



British Beet 
BBRO
Research Organisation

ANNUAL REPORT
2018-19

Reflections and ambitions from the Head of BBRO Dr Vicky Foster

I am very excited to have completed my first year with BBRO and I am very pleased to see how our research and knowledge exchange programmes help to underpin and support progress in our industry. This year's Annual Report has a new format and provides an update on our activities from April 2018 to March 2019, focussing on key facts and figures. Details of individual projects will be accessible on a new area of the website 'BBRO Plus', to be launched summer 2019, and these will be updated as and when new results or information are available.

With support from the Stakeholder Committee, I will continue to drive forward a research portfolio that is relevant to the needs of the industry and a communications programme that is topical and timely. In 2018 I spent time listening to a wide range of stakeholders about research priorities for the next 3-5 years and in conjunction with the BBRO Executive Board we have refreshed our vision for the future and developed a set of core outcomes that our new work programmes will be built around. I also spent time gaining feedback from you on our communications activities so I can ensure we make the most of the resources available to us to deliver BBRO technical messages out as widely as possible.

Investment in future scientists with sugar beet expertise is also continuing to grow and we now have 6 PhD projects in our research portfolio, which are summarised in this report. I am also really pleased that we have taken on a second Knowledge Transfer Partnership post (Dr Alistair Wright) focusing on crop protection, which is backed by the Government through InnovateUK funding.

Alongside all our collaborators and partners, I would like to thank the BBRO team, who have provided an outstanding and incredibly dedicated service this past year under challenging circumstances, and I look forward to working with the team and with our levy payers over the coming 12 months.

Vicky



2018: a year of "challenge"

Alison Lawson, Stakeholder Committee Chair

What a year 2018 was, we faced some very challenging times right from the start, beginning with the 'Beast from the East', which saw very few beet crops in the ground much before mid-April. This was followed by very little rainfall and a very hot summer, some of the most 'challenging' growing conditions I can remember.

In mid-July 2018 I had the pleasure of meeting Trish Madsen on her tour around Europe looking at EU beet production for 'Green Pool'... a company specialising in sugar market analysis. Trish's understanding of the complex world markets and the "200 million tonnes" of sugar that had just been produced for the first-time worldwide, made me realise even further the challenges that lie ahead for UK growers in producing this crop competitively and efficiently in a 'world' market. At the time we stood in a field of sugar beet on a hot afternoon with practically every leaf flagged and touching the floor! I remember thinking, how are we going to get 80 tonnes per Ha from this crop!?

We then got the news that neonicotinoid seed treatments would be banned for our 2019 crop. Our emergency application was sadly turned down whilst being approved in other EU countries, to say the least very frustrating for all concerned. It was certainly not through the lack of effort by Dr Mark Stevens who worked tirelessly on this, and on behalf of all the sugar beet growers and the Committee I would like to extend our thanks and appreciation to Mark, Team BBRO and their patient families for all their efforts..

One thing is for sure, there will always be 'a challenge' to be met in growing sugar beet, but rest assured with good science-led technology and the work of the levy funded BBRO, growers have never been better placed for the future.

From the 1st March 2019 Dr Jon Knight took over the role as the new Committee Chair but I will continue to look after the interests of the growers as a NFU Sugar representative on the Committee.



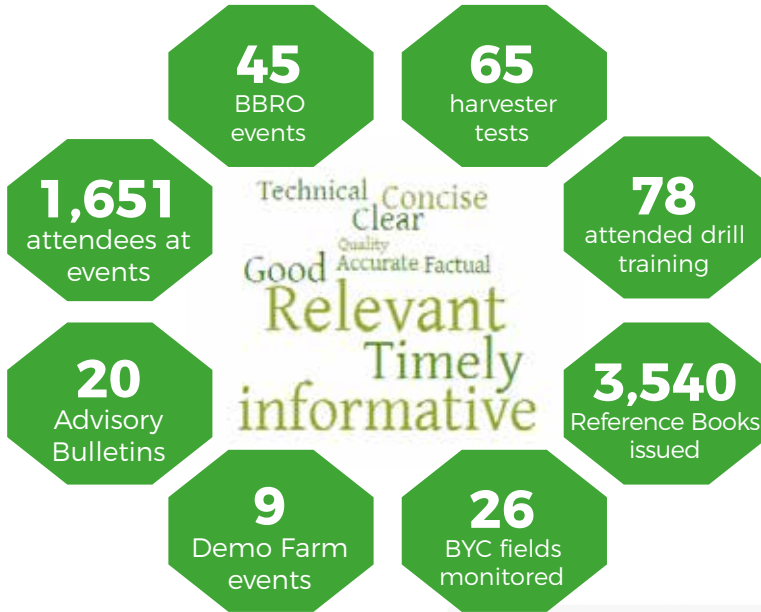
BBRO OUT AND ABOUT



1,075
unique web users
per year



30
new followers
per month



101
plant clinic
samples



Dr Mark Stevens assesses the crop in the BBRO Aphicide trial

Our Science

Over 30 research projects, alongside demonstration-farm activities and trials at our open day sites, were managed in 2018. BBRO has an excellent team of scientists and trials officers delivering this work for our levy payers.

The portfolio of research remained diverse including work on virus control, aphid surveillance, insecticide resistance, rhizomania, beet cyst nematode, nitrogen placement, variety-fungicide interactions, sulphur fertilisers, understanding intra-field variation, harvester damage and losses, impact of harvest date on yield, yield benchmarking and use of cover crops.



Disease trial showing varietal differences

We also conducted a review on future weed control strategies in conjunction with AHDB, as this is very much a farm-level issue, and a review of pesticide application technology in light of new nozzle development and use of appropriate water volumes. We continued to work in collaboration with the British Society of Plant Breeders (BSPB) to deliver the Recommended List for sugar beet. As part of this activity in 2018, BBRO managed five trials sites across the key sugar beet growing areas with an additional 17 sites managed by either the plant breeders or NIAB.

All trials data were analysed by NIAB and the 2019 RL tables were published in May, which included five new varieties that all had yields greater than the control varieties.

The latest findings from all our research activities can be found on the website or seen at BBRO events.

97%
of plant
clinic samples
acknowledged
within 24
hours



4,528
trial plots

BBRO is currently investing **£224,000** in **six** PhD projects covering a wide range of topics. Two of these are new and will commence autumn 2019, these will focus on the role of agronomy and genotype in tissue integrity and associated sugar losses during storage, and on mature plant resistance as a new way to control virus diseases and their spread. The latter project is an exciting new collaboration including Wageningen University in the Netherlands.

Other ongoing PhD projects are focussing on understanding water use efficiency of sugar beet, canopy architecture of sugar beet, population genetics and ecology of leaf miner and the effect of cover crops on soil structure and subsequent growth of sugar beet.

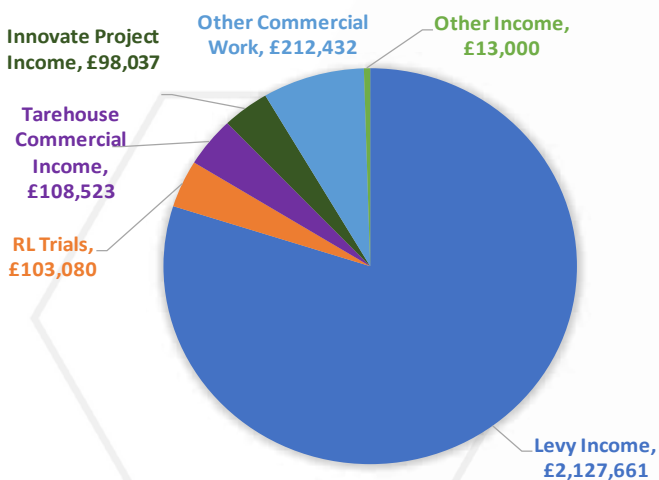
Two of our PhD students presented their latest findings at the BeetTech19 conferences (their slides with key messages are available on the BBRO website) and all of them have been encouraged to participate at other BBRO events and discuss their research with growers and industry.

BBRO is proud to be investing in future talent for our industry.

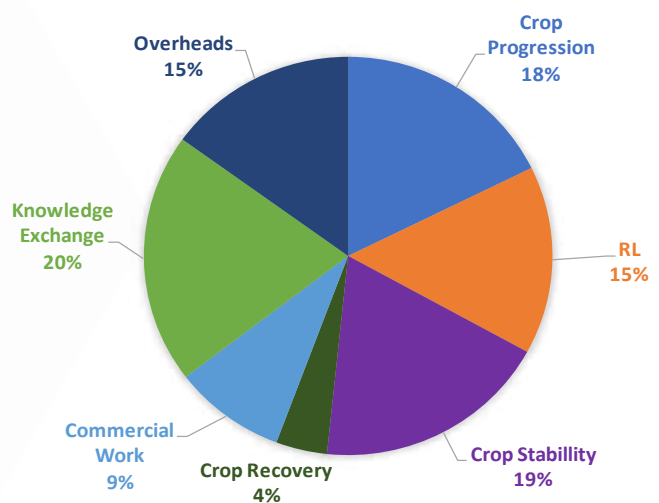


Investment summary

**BBRO Income for the year ending
31 March 2019**



**BBRO Expenditure for the year ending
31 March 2019**



Income for the year ending 31st March 2019 was slightly above predicted income of £2.1m due to good late season crop growth. 56% of the expenditure was spread across the three crop pillars (progression, stability and recovery) and the variety trials programme (RL) and a further 20% of the expenditure focussed on delivering knowledge exchange activities.

Setting our priorities for the year ahead

BBRO continues to invest in activities driven by the needs of the industry. In the autumn of 2018 we held a number of discussion groups with growers and other stakeholders to determine the priority areas for new work for the next 3 years. Some of the high priority areas include new options for virus yellows control, optimising plant establishment, improved yield modelling, future weed control strategies, use of biostimulants and impact of the continued loss of pesticides. Other priorities include optimising fungicide timings, improved tools for harvest and storage losses, impact of rhizoctonia in the rotation and greater understanding of nematode populations and their control. Whilst these topics have been identified as focus areas for the next

few years BBRO will continue to respond to urgent needs of the industry as and when required, such as the Emergency Authorisation application for Biscaya for the 2019 season to help control aphids.

As well as developing our research pipeline we have also produced a new business plan for 2019-2022. This was launched at the BeetTech19 events and focuses on three core outcomes 1) skills and expertise, 2) targeted research and knowledge exchange and 3) industry competitiveness. All BBRO activities will be aligned to these core outcomes and this will be delivered to the industry under the guidance of the BBRO Executive Board and Stakeholder Committee.

Our Vision

To have an unrivalled team of experts deliver and share first-class research to ensure the home-grown sugar industry thrives

Our Mission

To commission and implement research and technology transfer designed to increase the competitiveness and profitability of the UK sugar beet industry in a sustainable and environmentally acceptable manner

OUR CORE OUTCOMES

1. Skills and expertise

- 1.1 BBRO experts are trusted and the 'go to' people for independent information for growers and industry partners
- 1.2 Senior staff are recognised internationally for their expertise
- 1.3 Government views BBRO as an exemplar agriculture R&D model

2. Targeted research and knowledge exchange

- 2.1 Research is communicated and drives best practice
- 2.2 Research helps the industry maximise yield potential and profitability
- 2.3 Information is tailored to the needs of the stakeholders
- 2.4 Horizon-scanning for the latest innovation and technologies

3. Competitiveness

- 3.1 Sugar beet remains a competitive break crop for the grower
- 3.2 Sugar beet supply remains competitive against other countries for the processor
- 3.3 BBRO seeks to maximise the positive environmental impact of growing sugar beet



BBRO Governance

The BBRO Executive Board is primarily responsible for setting the BBRO levy, overseeing the corporate governance of BBRO, setting the strategic objectives, key performance targets and annual budget, and monitoring the annual programme of work. The current Directors of BBRO are Michael Sly (NFU Sugar Board Chairman), Simon Smith (NFU Sugar Board Vice Chairman), Paul Kenward (Managing Director for British Sugar) and Colm McKay (Agriculture Director for British Sugar). Along with the four Directors, in 2018 BBRO appointed Mike May as the Independent Chair and together they make up the BBRO Executive Board.

The BBRO Stakeholder Committee is primarily responsible for developing the programme of research and communications activities, monitoring BBRO's performance against key performance indicators, ensuring the quality and output of BBRO's information is robust and relevant to BBRO's strategic objectives, representing the interests

of the beet industry and acting as ambassadors for the sugar beet sector. In 2018 the remit and membership of the Stakeholder Committee was reviewed and a number of small changes were made including the addition of an Independent Chair and an additional Independent Committee member. The current members of the Committee are Dr Jon Knight (Independent Chair as of 1st March 2019), Alison Lawson (NFU Sugar Board), Tim Beaver (NFU Sugar Board), Nick Morris (British Sugar), Andrew Dear (British Sugar), Susie Emmett (Independent), Prof Debbie Sparkes (Independent) and Dr Jim Monaghan (Independent).

As the skills and expertise within BBRO continues to grow the decision was taken to wind up the Technical Board at the start of 2019 as a formal group, however, relevant external expertise will still be sought as and when required to provide technical input into the activities of BBRO.



Contact us

British Beet Research Organisation,
Innovation Centre,
Norwich Research Park,
Colney Lane,
Norwich
NR4 7GJ

W: www.bbro.co.uk

T: 01603 672169

E: BBRO@bbro.co.uk

Twitter: [BBRO@BBRO_Beet](https://twitter.com/BBRO_Beet)

