



Einbeck, January 20, 2022

## Innovative sugarbeet quality analysis system: British Sugar uses KWS technology

**Developed by KWS, the BEETROMETER® technology measures the sugar content of beets: quickly, precisely and reliably. And British Sugar (part of AB Sugar group), one of the world's largest sugar companies, is now working with the innovative measuring system.**

The sugarbeet quality parameters such as sugar content, recoverable sugar, dry matter play a decisive role in assessing the crop's annual yield. It has always been measured in special beet laboratories, a process that has been in place for years, but requires a significant manual effort compared with the KWS BEETROMETER®. British Sugar is now testing the KWS BEETROMETER® in the current harvest campaign at its Wissington factory. Each year, the company processes about 8 million tons of sugarbeet in Great Britain, in the end producing around 1.2 million tons of sugar. "We're very pleased that, with British Sugar, we've been able to partner with another prominent company that relies on our new technology," says Elton Carvalho, business manager for the BEETROMETER® at KWS. "The KWS BEETROMETER® helps to increase efficiency in analyzing sugarbeets," Carvalho continues. "Using more than 5 million samples, KWS has extensively tested its reliability and objectivity on a wide range of sugarbeet varieties in different regions." Dan Downs, who heads agriculture at British Sugar in Wissington, explains: "In the test phase, we'll use the KWS BEETROMETER® to analyze about 9,000 samples through to the end of our campaign. We expect the new method to considerably simplify the complex process of determining sugar content. and to transmit data quickly and accurately."

In the previous measurement method, the sugarbeets were processed into brei during sample preparation and subsequently analyzed for sugar content and non-sugar substances by using special chemical analysis systems. The KWS BEETROMETER® reliably and accurately determines the quality of beet samples within 20 seconds. This fully automated process developed by KWS involves crumbling the beets into pieces. A near-infrared spectrometer (NIRS) scans the surface of chopped beets in flow and measures the sugar content as well as other quality-determining factors.

The US sugar producer American Crystal Sugar Company was the first company to use the KWS BEETROMETER® commercially. In the meantime, other international sugar producers have chosen to use the new technology. "Around the world, sugarbeet plays an important role in diversified crop rotation as a regional and profitable product," says Dr. Peter Hofmann, who, among other areas, is responsible for the sugarbeet business as a member of the KWS Executive Board. "As a partner to sugarbeet growers and the sugar industry, KWS uses its research and development expertise to provide excellent sugarbeet seed. We also, however, use our position as an independent company to strengthen the entire value chain - and, in the process, sugarbeet cultivation worldwide - by providing innovative technologies."

### **Background information KWS BEETROMETER®**

The BEETROMETER® is a product of the KWS Research and Development department. For 10 years now, KWS has been successfully using the technology for sugarbeet breeding at the company. To determine the sugar content, beets are crumbled into pieces of roughly equal size and compacted on a conveyor belt. The surface is then illuminated with a near-infrared spectrometer (NIRS). A spectrum is recorded every 40 milliseconds. The intensity of the reflected, absorbed light ultimately determines the sugar content of the beets.

### **About British Sugar**

As the sole processor of the UK's beet sugar crop, British Sugar works in partnership with over 3,000 growers and customers to deliver a world-class product that is made to the highest standards every day. British Sugar is the leading producer of sugar for the British and Irish food and beverage markets, processing around eight million tonnes of sugar beet and producing up to 1.2 million tonnes of sugar each year. British Sugar's innovative approach to manufacturing also enables it to create a range of co-products from power generation and bioethanol, to animal feed and much more.

### **About KWS\***

KWS is one of the world's leading plant breeding companies. Around 6,000 employees in 70 countries generated net sales of around €1.3 billion in fiscal 2020/2021. A company with a tradition of family ownership, KWS has operated independently for 165 years. It focuses on plant breeding and the production and sale of seed for corn, sugarbeet, cereals, vegetables, rapeseed and sunflowers. KWS uses leading-edge plant breeding methods to continuously improve yield for farmers and plants' resistance to diseases, pests and abiotic stress. To that end, the company invested more than €250 million last fiscal year in research and development.

\*All indications excluding the results from the companies accounted for using the equity method AGRELIANT GENETICS LLC, AGRELIANT GENETICS INC. and KENFENG – KWS SEEDS CO., LTD.

For more information: [www.kws.com](http://www.kws.com). Follow us on Twitter® at [https://twitter.com/KWS\\_Group](https://twitter.com/KWS_Group).

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