Wageningen, the Netherlands, April 6th, 2017

WITH THE VIRTUAL REALITY BREEDING TOOL KEYGENE BRINGS PHENOTYPING AND CROP INNOVATION TO A NEXT LEVEL

As DNA sequences of crops are unraveled at high speed on daily basis genome information is no longer limited in crop improvement processes. Therefore KeyGene invests significantly in phenotyping, the current bottleneck in plant breeding. KeyGene will do major investments in (1) digital & robotized phenotyping, (2) big data handling & analysis and (3) visualization of phenotypic data.

With respect to visualization of big data and reporting, KeyGene researchers have developed the Virtual Reality Breeding tool. It was successfully introduced and demonstrated last January at the Plant and Animal Genome conference in San Diego. At the Crop Innovation & Business Conference in Amsterdam, held April 2 – 4, the Virtual Reality Breeding tool was explained by KeyGene's CEO Arjen van Tunen. Conference attendees were able to step into the virtual breeding world by a demo in KeyGene's booth. A preview of the virtual reality breeding tool can be seen in this video.

Arjen van Tunen, CEO KeyGene *"A single research project within our digital phenotyping facility with for example 900 plants generates a huge amount of data. The 900 plants will be imaged 9 times a day for 7 days a week. That means that after 7 weeks 396.900 digital images have been produced which have to be analyzed and handed over to the customer. This is truly big data! It requires a complete new approach of data handling and reporting. KeyGene's Virtual Reality Breeding tool is such a new approach."*

KeyGene was of one the first companies that embarked on high throughput automated and robotized phenotyping in the agricultural area. KeyGene has been using its in house high throughput plant phenotyping systems for more than 5 years. This has resulted in new insights in yield improvement, mechanisms of growth compounds and difficult to measure complex traits such as root development. Next to that, digital phenotypes have been used as predictive markers, for example for late season traits. This research has proven to be highly valuable to bridge the gap towards trait elucidation and crop improvement. With further investments in advanced phenotyping, big data handling and visualization tools KeyGene will be able to further expand its expertise to serve its customers with robust and powerful breeding tools that meet future demands for higher crop yield and food security.

Links
Youtube video of the Virtual Reality Breeding tool: https://youtu.be/ou5_Q1mMLZs

About KeyGene
The crop innovation company
KeyGene is the go-to AgBiotech company for higher crop yield & quality. With our intellectual capital, solution driven approach and collaborative spirit, we work for the future of global agriculture with partners in the AgriFood sector. Using our proprietary technologies and non-GM approaches, we support customers with the development of new and improved crops. Our goal is to help organizations with their toughest R&D challenges, combining our cutting edge breeding technologies, bioinformatics & data science expertise and plant-based trait platforms. *www.keygene.com*

For more information

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