



# Barley Harvest & Grain Markets

November 2021

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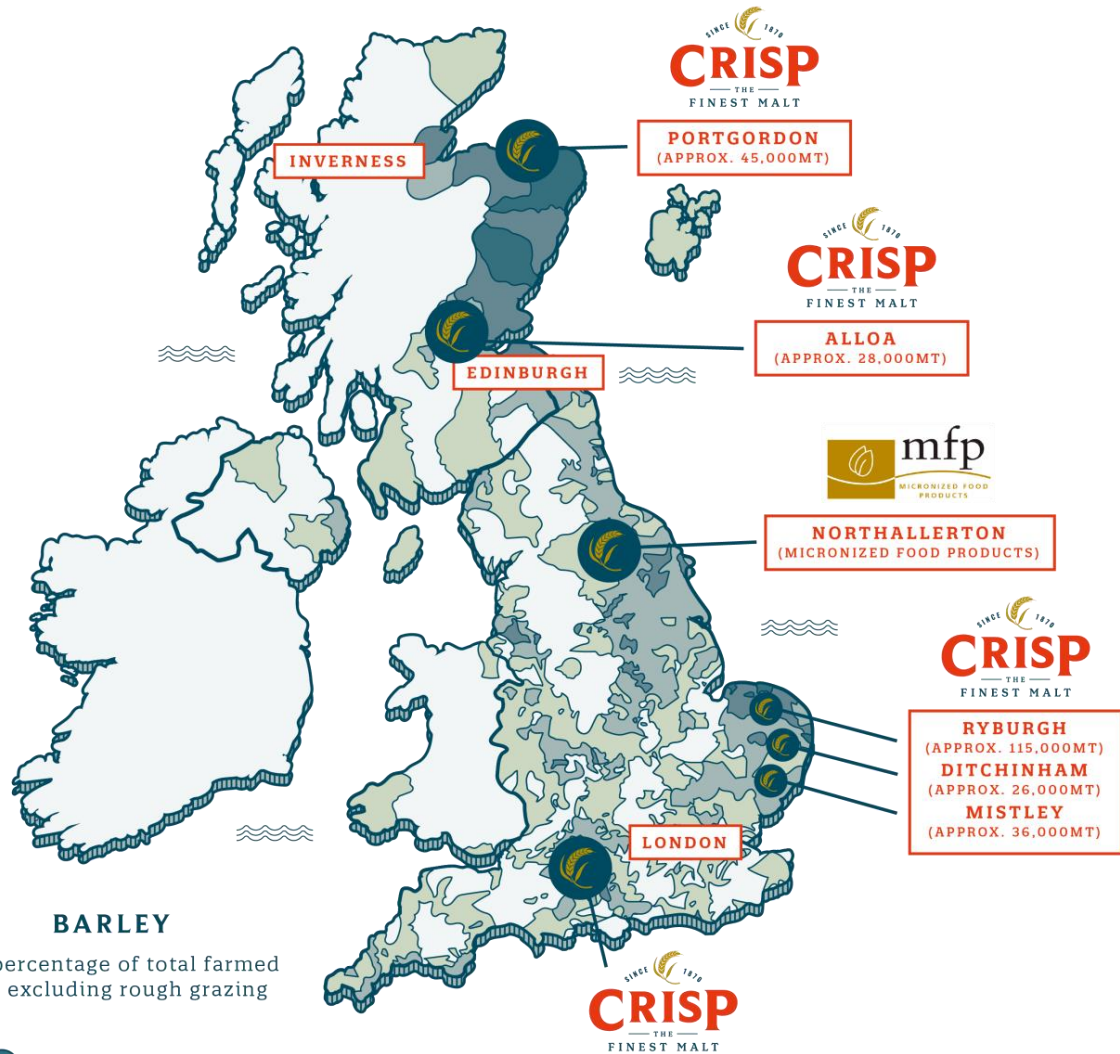
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# Introduction





### BARLEY

as a percentage of total farmed area excluding rough grazing

- MORE THAN 30%
- 20 TO 30%
- 10 TO 20%
- 5 TO 10%
- LESS THAN 5%





# UK Growing Season Weather

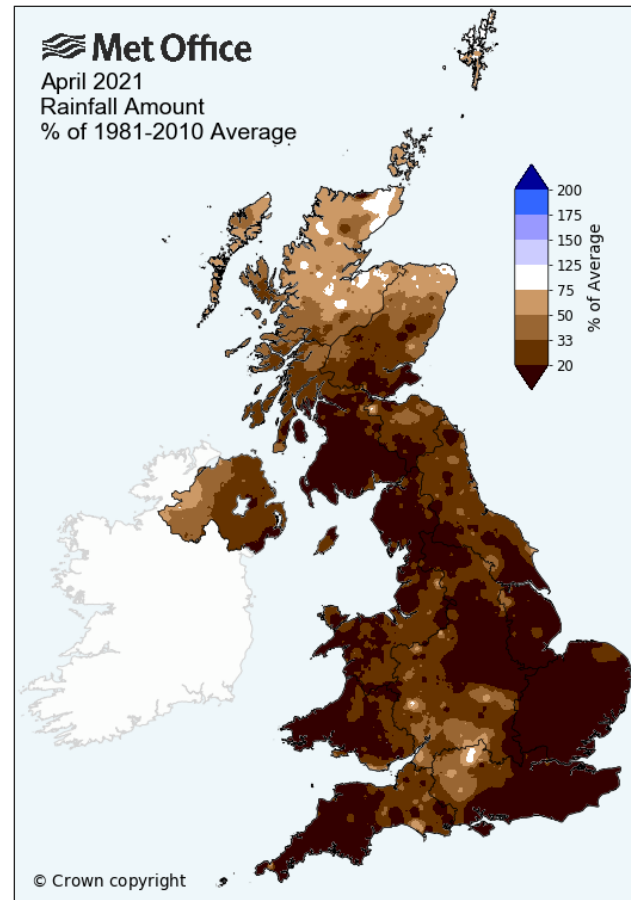
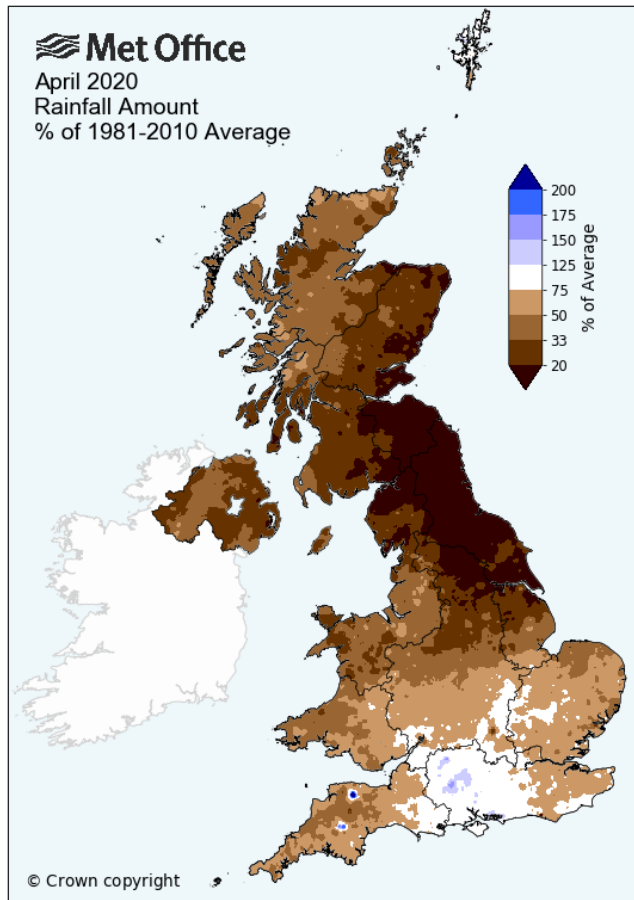




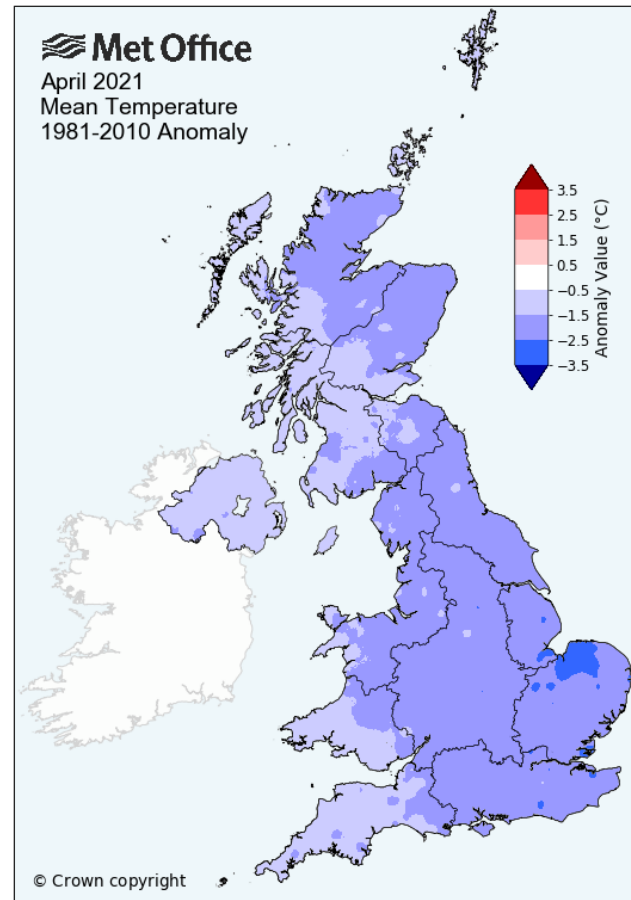
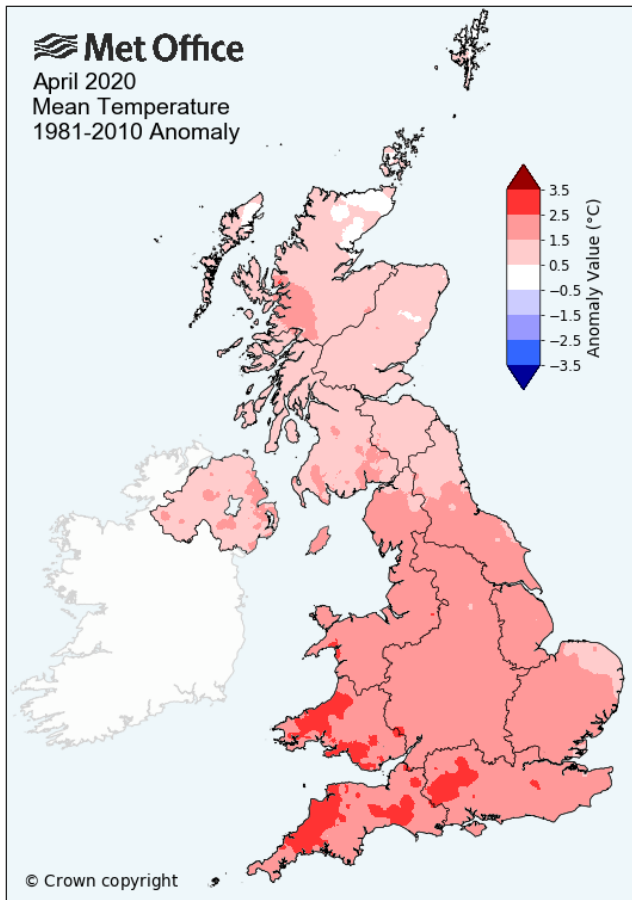
# Spring Weather



# April '21 actually drier than April '20

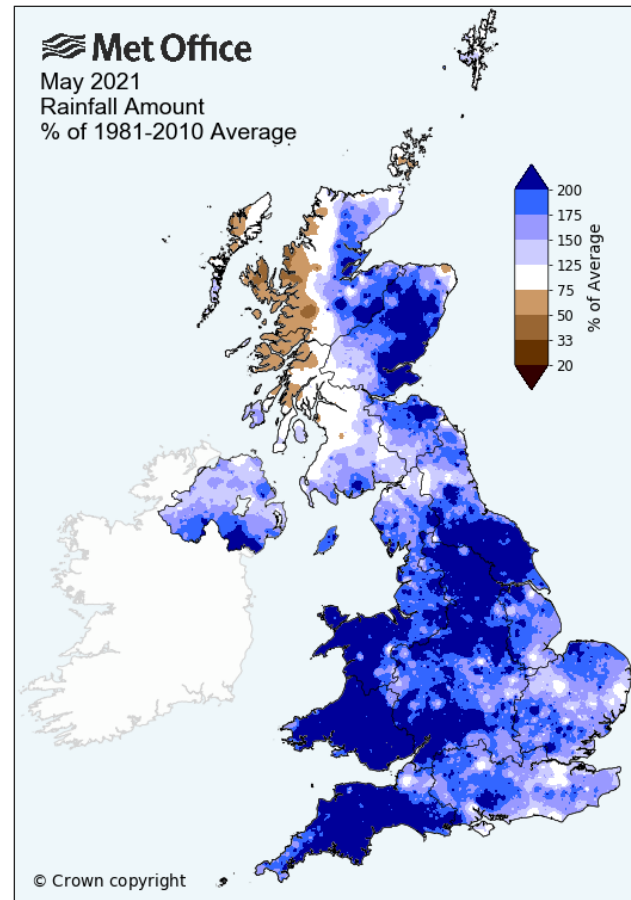
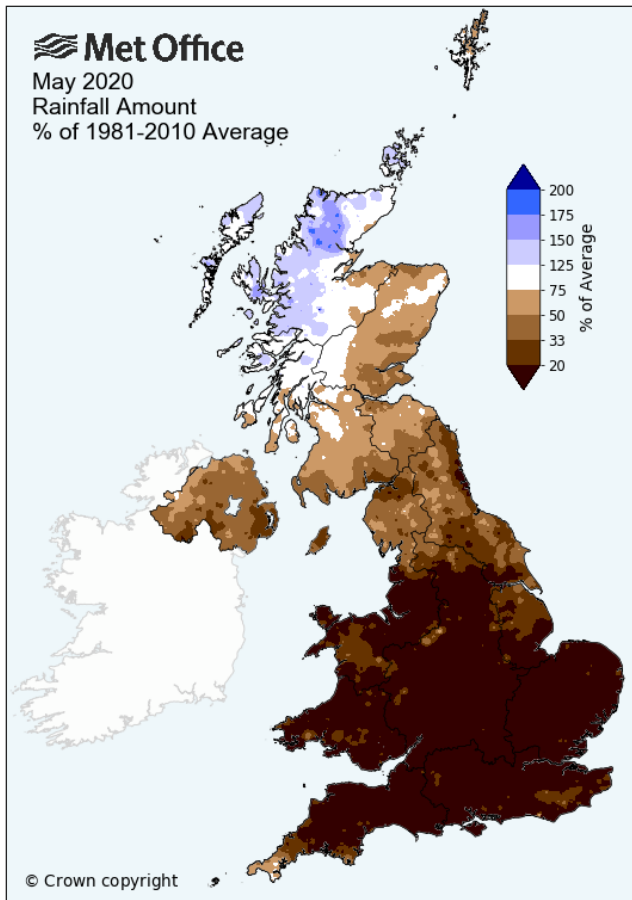


# Drought impact limited by low temps





# Then a wet May saved the day!

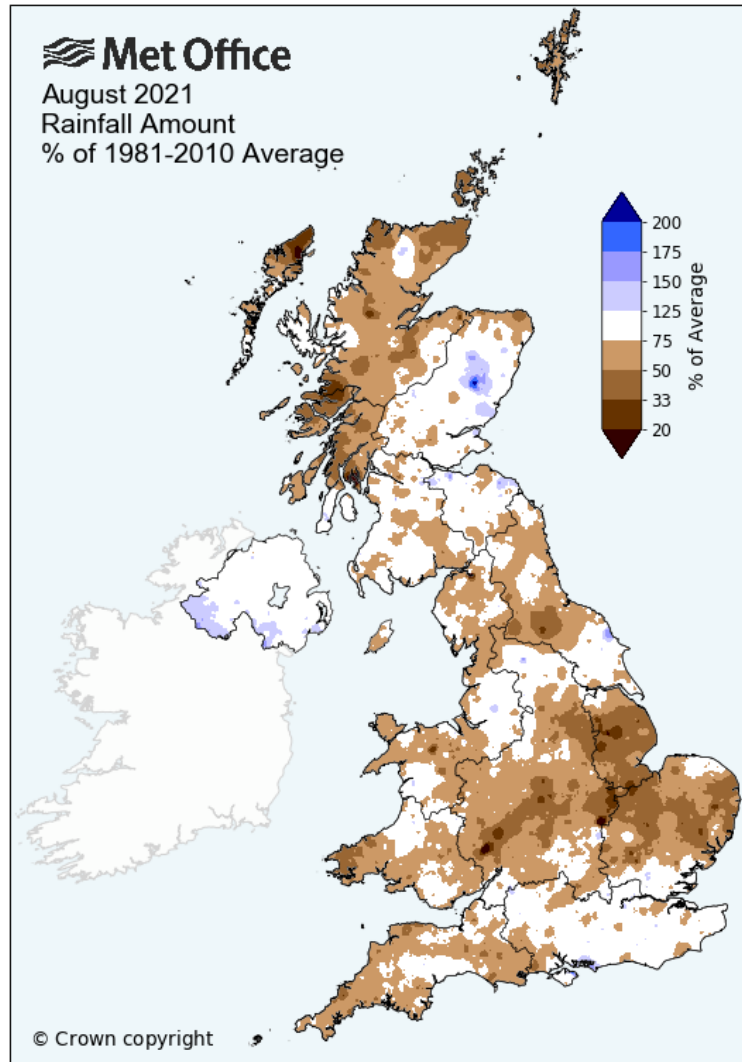




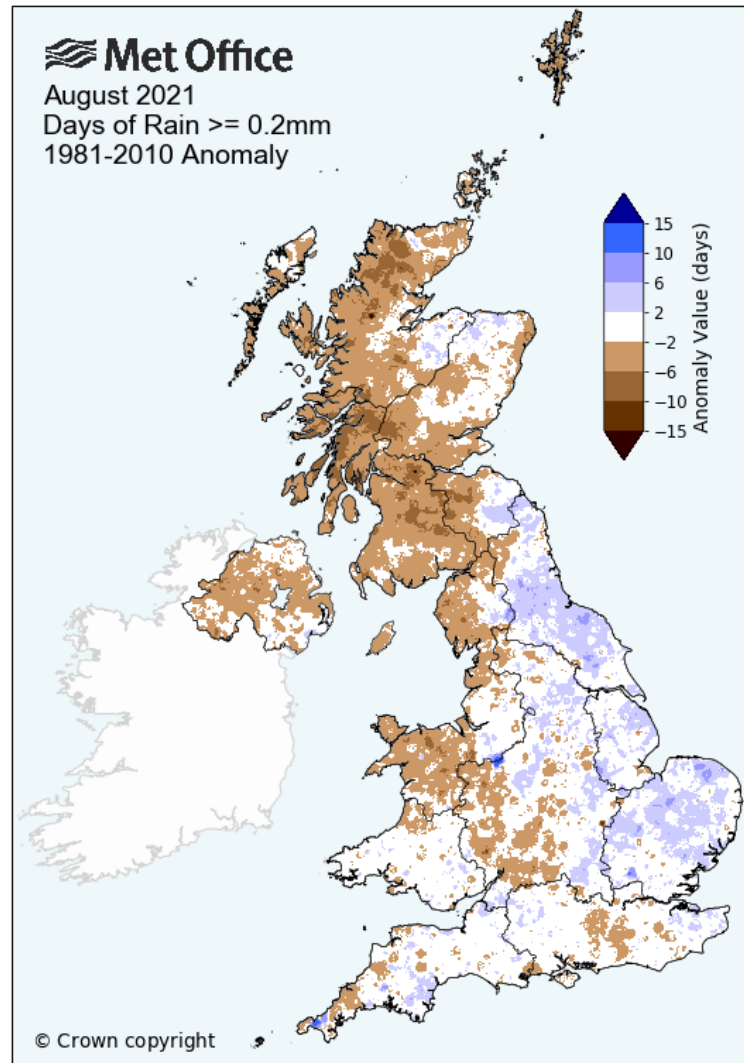
# Summer Weather



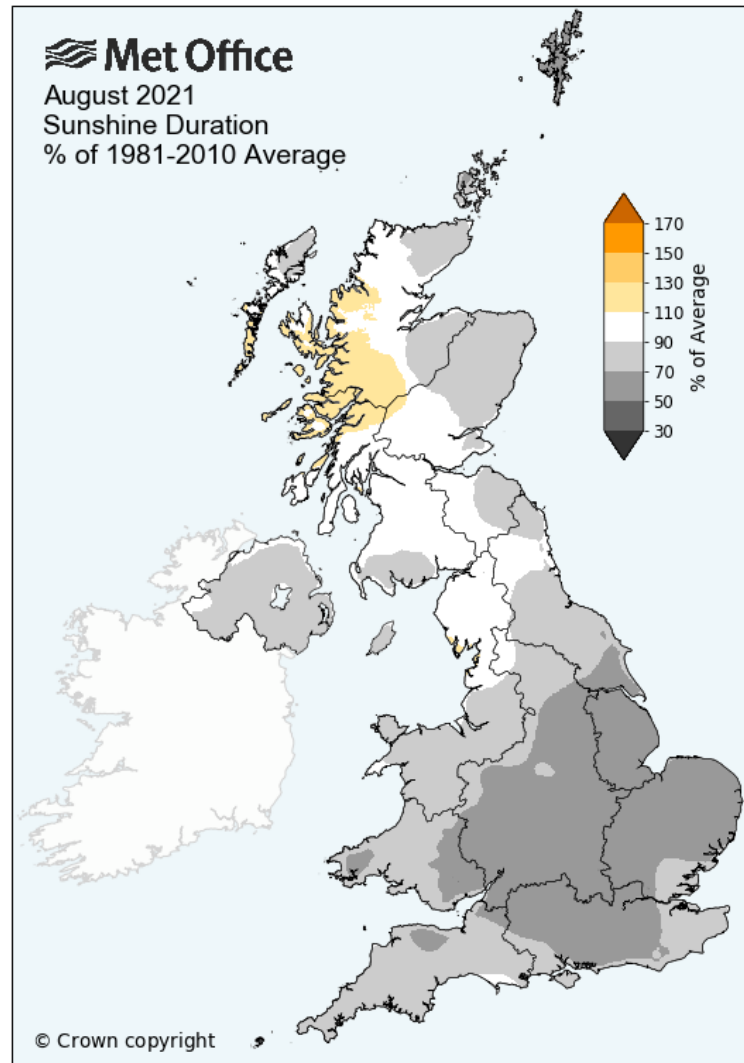
# Bizarrely, the driest wet harvest on record!



# Due to higher number of wet days...



# And lack of sun...





## 2021 Crop Quality to Date



# AHDB Harvest Data – 2021 vs 2020

## *UK Winter Barley summary*

Crop Year	Moisture Content		Specific Weight		Nitrogen Content		Screening Values % through 2.25mm		Screening Values % retained 2.5mm	
	%	s.d*	Kg/hl	s.d*	% d.m	s.d*	%	s.d*	%	s.d*
2020	14.8	1.8	65.7	2.8	1.76	0.24	1.7	1.1	94.6	2.8
2021	14.6	1.6	65.1	2.5	1.57	0.14	4.5	2.6	85.3	6.7

AHDB - Agriculture and Horticulture Development Board (*formally the HGCA*)

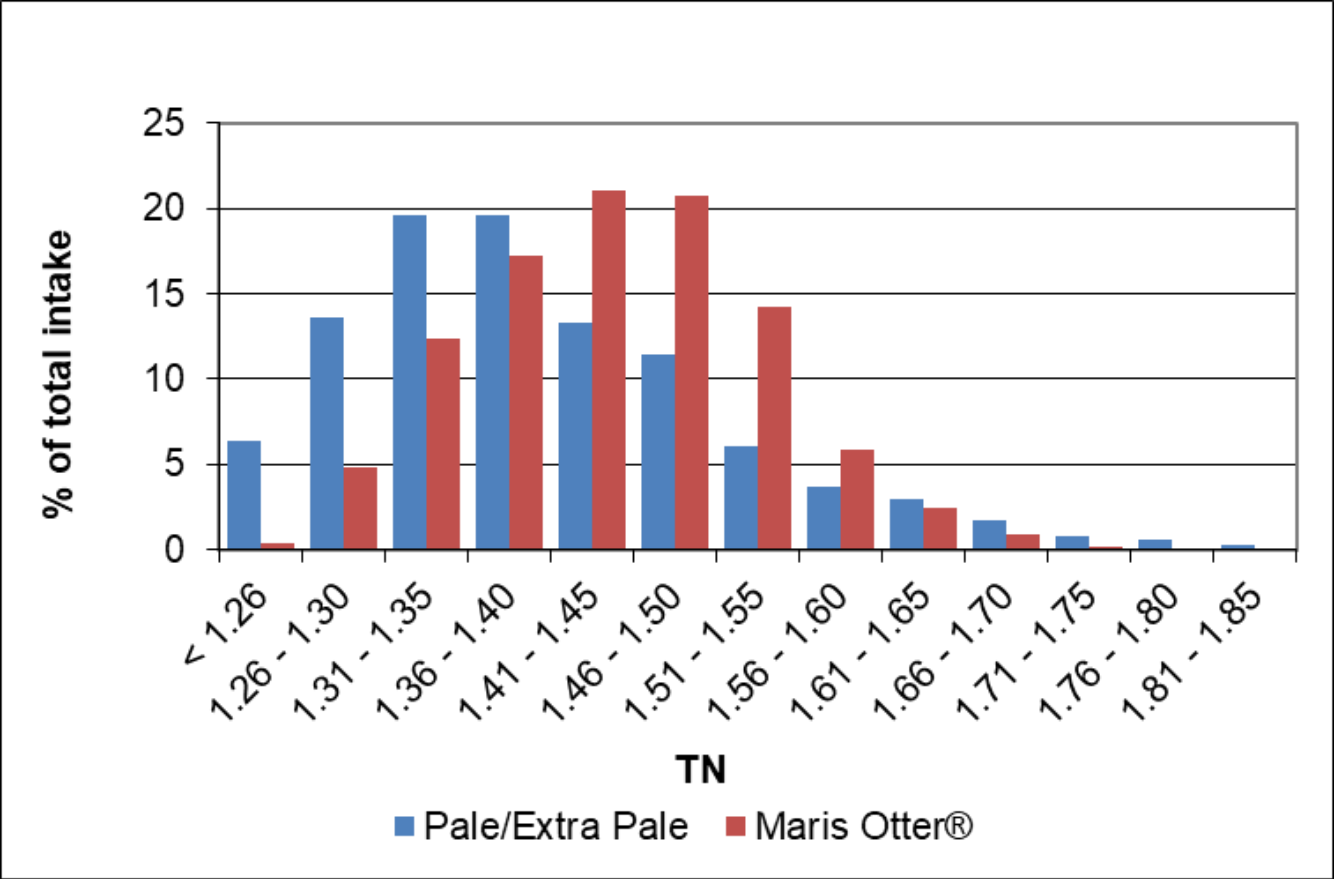


# Crisp 2021 crop Winter Barley Intake

Variety	Nitrogen Content	Screening Values % through 2.25mm	Screening Values % retained 2.5mm
	% d.m	%	%
Ale/Extra Pale	1.40	4.1	85.9
Maris Otter®	1.44	3.0	85.7



# Crisp 2021 crop Winter Barley intake

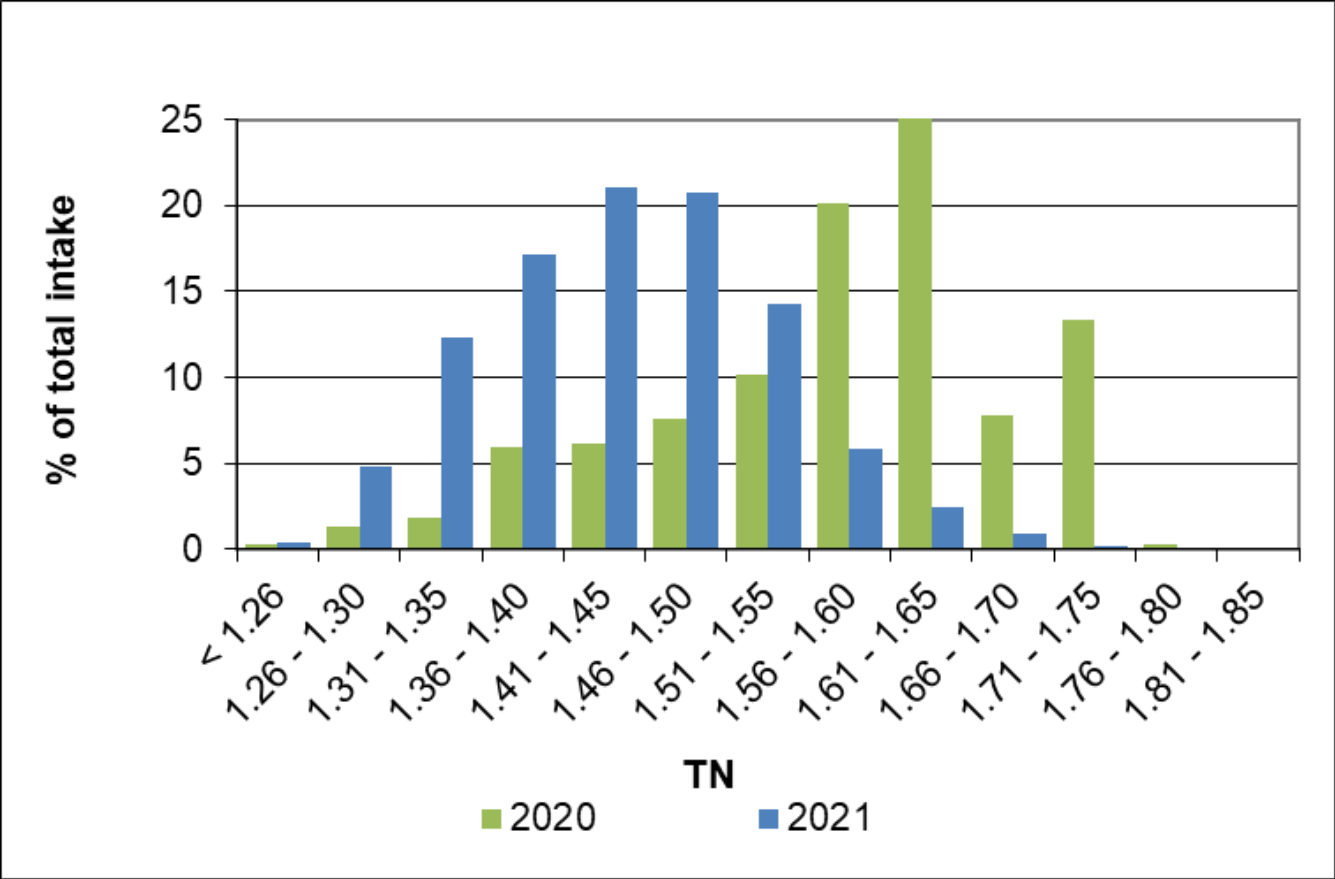


# Crisp Maris Otter® 2020 vs 2021

Variety	Nitrogen Content	Screening Values % through 2.25mm	Screening Values % retained 2.5mm
	% d.m	%	%
2020	1.63	1.9	94.7
2021	1.44	3.0	85.7

# Crisp Maris Otter® intake

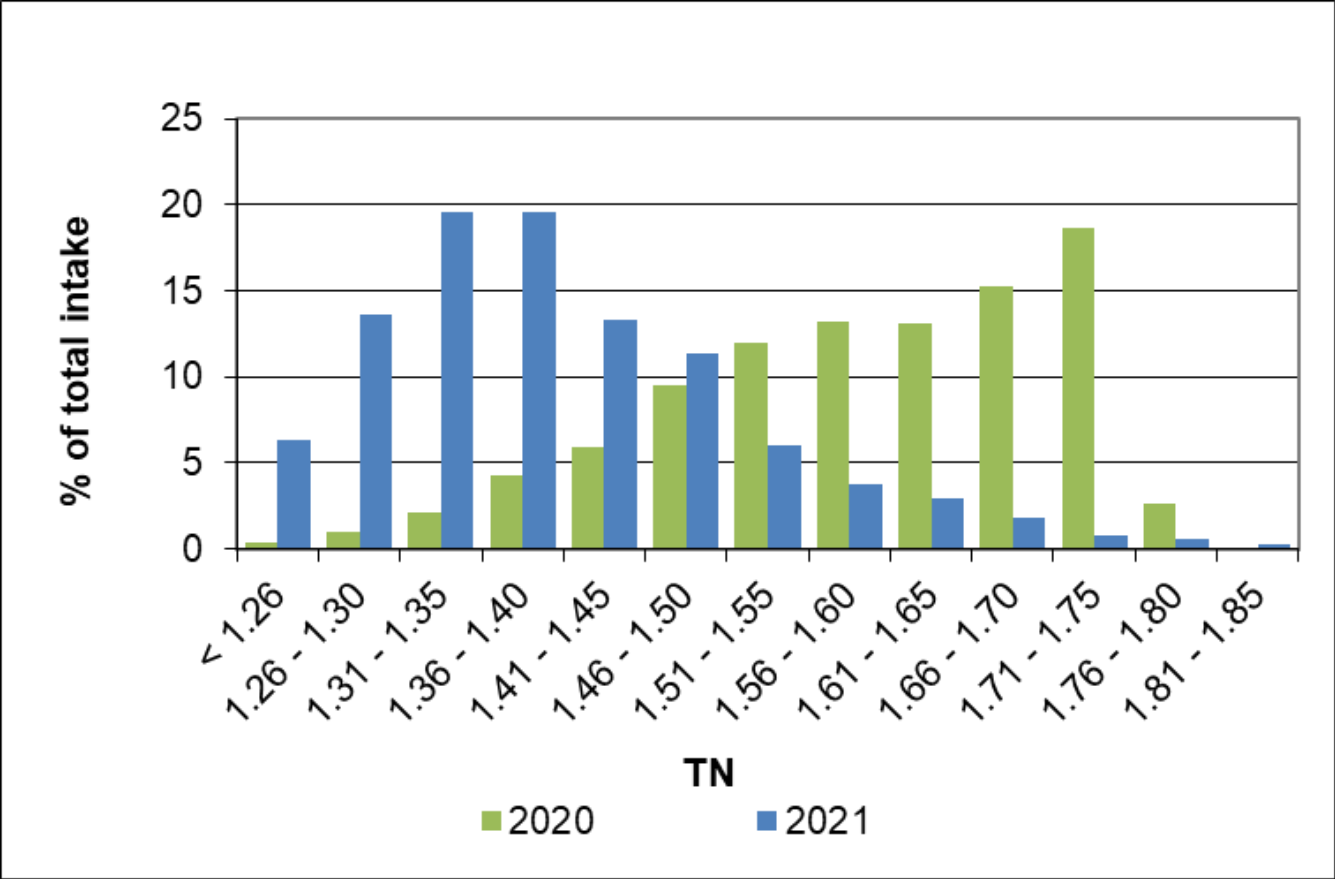
## 2020 vs 2021



# Crisp Best Ale/Extra Pale 20 vs 21

Variety	Nitrogen Content	Screening Values % through 2.25mm	Screening Values % retained 2.5mm
	% d.m	%	%
2020	1.65	2.2	92.5
2021	1.40	4.1	85.9

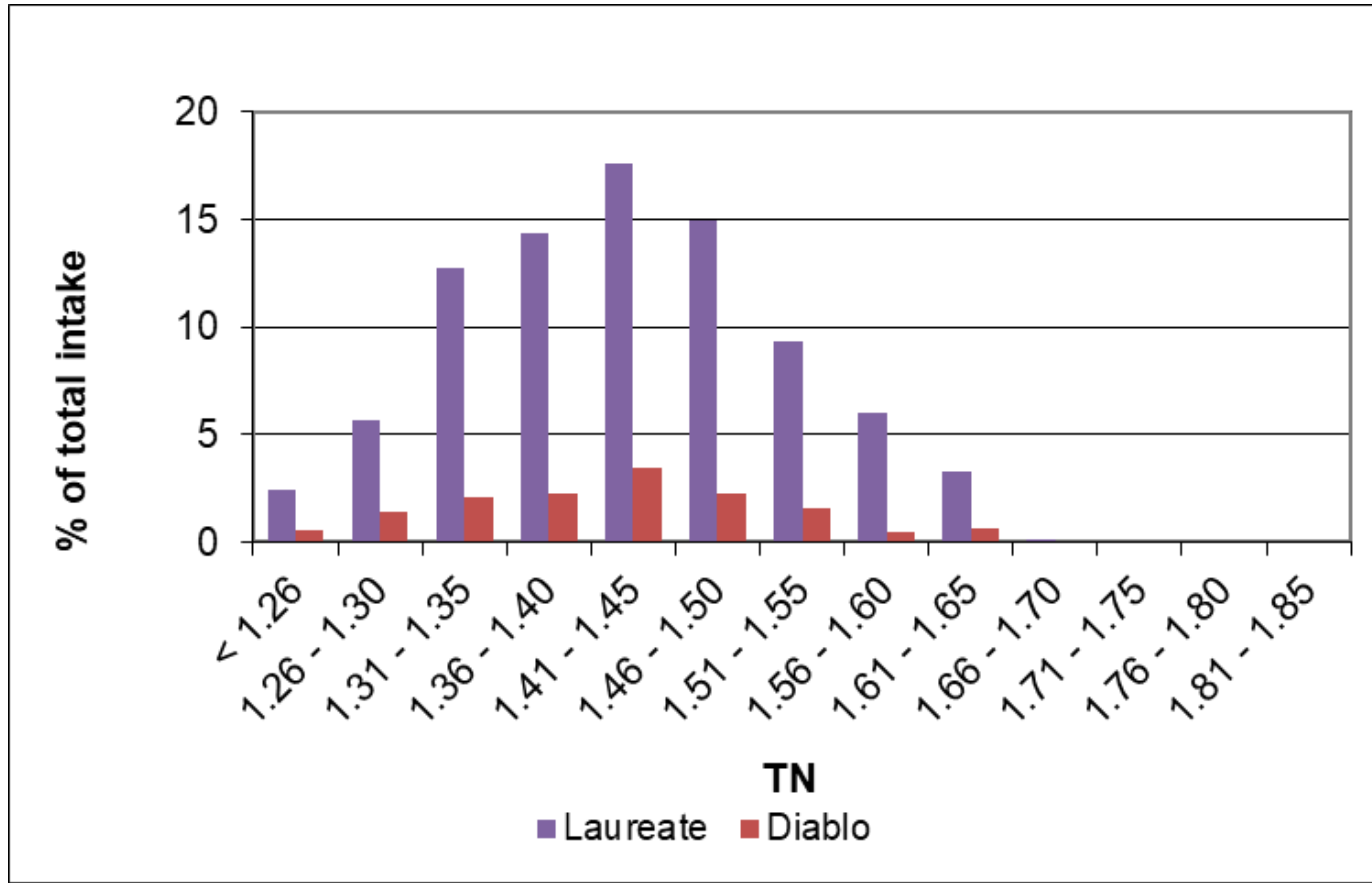
# Crisp Best Ale/Extra Pale intake 2020 vs 2021



# Crisp 2021 crop Scotland

Variety	% of Pot Still intake	Nitrogen Content	Screening Values % through 2.25mm	Screening Values % retained 2.5mm
		% d.m	%	%
Laureate	87	1.40	1.4	94.8
Diablo	13	1.42	1.2	97.1

# Crisp 2021 crop Scotland



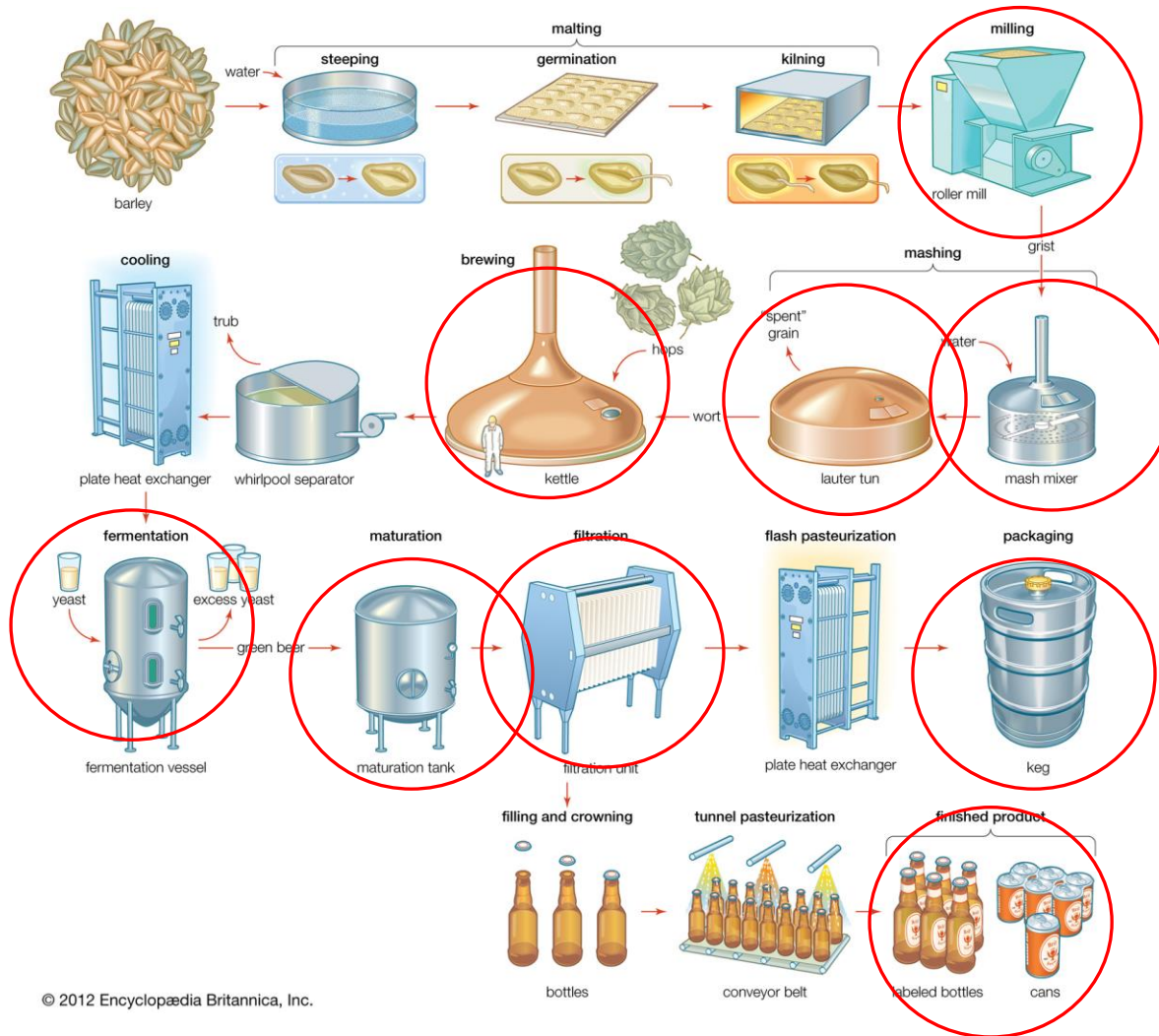


# Brewing Implications





# Brewing Process



Malt analysis is looking to provide a prediction of performance within the brewery and impact on final product quality

# Corn Size

- Vary depending on variety and weather
- Assessed by passing through a 2.25mm and 2.5mm screen
- Uneven corn size causes:
  - Variable rate of water uptake in steeping
  - Uneven germination
  - Milling and brewhouse issues
- Smaller grains may pass through the mill whole
  - Mill optimisation

Crop Year	Screenings Values % 2.5 retained
2018	88.4
2019	93.4
2020	95.6
2021	85.9

# Nitrogen

- Used as a measure of protein content
- High nitrogen content can cause:
  - ‘Steely’ grains that are difficult to hydrate in the steep
- Influences:
  - Degree of modification
  - Extract
  - FAN
  - Enzyme production
  - Bring processing issues:
    - Boil pH
    - Hot break
    - Clarity

Crop Year	Nitrogen Content
	% d.m
2018	1.48%
2019	1.56%
2020	1.63%
2021	1.40%

# In the brewhouse 2022

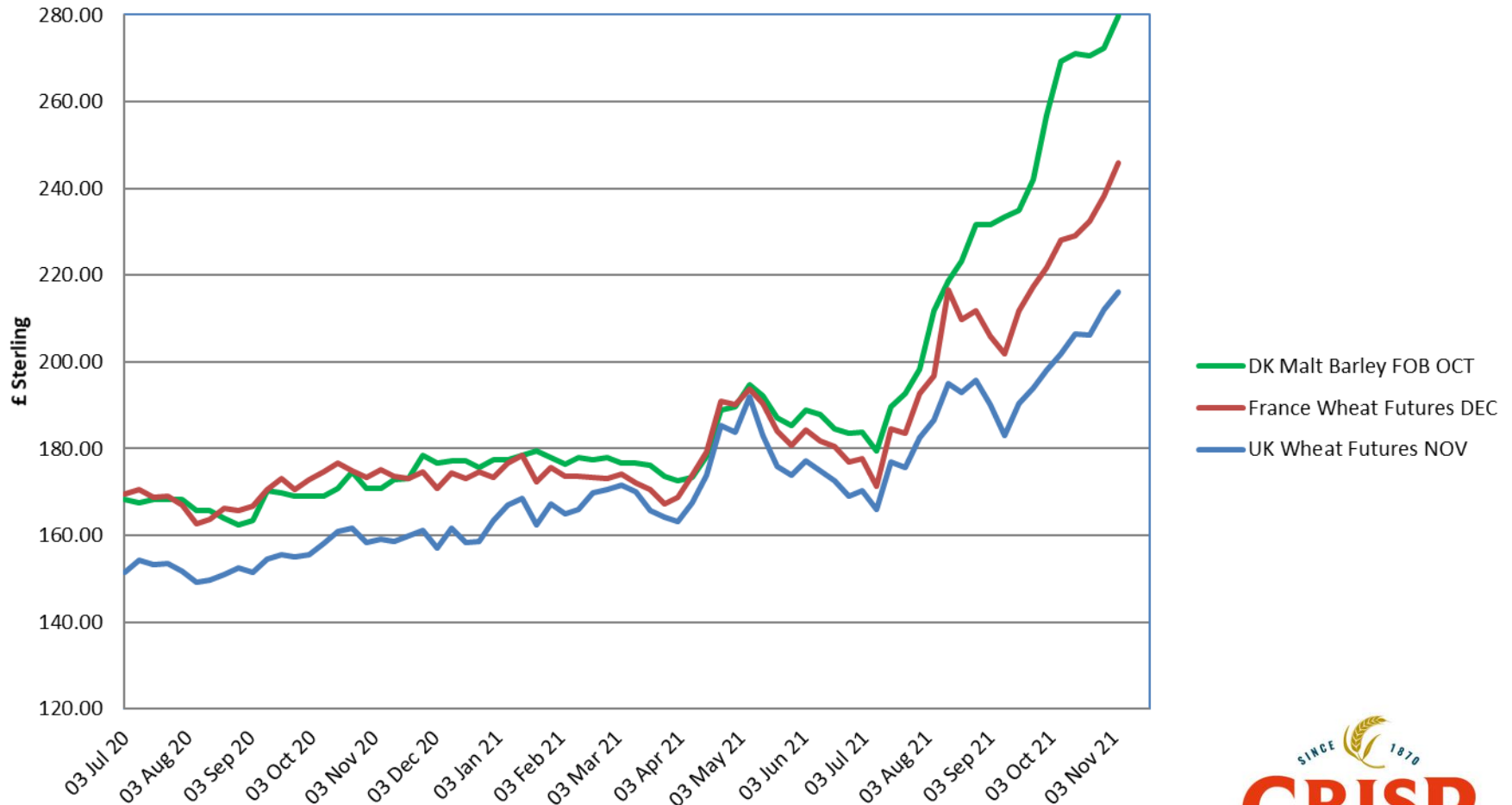
C of A Parameter	Things to check
EXTRACT	Mill setting, use the 'As is' from the CofA
FAN	Should be similar to 2020 crop and perfect for most beers. For high alcohol and high adjunct beers seek advice from Murphy's and Lallemand
DP	Should be similar to 2020 crop but seek advice for high adjunct beers
Clarity	Kettle finings optimisation and cask finings optimisation
PSY	Expected to be as good if not better than 2020 crop. Scottish crop is low in nitrogen with big bold grains.



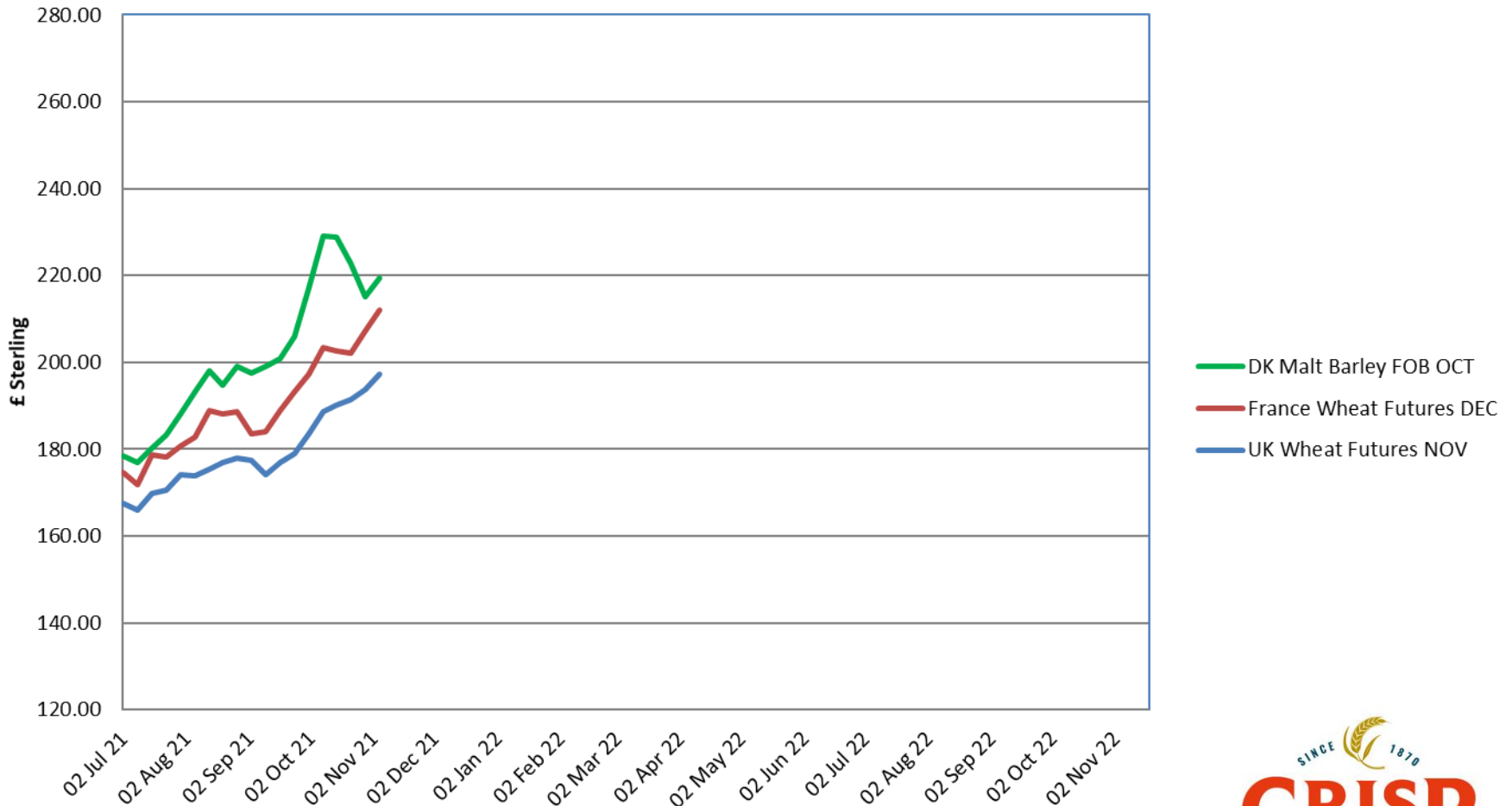
# 2021 Crop Pricing



# November/December 2021 pricing

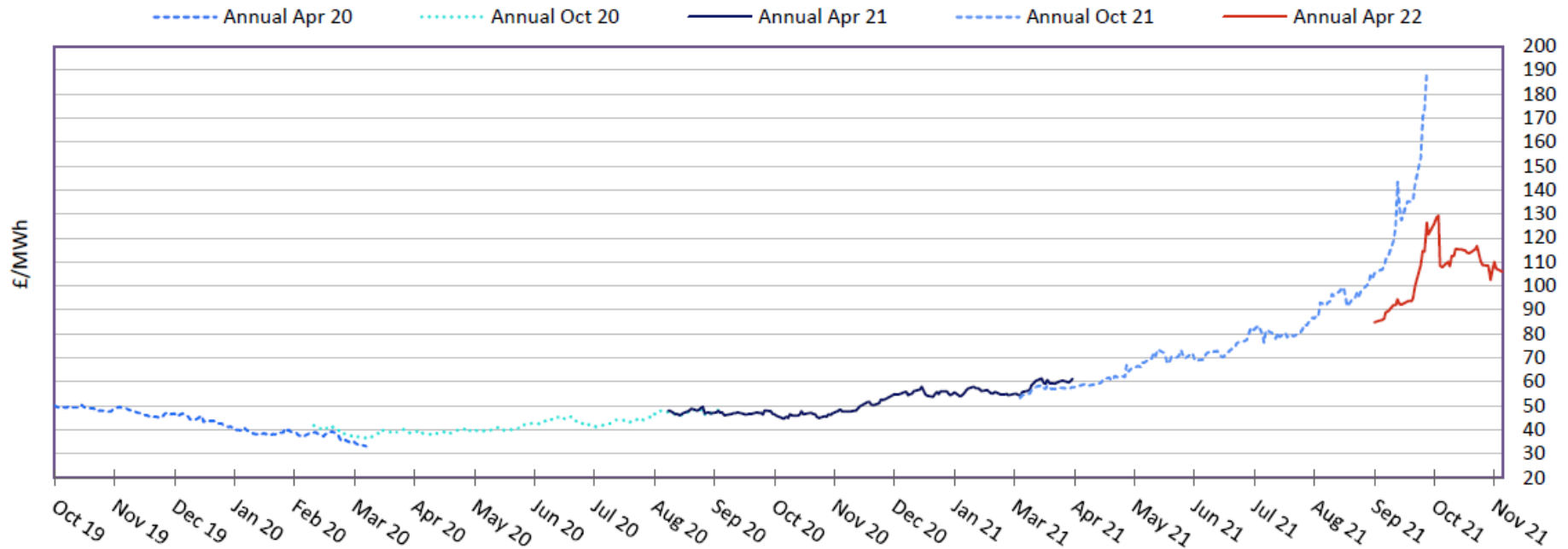


# November/December 2022 pricing



# And then there's energy....

## *Forward electricity baseload pricing*







**What happens next?**





**Thank You**

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