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Harvest Report for Great Britain – 2022

Summary

2022 will be remembered as yet another remarkable year for winegrowing in England and Wales. With an early and relatively frost-free spring, a very good flowering period, very high summer temperatures and a dry period that lasted in some vineyards for most of the summer, conditions were almost perfect. The lack of rain during bunch development undoubtedly reduced yields in some vineyards, and some growers who planted new vineyards in April and May saw their young plants wilt in the heat and if they were able to, resorted to watering, something almost unknown in GB vineyards. The rain eventually arrived just in time to swell the crop and the harvest was around 7-10 days earlier than average. The dry summer meant disease levels were low, and most growers found that keeping their crops clean was relatively straightforward. Ripeness levels were good with an average potential alcohol level over all varieties and all growers of just over 10 percent, with almost 20 per cent of 11 per cent or more. The wines from 2022 will undoubtedly be of good quality, especially the still wines made from Chardonnay and Pinot noir.

Weather conditions for the year

2022 started with one of the warmest Januarys on record, got warmer as the year progressed from winter to spring and reached its climax on 19 July when a temperature of 40.3°C was officially recorded at Coningsby in Lincolnshire, not somewhere previously associated with record-breaking temperatures. This beat the previous highest temperatures of 38.5°C recorded at Faversham, Kent on 10 August 2003 and 38.7°C recorded at Cambridge on 25 July 2019. It seems that the 'highest temperature' records are shifting ever northwards! In other parts of the east and south-east, temperatures of 42°C were recorded in some vineyards. Night-time temperatures during this mid-June period were also record-breaking with many places in the south-east not falling below 25°C, once considered a relatively warm daytime level!

Growing Degree Days

As can be seen from Table 1, Growing Degree Days (GDD) for the year were, in most cases, the highest recorded in the 5 years of records shown, with five out of seven weather stations recording totals over 1,100 GDD (and two very close). To put this into perspective, 1,100 GDD is just over 33 per cent above the 1981-2020 average of 830 GDD. By any measure, 2022 was a very warm year.

Table 1: 2022 was a very warm year

Growing Degree Days (2018-22)							
County	Altitude in metres	2018	2019	2020	2021	2022	Average
Essex	85	1089	948	987	906	1129	1012
East Kent	43	1125	968	1051	940	1127	1042
West Kent	39	1107	949	1037	957	1091	1028
East Sussex	65	1107	950	1059	951	1128	1039
West Sussex	20	1109	887	998	917	1106	1004
Hampshire	80	1103	885	959	911	1119	995
Somerset	33	1040	912	969	962	1087	994
Average		1097	928	1008	935	1112	1016

Data and Table supplied by Agrii Weather stations.

The spring in 2022 was relatively warm and dry and bud burst was early in most vineyards. Towards the end of March and into the first few days of April there were a few frosty nights, but damage was limited, and most growers escaped major harm. As April turned into May, the temperatures rose and what was to become a very long dry spell started. This was not something that newly planted vineyards really needed, and for the first time in my experience, some new vineyards had to be watered. Flowering started early – 11 June was the earliest for Chardonnay – and continued in very good weather throughout Wimbledon fortnight (27 June to 10 July). The six-month January to June period was one of the driest and warmest on record. The very hot spell started half-way through the tennis tournament and didn't really finish until the end of August. *Véraison* started in a few vineyards towards the end of July, but for many growers, it was slow to get going and continued, depending on location and variety, until the end of the first week of September which must be something of a record. The weather then cooled down and some much needed rain arrived, just in time (at least for the majority of varieties) to swell the berries and put some weight into the crop. This cool spell slowed down

sugar accumulation and some growers feared it might not be quite the great year that the high summer temperatures had promised.

First out with their picking buckets were Biddenden who started their Ortega on 31 August, with others following with other early varieties in the first two weeks of September. Those with Champagne varieties followed on at the end of the month and into October, and almost everything was finished around the 23 October some 7-10 days earlier than normal. Given the heat of the summer, many growers had assumed it would be an early *véraison* and an early harvest, but the combination of rainfall and cooler days at the beginning of September slowed things down. Despite the exceptionally hot summer, very few growers reported any sunburn on their grapes, no doubt because by mid-July the weather had already been hovering around 30-32°C on several occasions, tempering the grapes and getting them hardened to what was to come. In most vineyards the grapes were in excellent condition and disease damage, especially *Botrytis*, was minimal.

The harvest itself was plentiful in most vineyards, not a 2018-style mega-crop, but better in terms of yield than 2020 and 2021. Sugars were high, very high in some vineyards, and acids low, so low with some varieties that GB winemakers for the first time ever asked DEFRA for a derogation for the addition of acidity. DEFRA duly obliged, granting winemakers the right to add 1.50 g/l pre-fermentation and 2.5 g/l post-fermentation (something not allowed when we were in the EU). Unusually, many of the sparkling wine producers started with their Chardonnay, no doubt in an effort to retain acidity, and followed on with Meunier and then Pinot noir – the reverse of normal. Bunch weights of some varieties were above normal, a feature of the 2018 harvest which in part contributed to the high yields. Some Pinot noir and Meunier bunches achieved 250 grammes.

Yields¹

As can be seen from Table 2, the average yield from all vineyards who submitted data and from all varieties was 6.12 tonnes-ha (2.48 tonnes-acre), which is some 20 per cent above the average of the last 6 years (2016-2021) and second only to the record breaking 2018 harvest. As ever,

¹ The yields used throughout this report are based upon the data contributed by the 120 individual growers and wine producers who sent in data from the almost 1,500-ha of mature vines they farmed. This represents almost 50 per cent of the estimated area in production for 2022. However, the survey was self-selected and as has been shown by the previous yield surveys, tends towards the higher end of yields, rather than the lower. The national yields reported by Wine Standards (WS) are based upon all registered vineyards and includes all young vineyards in their first year or two of production (when yields can be low) and also poorly sited and less well-managed vineyards where yields also tend to be low. These national yields are typically twenty per cent lower than the yields reported in my surveys.

the best yielding vineyards performed well, and the top quartile yielded 56 per cent more than the middle 50 per cent of vineyards and over three times as much as the bottom quartile. This will come as no great surprise to those that have followed my annual harvest reports and as Table 3 shows, this is in-line with the long term trends. The good news for 2022 is that the yields for the middle 50 per cent of vineyards at 6.06 t-ha (2.45 t-acre) are very close to those in the bumper year of 2018 and 23 per cent above the 7-year average. Likewise, the bottom quartile's yields were the best ever recorded, no doubt due to the very warm summer.

Table 2: Best yields for five years

2022 WineGB Yield Survey				
Vineyards 0.10 ha or larger and 4 years and older	Tonnes-ha	Tonnes-acre	Potential alcohol %	Acidity g/l tartaric
Top yielding 25% of vineyards	9.64	3.90	9.62	10.94
Middle yielding 50% of vineyards	6.06	2.45	10.14	10.72
Bottom yielding 25% of vineyards	2.70	1.09	10.20	9.84
Av. All varieties, all vineyards	6.12	2.48	10.02	10.57

Table 3: Yields 2016-2022

2016-2022 Tonnes-ha								
Vineyards 0.10 ha or larger and 4 years and older	2016	2017	2018	2019	2020	2021	2022	Average 2016-2022
Top yielding 25% of vineyards	8.84	9.57	10.52	9.63	7.63	9.08	9.64	9.27
Middle yielding 50% of vineyards	4.41	4.12	6.16	5.32	3.55	5.20	6.06	4.97
Bottom yielding 25% of vineyards	1.36	1.31	1.63	1.77	0.92	2.17	2.70	1.69
Av. All varieties, all vineyards	4.54	4.68	7.12	5.93	4.24	5.41	6.12	5.43

Yields by variety

As can be seen on Table 4, almost all varieties in 2022 beat their long-term average yields, the exceptions being Chardonnay and Seyval blanc. The lower yields in Chardonnay were undoubtedly due to the fact that since 2018 there has been more still wine made from this variety and some growers are crop thinning in an attempt to raise sugar levels and lower acidities to improve ripeness levels. The highest yields were from Madeleine x Angevine 7672, Pinot blanc, Regent and Reichensteiner, all of which recorded a very respectable average yield of 8.36 tonnes-ha or more. However, care should be taken with interpreting these yields as they do come from lower sample numbers which are less reliable.

Table 4: Major variety yields over 2016-2022

Major Varieties Tonnes per Ha	2016	2017	2018	2019	2020	2021	2022	Average 2016-22	Av. 2016-22 T-acre
Bacchus	3.07	4.21	5.48	7.14	3.48	5.91	6.70	5.14	2.08
Blauer Frühburgunder	1.81	3.50	6.62	4.32	3.55	5.34	5.59	4.39	1.78
Chardonnay	5.58	4.42	8.67	6.61	6.33	4.75	5.54	5.99	2.42
Dornfelder	No data	No data	No data	3.47	4.37	N/A	6.57	4.80	1.94
Madeleine x Angevine 7672	6.05	5.64	6.70	6.44	5.22	5.05	8.28	6.20	2.51
Meunier	5.88	5.24	9.53	6.23	5.36	4.66	6.56	6.21	2.51
Ortega	No data	No data	No data	6.53	3.38	3.75	6.30	4.99	2.02
Pinot gris	No data	No data	No data	2.21	4.02	4.82	5.26	4.08	1.65
Pinot blanc	No data	4.86	7.85	No data	No data	No data	8.88	7.20	2.91
Pinot noir	3.00	4.31	7.93	6.18	5.25	5.70	6.01	5.48	2.22
Regent	No data	5.70	11.09	4.12	3.10	6.25	8.09	6.39	2.59
Reichensteiner	8.36	4.37	16.60	7.50	2.34	N/A	8.20	7.89	3.19
Rondo	No data	9.24	7.30	2.66	5.17	6.09	7.01	6.24	2.53
Seyval blanc	6.40	11.24	9.38	3.36	4.61	7.39	6.73	7.02	2.84
Solaris	No data	No data	No data	2.66	1.99	4.39	4.90	3.48	1.41
Other varieties - see table	4.26	3.68	4.10	3.35	3.65	N/A	5.57	4.10	1.66
Average of above varieties	4.93	5.53	8.44	4.85	4.12	5.34	6.64	5.60	2.27

The four major varieties, Bacchus, Chardonnay, Meunier and Pinot noir, which together account for around 80 per cent of the planted area in GB, all performed above average with the exception of Chardonnay for the reasons already given. As can be seen from Table 5, the results show that on the right site and in the right hands, these perform well with the average yields for the top quartile of the four varieties together coming in at as very respectable 9.52 tonnes-ha (3.85 tonnes-acre) which can be considered a truly sustainable yield. The middle 50 per cent of growers averaged 6.17 tonnes-ha (2.50 tonnes-acre) the best since 2018, which is probably just about enough to cover growing costs, but nothing for profit or return on capital.

Table 5: Bacchus, Chardonnay, Meunier and Pinot noir

2022 Average yields in tonnes-ha	Bacchus, Chardonnay, Meunier, Pinot noir				
	Bacchus	Chardonnay	Meunier	Pinot noir	Average
Top yielding 25% of vineyards	9.98	8.78	9.56	9.75	9.52
Middle yielding 50% of vineyards	6.95	5.35	6.53	5.83	6.17
Bottom yielding 25% of vineyards	2.95	2.48	3.63	2.64	2.93
Average all regions	6.70	5.54	6.56	6.01	6.20

Table 6: Major varieties yields in 2022 by region

Major Varieties 2022 Tonnes per Ha	East Anglia	Mercia	South East	South West	T&CVA	Wessex	All regions
Bacchus	5.70		7.87	7.52	6.36	6.72	6.70
Blauer Frühburgunder	2.91		4.53	8.20		8.44	5.59
Chardonnay	4.28		6.19	7.43	6.46	5.70	5.54
Dornfelder			6.09			4.80	6.57
Meunier	5.85		6.16		7.83	8.10	6.56
Pinot noir	4.29		6.56	8.17	8.16	7.40	6.01
Regent			5.63		7.57		8.09
Seyval blanc	8.27	8.65	6.86	4.70			6.73
Av. of all varieties inc minors	4.89	6.07	6.33	7.39	6.86	6.75	6.12
Note: Yields might have been reduced in vineyards making still wines							

Table 7: Minor variety yields in 2022

Minor Varieties 2022 T-Ha	Yield
Acolon	6.47
Alberino	5.80
Auxerrois	3.45
Huxelrebe	4.92
Kerner	3.40
Müller-Thurgau	4.80
Orion	6.80
Phoenix	8.93
Riesling	5.80
Sauvignon blanc	5.30
Schönburger	5.60
Average	5.57
Note: Smaller sample numbers may give less reliable results	

The yields in Table 6 need to be read with care as for the smaller regions, the number of responses was lower and this will have skewed the data. Nevertheless, I think they are of interest. The very dry conditions in the May-August period, plus the move towards making still wines by some producers, has undoubtedly contributed to the lower-than-average yields in the South East which in 2022 were lower than the more westerly and therefore wetter regions such as the South West, Thames and Chilterns and Wessex. The driest region in GB, East Anglia, was particularly negatively affected by the drought. One can also see the effect of regions such as Mercia and the South West, where high-yielding varieties such as Madeleine x Angevine 7572, Reichensteiner and Seyval blanc are grown, which, given a half-decent summer when temperatures are high and disease pressures are low, good yields are possible. Table 7, which shows the yields from the minor varieties, should also be read with care as sample numbers were

very low, in some cases only from two datapoints. It does however show that PIWI varieties such as Orion and Phoenix have quite respectable yields and Acolon is also worth considering.

Table 8: Yields from Mercia region in 2022

2022 Mercia	Yield t-ha
Madeleine x Angevine 7672	6.57
Ortega	6.70
Rondo	7.35
Seyval blanc	8.65
Solaris	6.30
Average of above varieties	7.11

Yields from the Mercia region

The most northerly region, Mercia, is something of an outlier as there were only enough returns from one variety (Seyval blanc) to make it into Table 6. However, I thought it would be of interest to show the results from those varieties that were recorded, and these are shown in Table 8. As has already been said, the results are from much

smaller numbers of responses and may not be representative of all vineyards in the region. However, it does show that if you want to establish a vineyard in one of the less-favoured areas of GB and want to get sustainable yields, varietal selection is even more important than in the better southerly and easterly regions.

Table 9: Top quartile yields by region

2022 Yields Tonnes-ha	Top 25%
East Anglia	7.85
Mercia	10.66
South East	9.63
South West	10.17
Thames and Chilterns	8.58
Wessex	9.95
Average of all regions top 25%	9.47

The regional variations in 2022 are even more starkly shown when looking at the yields from all varieties from the top quartile of producers. As has already been pointed out, the two driest regions, East Anglia and the South East were negatively affected, whereas the wetter regions benefited.

Table 10: Yields from the different regions over time

Yields Tonnes-ha	2016	2017	2018	2019	2020	2021	2022	2016-22 t-ha	2016-22 t-acre
East Anglia	6.89	4.35	6.92	6.09	5.82	6.58	4.89	5.93	2.40
Mercia	N/A	5.22	N/A	3.82	5.82	4.63	6.07	5.11	2.07
South East	4.31	4.61	9.90	6.43	6.43	5.10	6.33	6.16	2.49
South West	3.95	5.82	5.52	5.35	3.54	5.75	7.39	5.33	2.16
Thames and Chilterns	2.59	5.62	N/A	6.83	5.82	5.56	6.86	5.55	2.24
Wessex	2.08	3.44	9.93	5.66	6.61	5.09	6.75	5.65	2.29
Av. all regions, all varieties	3.96	4.84	8.07	5.70	5.67	5.45	6.38	5.62	2.28

Looking at the longer-term view (Table 10), the South East is the leading region in terms of yield and the only one to break an all-variety, all vineyard, seven-year average of 6.00 t-ha (2.40 t-acre). Despite the poor showing in 2022, East Anglia is not far behind with the other, more westerly regions following. The differences across the whole country are not huge, but much depends upon varietal selection. With the exception of Pinot blanc, the other three highest yielding varieties (Madeleine x Angevine 7672, Regent and Reichensteiner) are almost extinct in the South-East and East Anglia, but more common in the other regions.

National yields

Table 11: National yields 2017-22

Year	Total Planted Ha	Commercial vineyards	In production	Not in prod.	% of total not in prod	Yield HI-Ha	No 75 cl bottles in mn
2017	2,245	2,125	1,677	448	19.96%	23.60	5.28
2018	2,889	2,769	2,138	631	21.84%	45.97	13.11
2019	3,300	3,180	2,438	742	22.48%	32.24	10.48
2020	3,380	3,260	2,378	882	26.09%	27.80	8.81
2021	3,781	3,661	2,841	820	21.69%	23.62	8.95
2022	4,100	3,980	3,200	780	19.02%	32.00	13.65

Source: 2017-21 Wine Standards. 2022 Industry estimates

This survey is based upon returns from around 1,500 ha of cropping vineyards of 4 years or older. This represents almost 50 per cent of the estimated 3,200 ha of vineyards ‘in production’ in 2022 and therefore should be fairly robust in terms of accuracy. However, the 3,200 ha of vineyards ‘in production’ includes those in their first year or two of production when yields are low and wherever possible, data from these young vineyards has been

excluded. My estimate of annual production for 2022, based upon the survey results and adjusted for the lower production levels from young vineyards, is 13.65 mn bottles, a national record and slightly higher than the bumper 2018 figure of 13.11 mn bottles.

Table 12: Future yields

Number of 75 cl bottles produced in GB		
Years	Average ha in production	Million bottles per year
2005-2009	779	2.19
2010-2014	1,296	3.78
2015-2017	1,648	4.83
2018-2121	2,414	10.09
2022	3,200	13.65
2025	4,300	16.34
2025 figures are based upon estimated plantings and using the average ten year average production for 2013-22 of 28.50 hl-ha		

Looking to the future, if all the currently planted area was cropping fully (which it should be by 2025) and taking the official national average level of yield of 28.50 hl-ha, then total production would be 16.34 mn bottles. If one takes the production figure for 2018 of almost 46 hl-ha, then the total production in 2025 would be 26 mn bottles, almost double the 2022 yield.