2019’s Beet Yield Challenge

# What does the Beet Yield Challenge involve?

The Beet Yield Challenge (BYC) pushes growers to achieve the highest possible yields that they can with the resources at their disposal. To make the BYC fair, we will judge performance based on the proportion of yield potential achieved. Your yield potential is calculated by taking into account your specific field conditions, such as soil type and location; this uses the BeetGro model, which has been developed over many years to provide an accurate assessment of sugar beet growth. We encourage you not to automatically enter your ‘best’ field but instead enter an interesting or challenging field. This competition will help you to understand and hopefully mitigate some of the limitations on your yields in the future.

# What measurements will BBRO take?

We will be collecting a range of information from your BYC field including soil characteristics, aerial images and disease assessments. Due to the late start to last season, we were unable to collect a complete dataset for each field. This year, we want growers to sign up before the end of March so that we can get all fields soil sampled and included as part of British Sugar’s national field survey.

# What’s expected of participants?

To maximise the value of the BYC to you, to BBRO and to all sugar beet growers, we need you to be engaged and to provide some easy-to-collect data throughout the growing season. This data is outlined on the following page. For this, you’ll have support from BBRO and your Contract Manager. Please be sure that you are willing to commit to providing this information before you enter the BYC.

# What feedback is on offer?

Participants will receive a monthly newsletter from April onwards showing progress of each crop based on our assessments as well as a focus on interesting fields. At the end of the season, participants will receive a general report and grower-specific report.

There will be recognition for:

* The growers in each factory area achieving the highest proportion of their yield potential
* The grower with the highest yield relative to their five-year average
* The grower who returns the best-quality data

# How do I enter the BYC?

An application form is available from <https://bbro.co.uk/on-farm/beet-yield-challenge> or by emailing byc@bbro.co.uk. You will need to consider the location and field size you wish to enter. This must be the whole field and a minimum size of 2 hectares inclusive of headlands. You will also need to nominate a verifier for your application such as your Contract Manager or agronomist. The deadline for entry is the 31st March 2019.

# BYC 2019 schedule

The BYC involves data collection by BBRO and yourself. The tasks required of you during the year are highlighted in bold.

## March 2019

* **Participants to complete application form by 31st March**
* Soil sampling – This is to understand the field conditions and how they might influence plant growth.
* Solvita test – This provides us with information about your soil biological activity, which may relate to soil fertility.
* Drill testing – Last year we saw drill depth varying greatly across fields. Drill testing allows us to help you drill your beet to give it the best start.

## April 2019

* **Participants to provide information on drilling (e.g. variety, drilling date) and emergence date**
* **Participants to install fieldmargin phone app with assistance from BBRO –** this app will allow you to easily collect information for the BYC (see next page)
* Drill testing (continued)

## May

* Establishment counts
* Early canopy development to be assessed by Germains
* **Participants to take photos of crop canopy fortnightly** – This is to enable us to follow crop development, in particular for use in the BeetGro mode.
* **Participants to identify when the crop reaches the 12-leaf stage** – This year, we would like to see how quickly crops reach the 12-leaf stage as this is when they start to develop some resistance to aphids, which will be particularly important this year.
* Aphid numbers assessment

## June

* **Participants to continue to take photos of crop canopy fortnightly**
* Aerial images – For quantifying canopy development and intra-field variation in crop growth

## July

* **Participants to continue to take photos of crop canopy fortnightly**
* Leaf nutrient analysis – This will be used to understand the factors influencing your yield
* Disease assessment – We will quantify disease levels as part of our assessments

## August

* Root digs to be conducted as part of the spec field survey

## Campaign

* Harvest loss assessments – This is to identify any opportunities for increasing yields by reducing the loss of beet during harvesting
* **Participants to send yield data with assistance from Contract Managers**

## Spring 2020

* BBRO to analyse data and produce report for growers
* Announcement of winners during agricultural events in the early summer

# fieldmargin phone app – additional options for data capture

This year, to assist in the collection of data, we are encouraging BYC participants to use the fieldmargin app on their phones. This will allow:

* Photos to be easily taken from the field and uploaded straight to BBRO
* Data that we’ve collected to be accessible by you
* Updates on BYC progress to be sent directly to you

fieldmargin is available for free to download, and assistance will be provided to help you get up and running.

# Final remarks

The BYC offers a framework to explore how your sugar beet agronomy can be improved. The data you provided by you helps BBRO better understand where to focus our attention.

We are looking forward to hearing from you. If you have any questions, please don’t hesitate to contact us.

Kind regards,

The BYC team

Email: byc@bbro.co.uk; Telephone: 01603 672169

# Data privacy statement

All data will be held securely by BBRO. It will be treated confidentially and will not be shared with external organisations, except where necessary as part of the Beet Yield Challenge. If you have any concerns about the use of this data, please contact us at byc@bbro.co.uk