35	3.54	5.75	7.39	7.46	5.60	2.27
Av. all regions, all varieties	**3.97**	**4.65**	**8.92**	**5.77**	**6.10**	**5.39**	**6.18**	**9.59**	**6.32**	**2.56**

Source: 2022 & 2023 WineGB Yield Surveys; 2021 & prior years S. Skelton industry estimates (vineyards 0.10 ha or larger and 4 years and older - averages not weighted by tonnes produced)

Table 9 shows regional yields over time and continues to show the highest yields being achieved in the drier and warmer regions, the East, the South East, and Wessex, with other regions following. Differences are not huge, the highest yielding three regions average 6.41 tonnes/ha (2.60 tonnes/acre) over all varieties, whereas the two lowest regions average 5.53 tonnes/ha (2.24 tonnes/acre), a difference of 16%, but as has been said before, varietal differences between the regions plays a part in these differences. It also worth noting that, at least on the open market, the highest prices achieved are for the top three varieties – Chardonnay, Meunier and Pinot Noir with slightly lower prices being achieved for Bacchus, followed by substantially lower prices for Seyval Blanc and Reichensteiner. Therefore, on a financial basis, the differences between regions are much greater than purely in terms of weight of grapes harvested.

ALCOHOL AND ACIDITY

ALCOHOL AND ACIDITY

TABLE 10: POTENTIAL ALCOHOL LEVELS IN 2023

Major Varieties - 2023 Average % Pot. Alc	East	Midlands & North	South East	Thames and Chilterns	Wales	Wessex	West	All regions
Bacchus	8.90	Insufficent data	8.71	7.94	Insufficent data	8.26	8.77	**8.52**
Chardonnay	9.26	Insufficent data	8.77	9.19	Insufficent data	9.30	8.38	**8.98**
Meunier	8.90	Insufficent data	8.57	8.65	Insufficent data	8.06	7.82	**8.40**
Pinot noir	9.18	Insufficent data	8.75	8.83	Insufficent data	8.27	8.33	**8.67**
Averages	9.06		8.70	8.65		8.47	8.33	**8.64**

Source: 2023 WineGB Yield Survey (vineyards 0.10 ha or larger and 4 years and older - averages not weighted by tonnes produced). Smaller sample numbers may give less reliable result for some data points

TABLE 11: ACIDITY LEVELS IN 2023

Major varieties - 2023 Average total acidity as tartaric g/l	2023	Averages 2016-22
Bacchus	8.10	9.11
Chardonnay	10.90	13.08
Meunier	10.30	12.23
Pinot noir	10.30	11.30
Averages	**9.90**	**11.43**

ALCOHOL AND ACIDITY

One feature of 2023 was the relatively low natural sugar levels i.e. the potential levels of alcohol, in many grapes. As can be seen by Table10, across the four major varieties and across all regions, they clustered around an average of 8.64%, with Wessex and the West being marginally lower than the East and the South East. To put this in perspective, the 2016-22 average for these four varieties is 9.25%. In 2022, the highest sugar year between 2016 and 2022, the average was 9.96% with only two out of the 26 varieties recorded achieving less than 9%. These lower-than-average sugar levels can partly be explained by a combination of very high yields in many vineyards, coupled with dilution from the rain which started in the middle of October. Whilst we don't have data relating to sugar levels and picking dates, anecdotal evidence suggests that those that picked early had both higher sugar and higher acid levels. The addition of sugar to raise alcohol levels is restricted to 3%, so anyone hoping to make a still Chardonnay or Pinot Noir with 13% of more (as we have seen in the last few vintages) is probably going to be out of luck. There will be a few very good sites that managed to pick at higher sugar levels, but not too many.

Table 11: shows the acidity for the four major varieties across all the regions for which there is data available. 2023 was in general a low-acid year and as can be seen, levels were quite significantly below the 2016-22 long term averages. This, and the relatively high pH levels which many winemakers discussed at the time, are probably the most surprising features of harvest 2023. Whilst varieties such as Bacchus, of which a very high proportion is used for still wines, an acid level between 8 and 9 g/l is perfectly acceptable, for varieties such as Chardonnay, Meunier, and Pinot Noir, most of which is used for sparkling wines, anything starting with a 10 is low.

ALCOHOL AND ACIDITY

Most winemakers making what they hope will be long-lasting cuvées, especially of blanc de blanc wines, would prefer to pick Chardonnay nearer to 12-14 g/l. Why the sugar-acid balance in 2023 was so unusual is probably down to several factors. Some winemakers undoubtedly took the decision to delay picking, hoping that sugar levels would rise, but instead of which they remained largely static (and low) for the four weeks from mid-September to mid-October by which time the bulk of the crop had been harvested. Others undoubtedly picked early, hoping to capture as much acidity as possible, plus making hay (or wine) whilst the sun shone and whilst the good weather in the first half of October lasted. It will be interesting to see how the 2023s, both still and sparkling, turn out.

Acid levels for the four major varieties and across the regions showed considerable variation. The East and South East regions averaged just over 9g/l, whilst the three other regions for which sufficient reliable data was available, showed higher levels. Again, what impact this will have on quality and longevity will be seen in the years to come.

TABLE 12: ACIDITY ACROSS THE REGIONS

Major Varieties - 2023 Average acidity as tartaric g/l	East	Midlands & North	South East	Thames and Chilterns	Wales	Wessex	West	All regions
Bacchus	8.20	Insufficent data	8.00	7.10	Insufficent data	8.40	8.60	**8.10**
Chardonnay	9.90	Insufficent data	10.50	11.80	Insufficent data	11.30	12.40	**10.90**
Meunier	9.10	Insufficent data	10.10	11.10	Insufficent data	10.70	10.70	**10.30**
Pinot noir	9.30	Insufficent data	10.10	11.30	Insufficent data	10.70	11.10	**10.30**
	9.13		**9.68**	**10.33**		**10.28**	**10.70**	**9.90**

THE FUTURE

TABLE 13: FUTURE PRODUCTION OF WINE IN GB

Number of 75 cl bottles produced in GB		
Years	**Ha in production**	**Million bottles per year**
2017	1,677	5.3
2018	2,138	13.1
2019	2,258	10.5
2020	2,379	8.7
2021	2,841	9.0
2022	3,230	12.2
2023	~3,400	20 to 22
2017 -2022 data courtesy of Wine Standards. 2023 forecast: WineGB and S. Skelton estimates		

Production over the years has risen because of both more vines being planted, as well as higher yields. The area in production has risen from 1,297ha in 2012 to circa 3,400 in 2023, an almost trebling of the vineyard area in production. Yields per hectare have also been rising, but not in a straight line. The average yield per hectare over the last ten years (2014-23), including an estimate for 2023, is 30.1 hectolitre per hectare (hl-ha), whilst for the previous ten years (2004-13) it was 20.7 hl-ha, a rise of 45%. This is due to several factors: the climate which continues to surprise with the GDDs rising all the time; better sited and better planted vineyards (higher vine densities); and better vine husbandry. If new plantings continue at their recent pace and yields continue to rise, GB will have in excess of 7,600ha of total planting by 2032 with annual yields nearer to 40 million 75 cl bottles. However, large variability in annual yields will likely continue to be a fact of life in vineyards in all countries and probably more so in marginal regions.

[1] See overleaf for plantings and yields 2012-23

ANNEX 1
YIELDS

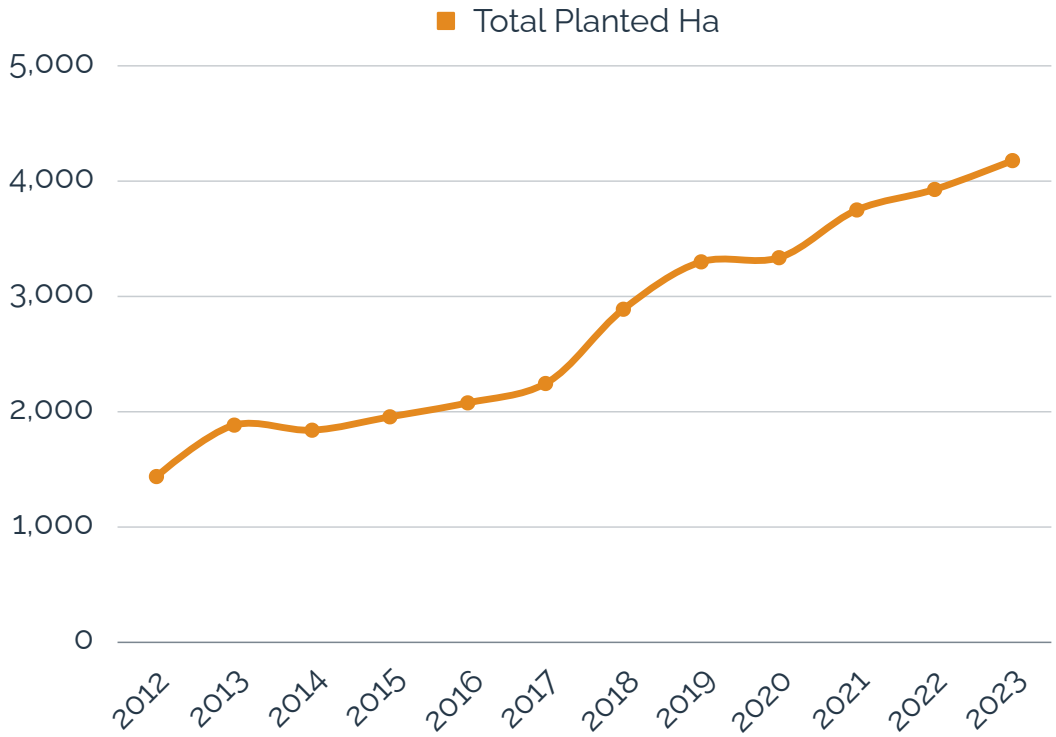
PLANTINGS AND YIELDS 2012 - 2023

	Total Planted Ha	Ha in production	Not in production	% of total not in prod	Yield Hl-Ha	No. 75 cl bottles (millions)
2012	1,438	1,297	141	9.8%	6.0	1.03
2013	1,884	1,571	313	16.6%	21.3	4.45
2014	1,840	1,506	334	18.2%	31.5	6.32
2015	1,956	1,839	117	6.0%	20.4	5.00
2016	2,077	1,654	423	20.4%	18.9	4.16
2017	2,245	1,677	568	25.3%	23.8	5.32
2018	2,889	2,138	751	26.0%	46.0	13.11
2019	3,300	2,438	862	26.1%	32.2	10.48
2020	3,380	2,379	1,001	29.6%	27.8	8.68
2021	3,781	2,841	940	24.9%	23.6	8.95
2022	3,928	3,230	698	17.8%	29.4	12.18
2023	~4400	~3400	1,000	22.7%	~50.00	20 to 22
2012-22 Wine Standards - FSA; 2023 forecast: WineGB and industry estimates						

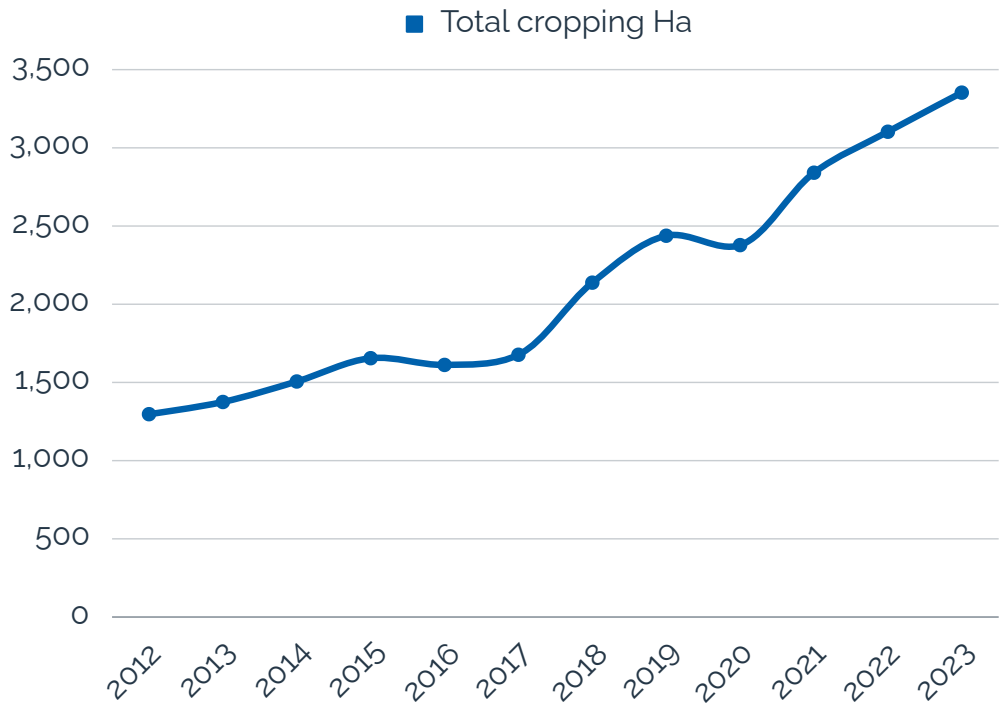
Note: The Wine Standards figures for plantings show a lag as new planting data often takes 2-3 years before it is reflected in the figure for 'total planted area'. We therefore focus on the figures for 'area in production' and yields.

ANNEX 2
YIELDS AND PLANTINGS

TOTAL PLANTED HA



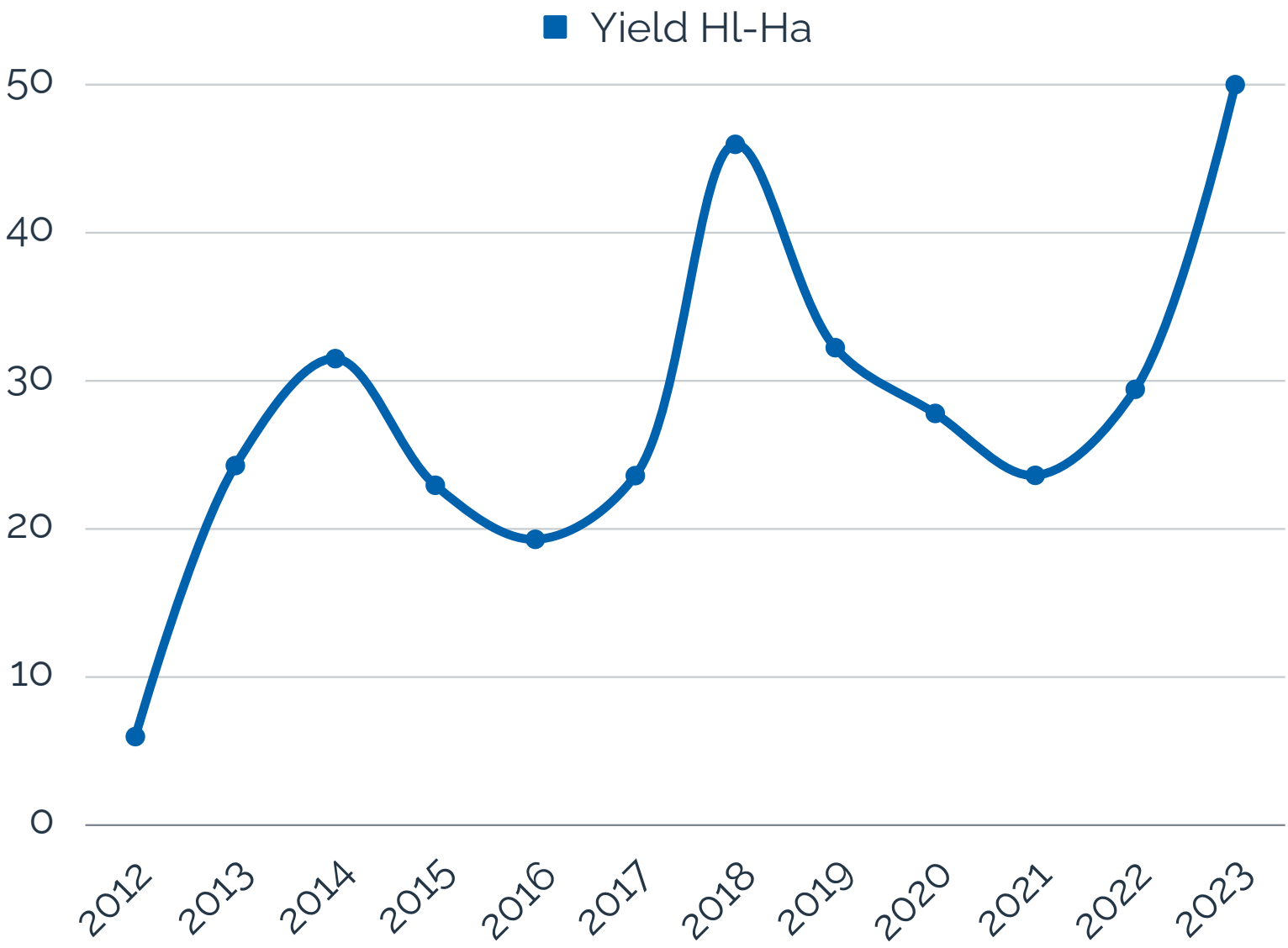
TOTAL CROPPING HA



All figures from Wine Standards, Food Standards Agency 2017 - 2022

ANNEX 2
YIELDS AND PLANTINGS

YEILD HL-HA



All figures from Wine Standards, Food Standards Agency 2017 - 2022

ANNEX 3
SURVEY RESPONSES

	2023	2022
Did spring frost affect your yield?	6%	29%
Did you harvest any of your grapes by machine?	13%	7%
Did you get as many pickers as you wanted?	87%	90%
Did you lose any of your crop to mildew of any type?	27%	16%
Did you lose any crop to botrytis?	40%	36%
Was bird damage of significance?	6%	14%
Was bird damage worse than in recent years?	9%	11%
Was your vineyard affected by spotted wing drosophila this year?	49%	17%

DEFINITIONS

Coulure: Caused by inclement weather during flowering and fruit set. Results in loose bunches with missing grapes.

Millerandage: Often called 'chicken and hens'. Caused by cold and inclement weather during flowering. Results in bunches with grapes of different sizes and maturity levels.

Rachis: is the stalk and stem of a bunch of grapes

Wine GB Harvest Finalists Photography credits:

Front cover – winner Cat Wilder for Harrow & Hope
Page 3 – Josie Veale for Wiston Estate
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Page 14 – Courtney Gillibrand for Poulton Hill
Page 20 – Ed Dallimore @59vines for Nutbourne Vineyard
Page 22 – Fergus Franks for The Uncommon
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Back page – St Martin's Vineyard

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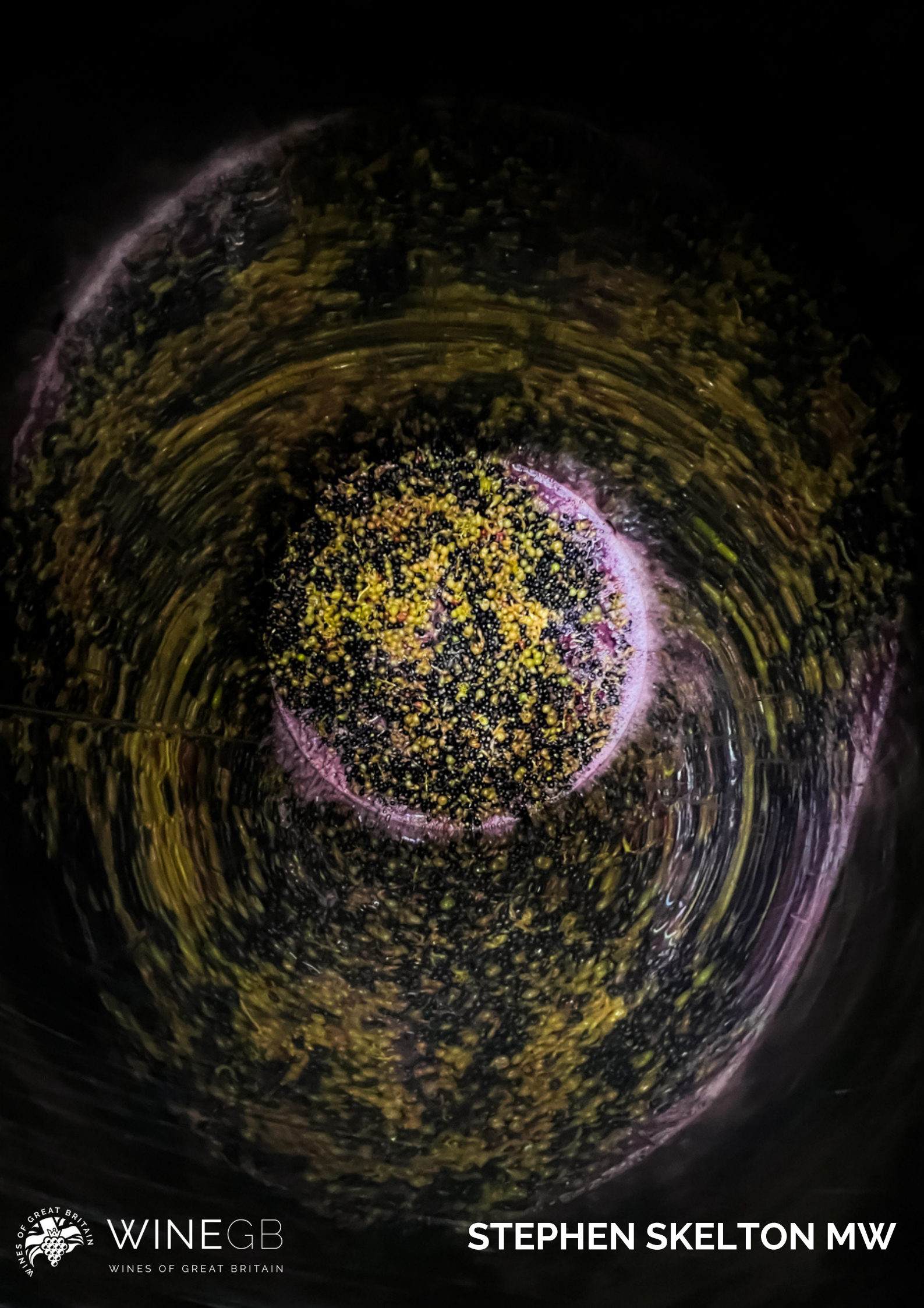

WINEGB

WINES OF GREAT BRITAIN

STEPHEN SKELTON MW