Yield10 Bioscience Obtains Nonregulated Status for its Novel CRISPR-Cas9 Triple Gene Edited Camelina Plant Lines to Boost Seed Oil Content

October 2, 2018

--USDA-APHIS Response Marks Clearance of Yield10's First Triple Genome-edited Plant Lines

--Favorable Response Accelerates Path to U.S. Field Trials in 2019

WOBURN, Mass., Oct. 02, 2018 (GLOBE NEWSWIRE) -- Yield10 Bioscience, Inc. (Nasdaq:YTEN), a Company developing new technologies to create step-change improvements in crop yield to enhance global food security, announced today that it has received a positive response from the USDA-APHIS's Biotechnology Regulatory Services (BRS) confirming that its genome-edited *Camelina sativa* plant lines developed using CRISPR-Cas9 for increased oil content are not regulated articles under BRS regulations. This clarification of the regulatory status of the triple genome-edited Camelina plant lines accelerates the path to conducting field trials in the United States in 2019. The Company's submission along with the USDA-APHIS BRS response is posted on the USDA's website .

In May 2018, Yield10 submitted an "Am I Regulated?" letter to the BRS, requesting confirmation of the regulatory status for Camelina plant lines containing combinations of genetic changes to increase oil production based on three gene traits: C3008a, C3008b and C3009. The positive USDA-APHIS response came in the form of a published letter indicating that the plant lines do not meet the definition of a regulated article under 7 CFR Part 340. Yield10 believes that this is the first triple genome-edited plant to receive nonregulated status from USDA-APHIS.

Preliminary results obtained by Yield10 in greenhouse studies suggest that the triple-edited Camelina lines may have the potential to increase oil content and to improve the quality of the oil. Yield10 intends to study these plant lines in field tests planned for 2019 in the U.S. as part of its development program to increase oil and seed yield in Camelina and canola for specialty oils applications.

"Obtaining nonregulated status from USDA-APHIS for our triple gene-edited Camelina lines designed for enhanced oil content represents an important technical and regulatory milestone for our team," said Kristi Snell, Ph.D., Chief Science Officer of Yield10 Bioscience. "This designation also highlights the versatile options we have for developing commercial crops with one or more novel gene traits accessible through genome-editing. We look forward to continuing to develop our oil boosting traits in our Camelina platform, as well as translating them to canola and soybean."

Yield10 Bioscience and Metabolix Oilseeds, Inc., a wholly owned Canadian subsidiary of Yield10 Bioscience, developed six genome-edited Camelina lines each containing three traits: C3008a, C3008b and C3009. The researchers used the CRISPR-Cas9 genome-editing tool to inactivate the three gene targets which together have the potential to increase seed oil content and improve oil quality.

"The achievement of nonregulated status for our triple genome-edited Camelina plant lines highlights our capabilities and expertise in the development of novel genome edited traits for oilseed crops," said Oliver Peoples, Ph.D., Chief Executive Officer of Yield10 Bioscience. "Using CRISPR technology, we have been able to combine, in single plant lines, combinations of specific genetic changes, each of which in all likelihood occurs individually in different plants through natural genetic variation. It would have taken decades of traditional breeding to accomplish these same outcomes."

"Focusing on novel traits accessible through genome-editing has the potential to significantly reduce the expense and timeline to commercialization for developing novel yield traits in key commercial row crops. Based on this new potential path to market enabled through genome-editing, we believe there may be opportunities for future collaborations around our genome-edited yield traits for increasing oil content in oilseed crops," said Dr. Peoples.

The APHIS BRS determination will allow Yield10 Bioscience to conduct field testing of its genome-edited Camelina outside of the Part 340 regulations for genetically engineered organisms. APHIS also noted in its response letter that "the genetic change" of the genome-edited Camelina lines "would not increase its weediness" However, the Company will still be required to follow any EPA or FDA regulations that may be applicable to the modified plant line.

AboutYield10 Bioscience

Yield10 Bioscience, Inc. is focused on developing new technologies to achieve step-change improvements in crop yield to enhance global food security. Yield10 has an extensive track record of innovation based around optimizing the flow of carbon in living systems. Yield10 is leveraging its technology platforms and unique knowledge base to design 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 Camelina, canola, soybean and rice. Yield10 is headquartered in Woburn, MA and has an Oilseeds Center of Excellence, Metabolix Oilseeds, Inc. in Saskatoon, Canada.

For more information about the Company, please visit www.yield10bio.com.

(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 future genome-edited crops and the possibility of using genome-editing technology or technology approaches using plant DNA exclusively to rapidly deploy desirable, novel traits into commercial agricultural crops, the timing for initiation of future testing on the Camelina lines including field tests, and the potential for collaborations, 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 and the evolving landscape of intellectual property rights in the CRISPR area. Yield10 assumes no obligation to update any forward-looking information contained in this press release or with respect to the announcements described herein.

Contacts:
Yield10 Bioscience:
Lynne H. Brum, (617) 682-4693, LBrum@yield10bio.com

Investor Relations Contact:
Amato and Partners, LLC
admin@amatoandpartners.com

Media Inquiries:
Eric Fischgrund
Fischtank Marketing and PR
eric@fischtankpr.com

Source: Yield10 Bioscience, Inc.