



Yield Enhancement Network

Cereal YEN Welcome Pack 2023 UK

Thank you for participating in the Cereal YEN 2023.

This guide provides the information you need to complete your 2023 sample submissions.

You will receive a separate pack for each YEN entry that you have.

Welcome Pack checklist

- Soil Sample:** Sampling instructions on page 2. Collect a representative soil sample of ~600g from across the whole field or area to be entered in YEN and send to NRM using the labelled sample bag and **BLACK NRM pre-paid postage bag**. Include the enclosed **analysis request form** with your sample and apply the **grey NRM soil analysis label** to this.
- Leaf Samples:** At the **start of stem extension (GS30)** send your first leaf sample to Lancrop. Send the second leaf sample at **flag leaf emergence / booting (GS39)**. Include the corresponding analysis request form with each sample and complete this with the type of crop entered, the rest of the details on these forms are prepopulated for your entry but please amend if any details are incorrect. Labelled sample bags and pre-paid postage bags are provided for these samples. Instructions on how to take tissue samples can be found at the below link:
<https://www.yara.co.uk/siteassets/crop-nutrition/farmers-toolbox/analysis/how-to-take-a-sample-for-soil-or-tissue-analysis.pdf/>
- Grab Sample:** Instructions are on page 3 with a link to guidance video. A day or two before harvest, collect ~100 **whole shoots** from the YEN entry area and send in the **potato sack** provided, with the **WHITE** return address label, to ADAS Boxworth via your local Post Office.
- Grain Samples:** Instructions are on page 4. At harvest, collect a representative sample of grain from all trailer loads from the area entered, fill the grain sample bags provided, and send one bag to each of the two laboratories for analysis, using the appropriate coloured labels and return pre-paid packaging.
 - Use the **BLUE** labels for NRM nutrient analysis (~200g)
 - Use the **GREEN** labels for NIAB+ADAS MARVIN and TGW analysis (~600g)
- Group 1 Bucket:** If you have entered a Group 1 wheat variety, in addition to the above samples, please contact us to receive a plastic tub to send ~5 kg (~10 lb) grain. The Group 1 grain sample will be collected by courier, please contact ADAS Boxworth on 01954 268200 to arrange collection.
- Return of samples:** The enclosed address labels provide **pre-paid returns** for the **grab sample**; you will not be charged when using these labels. Alternatively, you can arrange for a courier to collect the samples, which should be sent to the address mentioned at the end of this guide, however **you will not be reimbursed** for using courier services.
- Yield Data:** Attach the **YELLOW** label to the relevant Yield Entry Form – Field/Tramline/Research plot (attached at the end of this guide), and record the harvested area, grain fresh weight, and grain moisture content. Then take photos of (or scan) the completed Yield Entry form, along with your map and weighbridge tickets (if applicable) and upload them at <https://www.yen.adas.co.uk/yen-2023-yield-form-submission>. If using your mobile to upload the documents, you can scan the QR code on the form to open this link automatically.
- Yield Competition:** Entries without yield verification (i.e. without weighbridge tickets) will still receive a YEN Report but will not be eligible for any YEN awards. If you are not competing just enter the yield and supporting evidence. If competing, ensure that the yield form includes your harvested YEN field area (minimum 2ha), your harvested grain weight (keep all your weighbridge tickets), and your grain moisture determination.

SOIL SAMPLE INSTRUCTIONS

A soil sample of the field or area to be entered in YEN should ideally be taken before any organic manure or inorganic fertiliser applications have been made. **If it is necessary to sample following an application of fertiliser or manure then a minimum period of 3 weeks should be allowed to pass** before doing so and details of any application(s) made provided on the analysis request form.

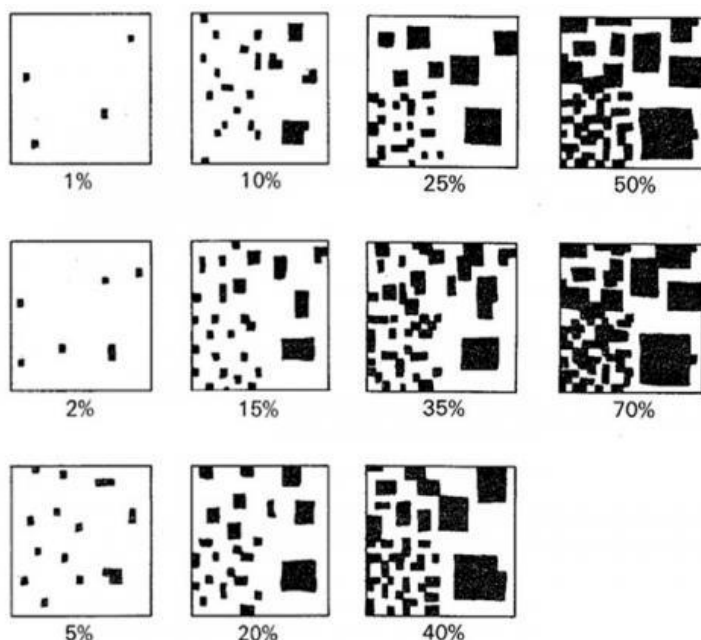
Please complete details on the form of current and previous cropping and whether previous crop residues have been removed or returned to the soil, if the field has a history of regular organic manure applications, please also detail this. **The more information you provide with your sample the better the analysis NRM will be able to complete** ensuring more reliable, trustworthy and useful results.

Walk a **'W' pattern** across the sample area as in the figure below avoiding any irregular patches such as gateways, headlands, and trees, collect about **25-30 soil cores to 15cm depth** and bulk the cores together in the labelled sample bag provided to give a **~600g sample**. Place the soil sample and analysis form with grey sticker attached into the **BLACK NRM return postage bag** and drop it off at your local post office.

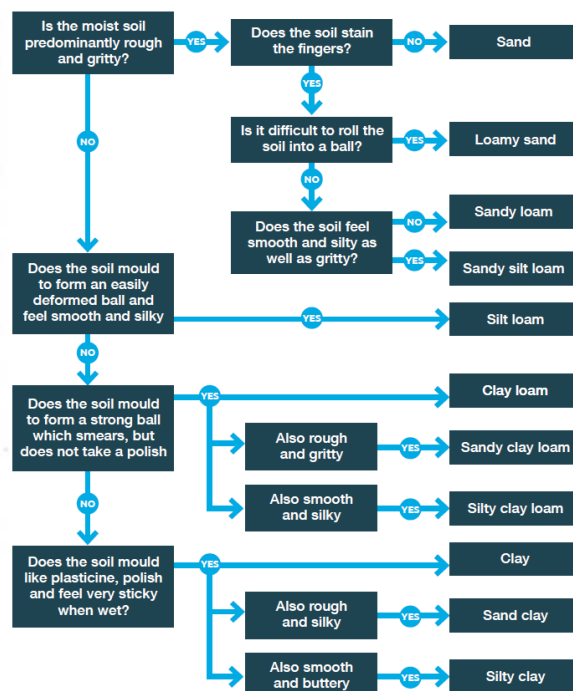


When taking your soil sample please also **record the texture and approximate % stone content of the topsoil** (guidelines for assessing soil texture by hand and estimating stone content are given below). These details should be provided when completing your field and crop details form online, information about which will be emailed to you separately.

Good soil descriptions are vital for allowing us to estimate soil water holding capacity which along with rainfall data we use to determine available water for your crop, a key component in calculating yield potential.



Each quarter of any one square has the same area of black



The results of the soil analysis carried out by NRM on this sample will be included in your annual report. These are also used to calculate various other metrics in the report, including available crop nutrients and efficiency of nutrient uptake.

GRAB SAMPLE INSTRUCTIONS

The potato sack in the Welcome Pack is for sending whole-crop 'grab' samples to ADAS Boxworth for analysis. It will help ensure trustworthy results if you follow these instructions carefully.



Scan this QR code to watch a video showing how to collect your Grab Sample

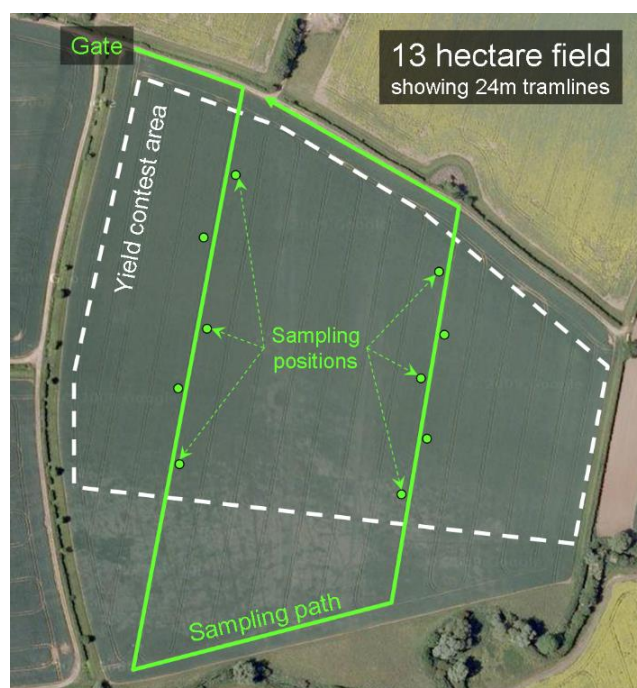
A grab sample of *the whole above-ground crop* must be taken once the crop has reached harvest maturity, when the crop is in a dry state, ideally a day or two before harvest.

You will need the potato sack and a serrated knife (it works well if you tape a couple of hacksaw blades together) or secateurs.

- Collect about 100 whole-shoots from within the area entered in YEN. This should comprise 'grabs' of ~10 shoots from **10 points** within your yield area; we

suggest the following sampling procedure, as in the plan below:

- Select two typical tramlines running through the area intended for yield measurement.
- Estimate the number of paces which will take you the length of the area.
- Walk a sixth of this length along the first tramline, then step to the left of the tramline by 3-4 paces.
- *Without close inspection*, grab ~10 neighbouring shoots and cut them **at ground level** using the hacksaw blade or secateurs.
- Place the whole shoots, ears-first into the sack, and retain all associated infertile shoots and leaves, but without any soil.
- Repeat for the next 4 points along the first tramline, on alternate sides of the tramline, and then repeat on alternate sides as you walk back along the second tramline.



Grab samples for Research Plot trials

- For research trial yields a grab sample should consist of 20-40 shoots per plot (4 positions x 5-10 shoots), from a minimum of 3 replicate plots. Put shoots from all replicate plots into the same sack for despatch.

Packing your grab sample

- All ~100 shoots should be placed side-by-side, ears-first, within a sack. If any shoot ends are protruding, fold them over inside the sack so that you can seal the end, with the length being <60 cm. **NB: The final package must be no more than 60cm long.** If the package is longer than this, it may be rejected or 'lost in transit'.
- Attach a **WHITE** pre-paid postal address sticker onto the sack and take it to your local post office/pick up point to be sent to ADAS Boxworth.

What will your grab sample tell you?

Data collected from your grab sample will be fed back in your end of year report. The metrics we derive from your grab sample include:

- Total Crop Biomass
- Harvest Index – the proportion of total biomass that is grain
- Ear numbers and Grain numbers per ear and per m²
- Estimated use of available water
- Estimated % solar radiation captured

GRAIN SAMPLE INSTRUCTIONS

We request that all Cereal YEN Entrants return TWO grain samples at harvest, each sent directly to separate laboratories for analysis. IN ADDITION, if you have entered a Group 1 wheat variety, we also request an additional 5kg grain sample for quality analysis as part of the Milling Wheat Quality competition.

Collecting your Grain sample

- Take an appropriate size sub-sample (~100g, or 1kg for Group 1 varieties) from each trailer-load of grain, close to the time it is being weighed. The sample should represent the grain being weighed, so it should be taken from two or more parts of the trailer load and it should not be cleaned, dried, or otherwise changed, before it is sent for analysis.
- Amalgamate and thoroughly mix the sub-samples in a bucket, and from this fill each of the plastic bags provided. Send one to each of the laboratories below with the appropriate request form, using the postage return packs provided.

1. NRM Grain Sample ~200g

- Attach one of the BLUE NRM labels to one of the bags of Grain. Attach the second BLUE NRM label to the NRM analysis request form. Place the Grain sample and form into the BLUE / GREEN NRM return postage bag and drop it off at your local post office.

Nutrient analysis carried out by NRM on this sample will be included in your annual report.

2. NIAB Grain Sample (via ADAS) ~600g

- Attach one of the GREEN ADAS/NIAB labels to one of the bags of grain and place it inside the hardback envelope provided. Attach the second GREEN ADAS/NIAB label, with return address to ADAS Boxworth to the hardback envelope, and drop it off at your local post office.

NIAB and ADAS analysis will calculate the grain dimensions and TGW, which will be included in your report. These are also used to calculate various other metrics in the report, including Grains/m².

3. Group 1 variety: 5 kg Grain Sample

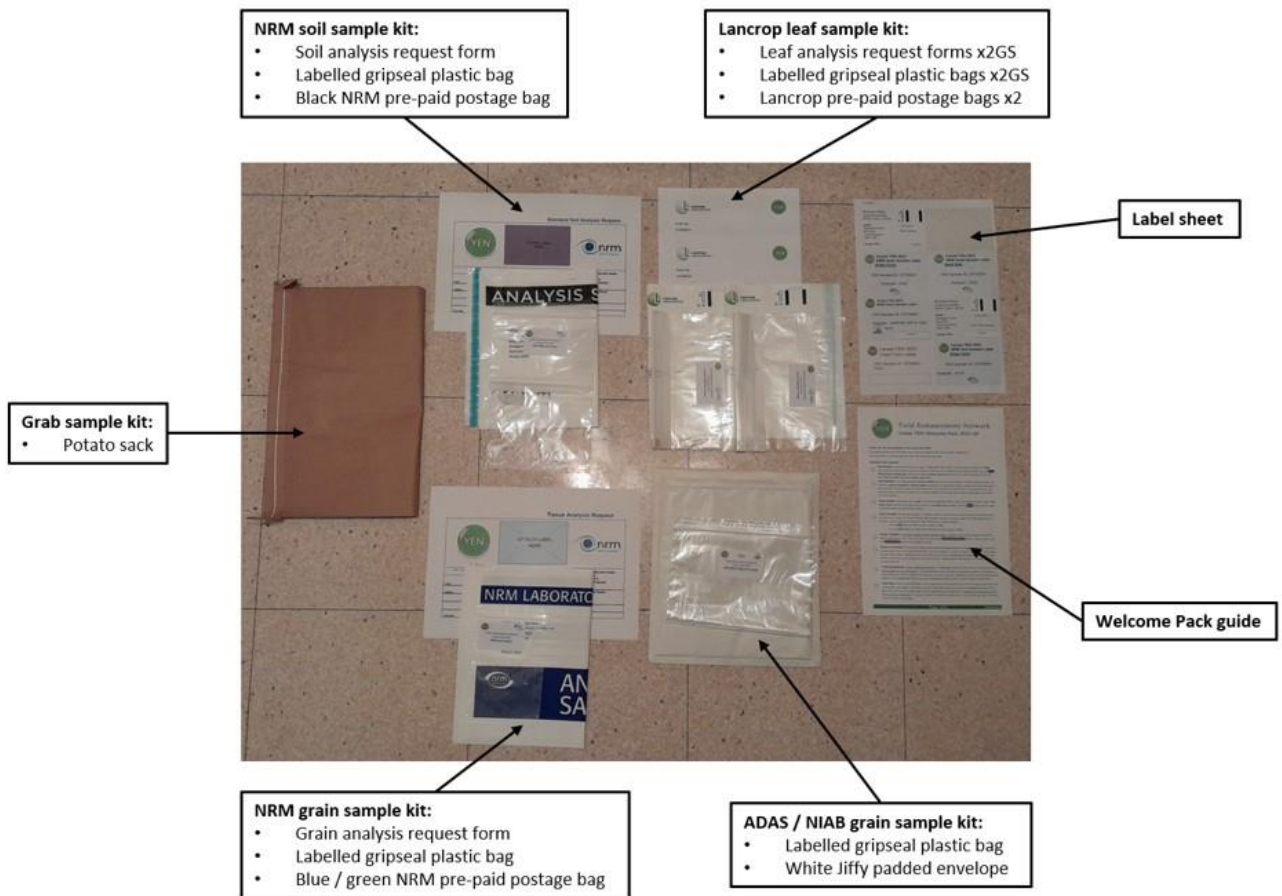
- If you have entered a Group 1 variety please contact us to receive a 5kg plastic tub. Fill this with grain and contact ADAS Boxworth on 01954 268200 with the YEN ID to arrange for a courier to collect this sample.



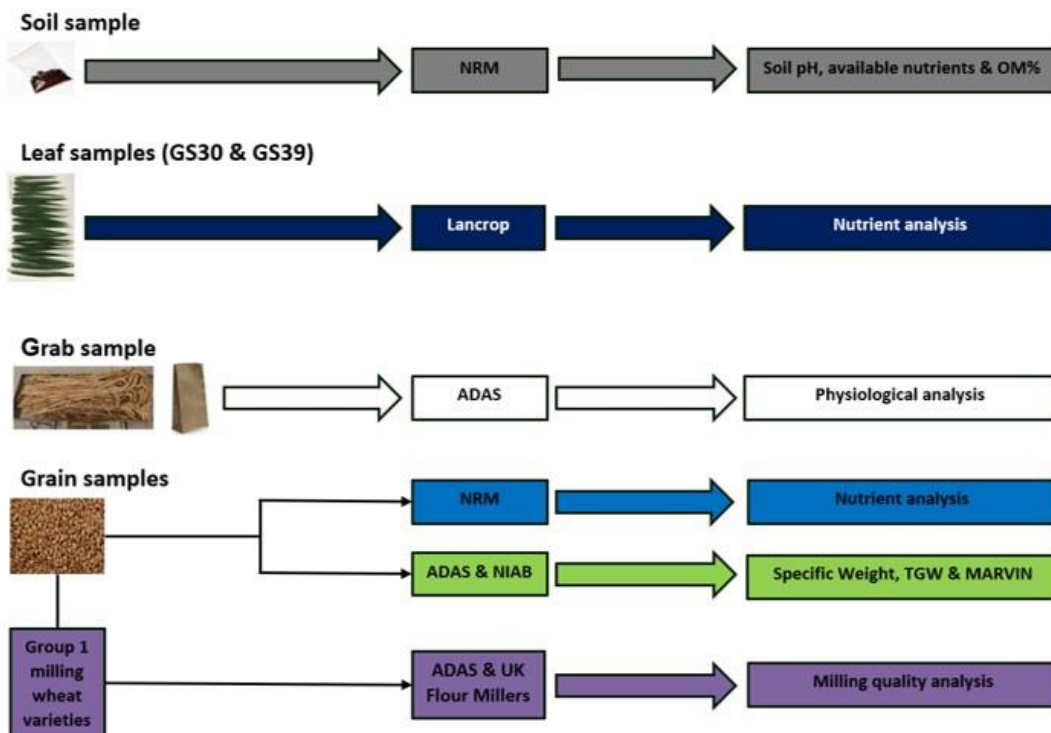
Sciantec will analyse a sub-sample of the grain for protein content and HFN. This data, along with yield results, will be used to shortlist Group 1 entries for Milling Wheat Awards.

Further analysis will be carried out by UK Flour Millers on shortlisted entries to determine the winners, who will be announced at the YEN Conference.

WELCOME PACK CONTENT SUMMARY



WELCOME PACK POSTAGE SUMMARY



RETURN ADDRESSES

<i>Lancrop</i>	<i>ADAS Boxworth</i>	<i>NRM</i>
Yara Analytical Services Pocklington Industrial Estate Pocklington York YO42 1DN	FAO Josh Humphrey ADAS Boxworth Battlegate Road Boxworth Cambridgeshire CB23 4NN	Coopers Bridge Braziers Lane Winkfield Row Bracknell RG42 6NS

If you require additional labels for any samples, please contact yen@adas.co.uk.

Crop samples, Yield data and Online Field Data submission forms must be returned no later than **30 September**

CONTACTS

Dhaval Patel	Dhaval.Patel@adas.co.uk	07502 658098
Josh Humphrey	Josh.Humphrey@adas.co.uk	07503 189319
Roger Sylvester-Bradley	Roger.Sylvester-Bradley@adas.co.uk	
Pete Berry	Pete.Berry@adas.co.uk	

Or email yen@adas.co.uk for general enquiries.

@adasYEN 

YEN SPONSORS IN 2023



Bayer CropScience



Cereal Yield Enhancement Network 2023

Please fill in the form below and upload a copy, with maps and weighbridge tickets (if applicable), using the below QR code below or online at <https://www.yen.adas.co.uk/yen-2023-yield-form-submission>



Yield Entry Form



Field Name
Harvest area (hectares)
Fresh grain weight at harvest
Average moisture content of grain (%)

Briefly describe how you weighed (or otherwise measured) your grain and calculated your harvest area:
Please provide a map where possible.

Have you included a weighbridge ticket? YES NO
(Required for competition)

Combine Yield from Monitor or Map (if available)

Yield from combine yield monitor / map
Yield monitor make and type
GPS accuracy
Date yield monitor was last calibrated

DECLARATION *I confirm that to the best of my knowledge the information above is correct.*

Name

Signature

Date.....



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Please fill in the form below and upload a copy, with maps and weighbridge tickets (if applicable), using the below QR code below or online at <https://www.yen.adas.co.uk/yen-2023-yield-form-submission>



Research Plot Yield Entry Form



Name of Site or trial:

Field Name:

No. of Plot reps per treatment

Name/code of treatment being entered in YEN:

Is a layout plan attached, with submitted treatment(s) identified?

YES NO

Please supply or tabulate

- A copy of the latest calibration of grain-weighing equipment on harvester, with date
- Fresh weights and moisture contents of grain from each of ALL the plots entered
- Length(s) of all plots (to nearest 10cm):
- Widths of all plots (plot centre to plot centre, to nearest cm):
- Harvested width / width of cutter-bar (to nearest 1cm):

Have the plot yields been statistically analysed? YES NO

Please supply: -

- A copy of a statistically analysis of all plot yields
OR
- Confirm that the coefficient of variation for grain yields corrected to standard moisture (15%) did not exceed 6%. (CoV: = Residual Mean Square x 100 / Grand mean of all plot yields)

DECLARATION *I confirm that to the best of my knowledge the information above is correct.*

Name

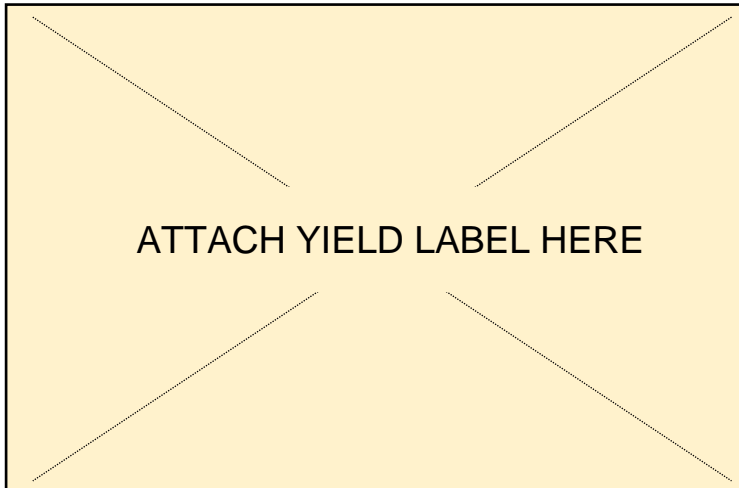
Signature

Date.....



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Please fill in the form below and upload a copy, with maps and weighbridge tickets (if applicable), using the below QR code below or online at <https://www.yen.adas.co.uk/yen-2023-yield-form-submission>



Tramline Trials Yield Entry Form



Name of Site or trial:

Field Name:

Name/Code(s) of plots being entered:

Weighbridge weights (kg) :

%MC of grain for each of ALL plots: -

DECLARATION *I confirm that to the best of my knowledge the information above is correct.*

Name

Signature

Date.....

