

BARLEY CROP 2024 REPORT



- IMPACT ON MALTS IN 2025
- BREWING INSIGHTS & EXPERT TIPS





OVERVIEW OF GROWING CONDITIONS

Castle Malting sources high-quality two-row spring (2RS) barley from northern France, renowned for producing the world's best malting barley. Here are the key observations for the 2024 crop:

SOWING

In October 2023, heavy rainfall limited the sowing of 2RS barley. The conditions remained wet throughout spring 2024, resulting in a sowing period from February to mid-April. The available windows to access the fields were short, leading to a delayed sowing period.

GROWING

The alternating rainy and sunny periods helped promote growth; however, the yield potential was impacted by lower-than-usual tillering levels. Unlike the previous crop, there were no heat waves affecting grain filling. However, the cool temperatures and lack of sunshine resulted in unsatisfactory screenings.

HARVEST

Weather conditions improved prior to the harvest, allowing the barley to mature and dry. Overall, this improved the harvest's quality, despite lower yields.



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**MALTING BARLEY
VARIETIES CROP 2024**

- **Planet** (2RS) for the majority of Château malts
- **Laureate** (2RS) for Château Distilling malt
- **Faro** for Château Pilsen 6RW (6-row-winter)

BARLEY CROP 2024: KEY RESULTS

YIELDS

The average yield was 5.6 t/ha, approximately 10% lower than the previous crop, mainly due to prolonged rainy periods.

PROTEIN CONTENT

The average protein content was 10.3%, about 0.3% lower than the previous crop. The extended rainy periods stressed the plants and limited nitrogen uptake.

SANITARY CONDITIONS

Overall, sanitary conditions were good. Some fungal diseases were observed on the leaves during growth, attributed to the alternating rainy and sunny periods. However, the levels of DON (deoxynivalenol) in the kernels were very low, as the rain occurred during unfavourable times for *Fusarium* development (outside the fertilization period and before physiological maturity).

NOTE: Similar crop conditions were observed in many other regions of France and EU countries.



CROP 2024 MALT QUALITY

IMPACT OF 2024 BARLEY QUALITY ON MALT CHARACTERISTICS & BREWING ADJUSTMENTS

Malt quality is intrinsically linked to the quality of the barley. While the malting process effectively standardizes certain quality parameters to meet brewing specifications, its impact varies across different attributes. It can significantly influence some parameters, such as the Kolbach Index or beta-glucan content, while its effect on others, such as protein content or kernel size, is minimal.

Consequently, malts produced from the 2024 barley crop will exhibit distinct characteristics when compared to those from the 2023 crop. It is essential for brewers to be aware of these variations in order to adjust their processes accordingly. Below are indicative values for base malts available until November 2025, with comparisons to the previous crop year.

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MALT QUALITY PARAMETERS CROP 2024

PARAMETER	TYPICAL VALUE	COMPARISON WITH CROP 2023
Extract (fine, dry matter)	82.3 %	↗
Color	4 EBC	-
Boiled wort color	6.5 EBC	↗
Total protein	9.8%	↘
Soluble protein	4.4%	↗
Kolbach Index	45 %	↗
Viscosity	1.52 cp	-
Beta-glucans	<200 ppm	-
pH	5.8	-
Diastatic power	300 WK	-
Friability	90 %	↗
DMSp	5 ppm	↗
Screening above 2.5 mm	>90%	-
Wholly unmodified grains	0.6	-
Gelatinization temperature	63.5°C	↘



MALT QUALITY CROP 2024



CONCLUSION:

The average protein content of the 2024 barley crop is 10.3%, with most batches showing protein levels below this average. This lower protein content, compared to the previous crop, is advantageous for providing a higher extract, as reduced protein levels typically correlate with increased starch content. However, this may result in more extensive modification during the malting process, which could lead to a higher Kolbach Index, indicating an increased proportion of soluble proteins. Additionally, the malt may exhibit a slightly higher boiled wort colour, increased friability, and a marginally higher concentration of Dimethyl Sulphide (DMSp).

While the maltster can adjust the modification process to control these characteristics, this may also lead to a higher beta-glucan content. Variations in these attributes may occur between batches. In terms of kernel size distribution and screenings, there is no significant deviation from the previous crop. Notably, gelatinization temperatures are lower compared to last year, returning to 63-64°C, likely due to the absence of heat waves and the alternating rainy and sunny periods that characterized the growing season. These observations represent general trends, and it is important to note that individual batch characteristics may differ.



Brewing tips & tricks for 2025





BREWING TIPS & TRICKS

MILLING

In our supplies, screenings > 2.5 mm and > 2.8 mm are good and similar to last year. However, pay attention to the variability between batches and adapt your milling settings when necessary to achieve the best trade-off between yield and time-saving during lautering.

LAUTERING

It's always one of the trickiest points in brewing, isn't it? On one hand, the beta-glucan content and viscosity are moderate. On the other hand, the high friability and some heterogeneity in the kernel size distribution may occasionally generate more flour during milling. Therefore, lautering will depend on both the batch specifications and the practices in your brewhouse.

MASHING

With gelatinization temperatures returning to $63-64^{\circ}\text{C}$, a mashing regime at 65°C (or even slightly lower) should be sufficient to gelatinize most of the starch. Beta-amylase activity will be more facilitated compared to last year.

BOILING

The high proportion of soluble proteins might have two impacts during boiling for a light-coloured ale/lager: (1) the colour of the wort after boiling may be slightly higher than expected, and (2) the slightly higher DMSp content suggests that the boiling period should not be shortened too much to avoid DMS off-flavours. It is advisable to minimize whirlpool stand time and rapidly cool the wort.

BREWING TIPS & TRICKS

FERMENTATION

The high proportion of soluble proteins suggests that any wort produced with enough base malts should not experience nitrogen deficiency during fermentation. Additionally, the lower gelatinization temperatures are favourable to beta-amylase activity, which could lead to potentially higher attenuation.

FOAM

A high Kolbach Index often means a lower amount of long polypeptides for head formation and stability. When necessary, feel free to compensate with our low-colour Cara malts or protein sources (e.g., wheat, oats, etc.). Preserve your foam: less foam loss during brewing means more in the glass. Minimize heat exposure and shear forces/splashing throughout the brewing process.





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