

Plant Breeding

Matters

Information from the British Society of Plant Breeders

SUMMER 2021

I am excited to bring you our first Plant Breeding Matters of 2021, and my first as CEO. Dealing with the combined challenges of Covid-19 and the UK's exit from the EU have certainly been a baptism of fire for me and the BSPB team. However, we are now back in the office and working together to help you as the nation adjusts to the changes we have all experienced.

In this issue we look at the effects of leaving the EU and discuss both threats and opportunities for plant breeders and the business of crop genetic improvement. We explore the immediate challenges, the additional costs and the bureaucracy associated with sanitary and phytosanitary (SPS) requirements.

The Defra consultation on gene editing stands out as potentially the most significant and positive policy development for genetic innovation in this country for more than two decades. BSPB has been active in an industry submission into the consultation, and we have been supporting members to add their submissions as individual companies.

Since taking over as chief executive I have instigated a number of changes, including a fresh look for BSPB with a new website. I am confident that this will reflect our renewed commitment to be more outward-facing and transparent as an organisation and as an industry. This will enable us to be more vocal in championing the positive contribution of seed innovation to our planet, our people, and our climate.

 **Sam Brooke / BSPB Chief Executive**



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WORKING WITH DEFRA TO IMPROVE SPS REQUIREMENTS

Following the UK's exit from the Europe Union, several challenges have arisen which are currently putting pressure on the continued success of the UK's breeding industry and supply of seed.

New Sanitary and Phytosanitary (SPS) requirements on seed coming from EU member states or being exported into EU member states from the UK for experimental, trial, research and breeding purposes is adding cost and time. This has led to concern that the number of varieties being tested in the UK could reduce, which could also reduce choice for UK growers and lead to a decline in the genetic diversity of varieties. However, BSPB is working closely with DEFRA and the devolved administrations to reduce and streamline this process. Changes have already been made by DEFRA to how seed for final use, such as trials, is tested and sampled as it comes into the UK, which should help the process.

The methods and regulations involved in exporting seed to EU member nations have become less clear, and although we have equivalence on certified seed with the EU there is very little alignment on requirements between countries. BSPB is therefore working with DEFRA, the EU Commission and individual member states to clarify the requirements for importing seed. The aim is to collate a list of issues relevant to specific member states that can be addressed and hopefully overcome. Seed and plant breeding is very much a European industry, and we want this to continue. Importing seed into the UK also carries challenges. The EU chose an immediate start date of 1st January 2021 for SPS requirements. However, the UK opted for a phased entry, starting with higher priority plants. Although this is a welcomed phasing of new checks and procedures it has led to some confusion at UK borders. Working with DEFRA, BSPB has tried to provide increased communication to members importing



seed, hoping to ensure seed supply remains consistent and secure now and in the future. Duties on seed imports and exports between the UK and EU member states has been causing confusion and uncertainty. This has caused some delays at border control, and, in some cases, it has increased the cost for businesses importing seed. BSPB is communicating with businesses and individuals handling the import of goods into the UK about when a duty is due. Clarifying this will help to ensure products are not being held up awaiting a decision. It will also help to prevent against any unnecessary payments being made.

If you are experiencing problems post Brexit and want to discuss these, please let us know and we will do all we can to help.

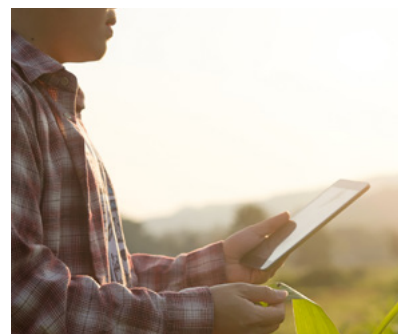
DEFRA GENE EDITING CONSULTATION RECEIVES 6444 SUBMISSIONS

In March DEFRA put forward a public consultation to gather opinion on the debate about whether gene editing (GE) should be regulated in the same way as genetically modified organisms (GMOs). BSPB welcomed this consultation and hopes that the results to the questions it has posed will reflect positively on the fundamental differences between GE and GMOs.

The results will be published later this summer and DEFRA has received 6444 submissions which highlights the importance of GE and this legislation to food and farming in the UK. BSPB supports new breeding techniques such as gene editing as these new technologies help us accelerate and improve changes that occur naturally over time. GE has the potential to make producing abundant, healthy food part of reducing the environmental impact of a

growing global population. By improving the natural breeding process, GE can help the UK to reach climate and biodiversity goals. It could also have the potential to produce pest and disease resistant crop varieties that can adjust to future climate changes.

This was supported and shared in the recently published EU Commission study on New Breeding Techniques. The study highlighted that the current legislation for these technologies is not fit for purpose and



suggested that GE has the potential to support the EU's farm to folk and biodiversity strategies.

BSPB is hopeful that the distinction between GE and GMOs will be clearly identified and that this will lead to restrictions being lifted. Should this happen, it will offer a huge boost to members and represent a significant change in policy that BSPB believes will only help UK farming and food production.

TIGRR REPORT IS A 'WAKE UP' CALL

The Prime Minister's Task Force on Innovation, Growth and Regulatory Reform (TIGRR), has suggested that the UK government should support farmers and growers with the adoption of gene edited crops, particularly those which help the transition away from agrochemicals to naturally occurring biological resilience.

TIGRR was set up earlier this year to identify post-Brexit regulatory changes which could unlock the potential for sustainable economic growth and innovation. BSPB has welcomed advice in a report that reflects on the importance of genetic innovation to help the UK fulfil its sustainable agriculture goals.

The Brexit dividends for UK-based plant breeders have been in short supply to date. BSPB is

aware that members are facing increased costs, bureaucracy and uncertainty while operating in a much smaller marketplace. The aim is to work with those who can influence policy and act on behalf of members to amend the definition section 106 of the Environmental Protection Act 1990. This will enable simple gene edited crops, which could have been produced through conventional breeding, to be regulated in the same way as other varieties.

BSPB sees this report as a timely reminder to the government that the UK is serious about genetic science and innovation. It also demonstrates that the UK can align its rules with the science-based regulatory stance of other countries around the world to strengthen its position as a global hub for investment and research.

NEW NOLEPPA STUDY

Steffen Noleppa published a report that illustrates the socio-economic and environmental value of plant breeding to farming and food production. The research considers the impact that plant breeding has had on crop production since the turn of the millennium and offers some very encouraging conclusions and data

The report claims that plant breeding has directly led to an increase in the yield of arable crops in Europe and that on average production would have been more than 20 percent lower in 2020 without the genetic crop improvements that have been implanted since the beginning of the millennium. More specifically it identifies increases of 53 million tons of cereals and 8 million tons of oilseeds that have been produced because of modern plant breeding methods. Here are some more of the key facts, but if you want to read the full study you can find it here <https://hffa-research.com/wp-content/uploads/2021/05/HFFA-Research-The-socio-economic-and-environmental-values-of-plant-breeding-in-the-EU.pdf>

Without 20 years of plant breeding:

- The UK would be a net importer in all arable crops – including potatoes
- Farmer's income would have reduced £17,000 per year
- The UK would need an additional 1.8 million hectares of cropped land
- The UK would have emitted an extra 300 million tonnes of GHG over the last 20 years

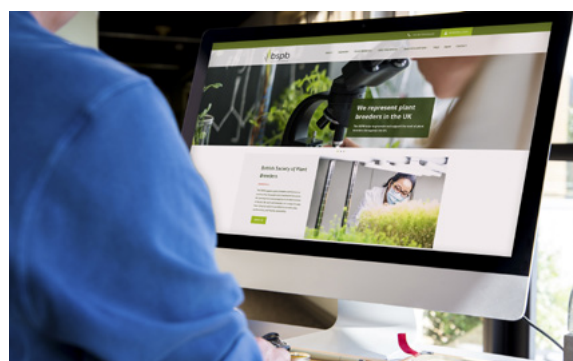
Plant breeding is responsible for:

- More than 1% yield growth in the UK per annum
- This 1% growth per annum was higher than the other EU countries taking part in the study
- Looking forward, plant breeding until 2030 can compensate for "extensification" needed, to produce more from less, more sustainably

A FRESH LOOK FOR A PROSPEROUS FUTURE

BSPB has chosen to breathe new life into the visual identity of organisation. A refreshed logo and website have been developed and will launch in the summer of 2021. The aim is to help farmers recognise the importance of plant breeding and to better educate the agricultural industry on how members are working to help feed the growing population.

The new website has been designed to offer more information in one place. Various small sites were created in the past to tackle the need for information in niche areas. However, these sites have become dated and unsustainable. The new site will cover the various facets of the industry to demonstrate the strength and depth of the plant breeding sector. This will help internet users find more information more quickly and also enable farmers and growers to access a new payment portal.



The new payment portal will simplify farm saved seed payments. BSPB hopes that this will increase the percentage of declarations and member revenue as farmers find out how much easier it is to make declarations online.

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POST BREXIT COMMENT

BSPB has been working closely with members to better understand the effect of Brexit on plant breeding and its affiliated businesses. Craig Thomas, Commercial Manager at CN Seeds has been reflecting on how the plant breeding sector and its UK businesses has been challenged by Brexit and what opportunities lie ahead since the decision to leave the European Union. CEO, Sam Brooke, asked Craig what leaving the EU had changed for CN Seeds.

“We have moved a substantial part of our operation to Europe including machinery and staff because we only see ourselves doing more business with EU nations. Seed we produce in Europe for EU sales is unlikely to be cleaned and treated in the UK due to the logistical expense, paperwork and duty,” he said.

He explained that previously the UK operation had acted as a control point, but that this was no longer sustainable since complications following Brexit had disrupted the business’s working practices.

“Moving seed to EU customers from the UK prior to Brexit took 2-3 days. Now it is very challenging to send seed out of the UK direct to a grower because of the paperwork and delivery complications. Phytosanitary requirements have made it harder to find hauliers that will take single pallets. This has led to our business becoming a taxpayer in Spain which has reduced its tax liabilities in the UK,” he explained.

Sam was interested to know what the biggest hurdles had been for business. Craig suggested that paperwork and adjusting to new customs regulations and procedures had been challenging. CN Seeds has also experienced inconsistencies with plant passports.

“Every country has interpreted the Brexit agreement in its own way. This has brought about confusion, but also opportunity. CN is going from strength to strength and has opened a new 2300 square metre business in Europe and has acquired two warehouses in the last two years. The industry is buoyant and, when the dust finally



■ Craig Thomas, Commercial Manager at CN Seeds

settles, we are optimistic that trade between EU countries and the UK will improve. Being a member of the BSPB has been invaluable during this challenging time and the team has been a great help to CN Seeds throughout,” he concluded.

Robin Wood is vice chair of BSPB and deputy chair of seed specialists Elsoms. He too has reflected on the impact that Brexit has brought to members and the wider agricultural community. “It’s been a year of disruptions throughout the supply chain. Delays at customs and increased costs for importing

and exporting have challenged everyone to work differently and find ways to adjust," he said. In the context of Elsoms he was able to reference examples of how post Brexit changes have affected the business. "Most of our vegetable seed come to the UK via the EU. Delays have led to uncertainty about when and what quantities to buy, to enable sufficient seed to reach farmers when they need it. Too much, and we jeopardise profit through waste. Too little, and we lose out on potential sales," he explained. He too has experienced challenges when sending leaf and seed samples, particularly with phytosanitary certificates. "The process is taking weeks rather than days and the price increase is making small volumes unsustainable. We are finding it easier to move a pallet by boat than a 5-kilo box by air," he said. He believes sampling requirements are also likely to cause a loss breeding material from unique lines that could jeopardise the availability of niche varieties. Staff and resources are both reaching ever higher levels to help manage new measures such as plant passports. He also expects the upcoming changes in chemical approvals to cause further administrative issues. "There is definitely more paperwork and as more regulations loom on the horizon we are preparing for yet more disruption. The changes to chemical approvals may also make shipping treated seed to and from the EU more difficult," he said. Challenges with APHA and DEFRA has led Elsoms and other members to lean on BSPB more to



■ Robin Wood vice chair of BSPB

help represent the industry at an unprecedented time of change and disruption. "The BSPB offers huge reassurance to its members because it is so well placed to negotiate with other organisations and government bodies. The concerns I have raised are largely shared by other members. In some cases, we are in competition but on the subject of Brexit we have come together under the umbrella of BSPB to share our problems and find solutions. I feel this is how we will resolve the challenges post Brexit and I am optimistic that this will happen soon," he concluded.

