Yield10 Bioscience Submits "Am I Regulated?" Letter to USDA-APHIS BRS for CRISPR Genome-Edited C3007 in Camelina to Pave the Way for U.S. Field Tests

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WOBURN, Mass., Jan. 16, 2020 (GLOBE NEWSWIRE) -- Yield10 Bioscience, Inc. (Nasdaq:YTEN), an agricultural bioscience company that uses its “Trait Factory” to develop high value seed traits for the agriculture and food industries, today announced that it has submitted an "Am I Regulated?" letter to USDA-APHIS's Biotechnology Regulatory Services (BRS) to confirm that the use of CRISPR genome-edited trait C3007 in *Camelina sativa* plant lines for increased oil content does not meet the definition of a regulated article under 7 CFR Part 340 regulations. Once regulatory status of the plants is confirmed, Yield10 plans to conduct field tests of CRISPR genome-edited Camelina plants in the United States.

“We have applied considerable effort and resources into the discovery and early development of a portfolio of novel traits with the potential to increase oil content in oilseed crops,” said Dr. Kristi Snell, Ph.D., Chief Science Officer of Yield10 Bioscience. “The creation of a CRISPR genome-edited version of C3007 in Camelina and its progression toward field testing represents an important milestone in our development program. Initial studies with C3007 have been promising and we look forward to testing the trait under field conditions to evaluate the impact this unique trait may have on boosting oil content.”

“Yield10 is transitioning from a company that is developing innovative technologies designed to address global food security through discoveries related to crop yield, into a company that is also developing crop-based products and assets that our peers in the industry deem of high commercial interest,” said Dr. Oliver Peoples, Chief Executive Officer of Yield10 Bioscience. “We believe there is considerable potential for C3007 and, more broadly, technologies that enhance oil biosynthesis which would provide an economic boost to the production of food, energy and livestock feeds.”

Yield10 licensed C3007 from the University of Missouri (“MU”) in mid-2018. The protein encoded by C3007, also known as BADC, is a novel, negative regulator of the enzyme acetyl-CoA carboxylase (ACCase), the key enzyme for producing fatty acids for oil biosynthesis. In pilot studies conducted by MU researchers, reducing activity of the protein encoded by C3007 resulted in significantly increased oil content in seeds. Yield10 researchers have now successfully used CRISPR to reduce the activity of C3007 in Camelina and have seen clear evidence of increased oil content in some lines in laboratory studies. The use of CRISPR may enable an expedited timeline for development and commercialization within the U.S. market based on obtaining confirmation that USDA-APHIS does not consider the lines to be regulated pursuant to 7 CFR part 340. The lines may still be subject to regulation by EPA or FDA.

The CRISPR edited C3007 trait could deliver significant economic value by changing the value equation for the commercialization of identity preserved, specialty oilseed crops where the key value-driver is oil content with improved nutritional profiles or oils, modified for aquaculture feed or industrial markets. These traits may also be used to increase production of edible oils in major oilseed crops such as soybean and canola.

About Yield10 Bioscience

Yield10 Bioscience, Inc. is an agricultural bioscience company which uses its “Trait Factory” to develop high value seed traits for the agriculture and food industries to achieve step-change improvements in crop yield to enhance global food security and develop specialty crop products. Yield10 has an extensive track record of innovation based around optimizing the flow of carbon in living systems. The “Trait Factory” has two components: the “GRAIN” computational modeling platform, which is used to identify specific gene changes designed to improve crop performance, and the deployment of those changes into crops using genome-editing or traditional agricultural biotechnology approaches. The purpose of the “Trait Factory” is to engineer precise alterations to gene activity and the flow of carbon in plants to produce higher yields with lower inputs of land, water or fertilizer. Yield10 is advancing several yield traits it has developed in crops such as canola, soybean, and corn. Yield10 is headquartered in Woburn, MA and has an Oilseeds Center of Excellence in Saskatoon, Canada.

For more information about the Company, please visit the website and follow the Company on Twitter and LinkedIn. (YTEN-G)

Safe Harbor for Forward-Looking Statements

This press release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements in this release do not constitute guarantees of future performance. Investors are cautioned that statements in this press release which are not strictly historical, including, without limitation, statements regarding the Company's ability to achieve a nonregulated status from USDA-APHIS for genome-edited Camelina, the ability of C3007 to increase oil content in oilseed crops and to deliver economic value in other areas, and the possibility of using genome-editing technology to rapidly deploy desirable, novel traits into commercial agricultural crops, constitute forward-looking statements. Such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated, including the risks and uncertainties detailed in Yield10 Bioscience's filings with the Securities and Exchange Commission. Yield10 assumes no obligation to update any forward-looking information contained in this press release or with respect to the matters described herein.

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