NIAB CSSL D genome yield (ID WW20-05503)

November 4, 2022

To view this study online, go to https://grassroots.tools/fieldtrial/study/61faaf25c68884365e7bcc34

Programme

Name:	Designing Future Wheat
Abbreviation:	DFW
Objective:	The BBSRC funded Designing Future Wheat Institute Strategic Programme (ISP), spans eight research institutes and universities and aims to develop new wheat germplasm containing the next generation of key traits. Building on this research we will then provide this new germplasm in a readily accessible and referenced form to commercial crop breeders and the plant science community. As the global population increases towards 10 billion people, with most increased consumption expected to occur in developing countries, it is anticipated that the world will need to produce 60% more wheat by 2050 to meet global demand. Since it takes between 15 and 20 years for current research to improve wheat varieties grown in farmers' fields, it is imperative that we act now to address problems facing us in the future. The Designing Future Wheat ISP is a fully integrated, cohesive national UK wheat research programme involving more than 25 groups of scientists across Rothamsted Research (RRES), the John Innes Centre (JIC) and Earlham Institute (EI), with additional contributions from the National Institute of Agricultural Botany (NIAB), Cambridge, the European Bioinformatics Institute (EBI), Cambridge and the Universities of Bristol and Nottingham.
Principal Investigator:	Graham Moore (Graham.Moore@jic.ac.uk)
Web Address:	https://designingfuturewheat.org.uk/
Crop:	Wheat

Field Trial

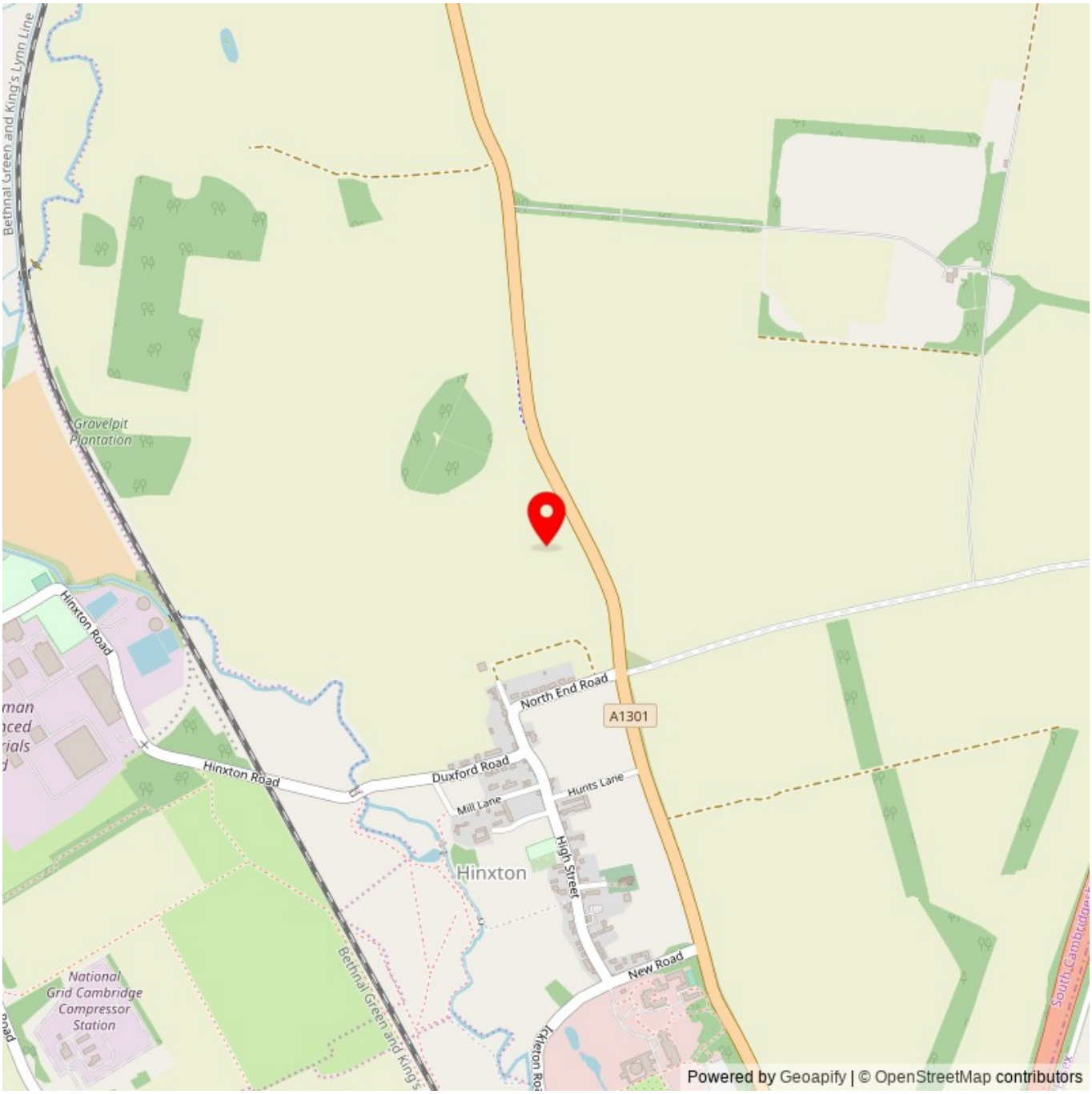
Name:	Richard Horsnell
Team:	NIAB DFW

Study

Name:	NIAB CSSL D genome yield (ID WW20-05503)
Description:	3 x rep yield trial. Controls used were Paragon x 6 reps and KWS Chilham x 4 reps.
Sowing Year:	2019
Harvest Year:	2020
Current Crop:	Wheat
Previous Crop:	Wheat
Contact:	Fiona Leigh (fiona.leigh@niab.com)
Curator:	Richard Horsnell (richard.horsnell@niab.com)
Physical Samples Collected:	10 ears collected form each plot

Location

Address:	Hinxton, North End Road, Hinxton, Cambridgeshire, GB, CB10 1RE
Latitude:	52.091193
Longitude:	0.180964



Layout

Number of Plots:	108
Number of Rows:	12
Number of Columns:	9
Number of Replicates:	3
Default Plot Width:	2.00
Default Plot Length:	3.80
Plot Rows per Block:	12
Plot Columns per Block:	3

Measured Variables

Ant_dto_day

Trait Name:	Anthesis time
Trait Description:	Anthesis or flowering time is the period during which a flower is fully open and functional. pollination and fertilization occur during this period.
Trait Abbreviation:	Ant
Measurement Name:	Ant DS65 DT Computation
Measurement Description:	Number of days required from sowing to when 50% of spikes have flowered (DS65). However, when planting in dry soils in dryland areas it is counted from the first day of rainfall or irrigation which is sufficient for germination, or from emergence date.
Unit Name:	day

Hd_dto_day

Trait Name:	Heading time
Trait Description:	Heading time extends from the time of emergence of the tip of the spike from the flag leaf sheath to when the spike has completely emerged but has not yet started to flower.
Trait Abbreviation:	Hd
Measurement Name:	Hd DS55 days Computation
Measurement Description:	Number of days required from sowing to spike emergence from the flag leaf (DS55). However, when planting in dry soils in dryland areas it is counted from the first day of rainfall or irrigation which is sufficient for germination, or from emergence date.
Unit Name:	day

NdviMean_UavRgbNAlc_Ind

Trait Name:	NDVI Mean
Trait Description:	Mean NDVI value of area assesed
Trait Abbreviation:	NdviMean
Measurement Name:	UAV RGB+NIR imagery with ambient light spectral data for each image.
Measurement Description:	Mean NDVI value of area assesed, calculated from RGB+NIR UAV imagery. Each image adjusted for ambient light levels at the time the image was captured.
Unit Name:	Index

CpHt_FldMes_cm

Trait Name:	Mean crop height
Trait Description:	Mean crop height
Trait Abbreviation:	CpHt
Measurement Name:	Calculation or ruler measurement
Measurement Description:	The mean of individual height measurements (may only be one measurement) per plot
Unit Name:	cm

AwnPreAb_Vis_0to1

Trait Name:	Awns
Trait Description:	Awns, presence or absence
Trait Abbreviation:	AwnPreAb
Measurement Name:	Visual assesment of awns
Measurement Description:	Visual assesemnt of awns, score =0, no awns, 1=awns present
Unit Name:	scale 0 to 1