



## Yield10 Bioscience Field Test Results Show Seed Oil Content Increase in Camelina and Canola

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### Increasing Oil Content in Oilseed Crops is Required to Meet the Projected Demand for Renewable Diesel

WOBURN, Mass., March 01, 2022 (GLOBE NEWSWIRE) -- Yield10 Bioscience, Inc. (Nasdaq:YTEN) ("Yield10" or the "Company"), an agricultural bioscience company, today announced that 2021 field test results show that the trait C3020 tested in Camelina and C3007 tested in canola produce increases in seed oil content. Further field testing of these novel oil content traits is planned in spring 2022.

#### Summary of 2021 Field Test results for C3020 and C3007

**C3020:** Yield10 tested C3020 Camelina lines for the first time in its 2021 Field Test program. In field testing, the best performing Camelina lines showed an increase in seed oil content of up to 9% as compared to control plants, a result comparable to the 10% increase in oil content produced in greenhouse studies. Yield10 plans to include Camelina C3020 lines in its 2022 field testing program to collect additional oil content and seed yield data after obtaining permits from regulatory agencies.

**C3007:** The CRISPR genome-edited C3007 trait was field tested in canola for the first time in 2021. The best performing C3007 canola lines showed an increase in seed oil content of approximately 5%. In greenhouse studies, the C3007 canola trait produced an increase in oil content in the range of 5% as well as an increase in seed yield of up to 17%. The collection of seed yield data in the 2021 field tests was challenging due to the warm weather conditions at the site tested. USDA-APHIS has previously determined that [Yield10's canola C3007 lines](#) do not meet the definition of a regulated article under 7CFR part 340.

"Yield10 is developing a leading portfolio of novel traits designed to increase seed oil content in Camelina and major oilseed crops such as soybean and canola," said Kristi Snell, Ph.D., Chief Science Officer of Yield10 Bioscience. "The data generated in our 2021 field test program show that C3020 and C3007 boost oil content in Camelina and canola, respectively. We believe these traits may represent important new pathways to boost oil production, and their successful deployment would increase the economic value of oilseed crops."

"There is significant growth projected in the market for vegetable oil with demand driven by significant investments in renewable diesel requiring low-carbon oil feedstocks," said Oliver Peoples, Ph.D., Chief Executive Officer of Yield10 Bioscience. "Yield10 is well-positioned to address this market on two fronts. First, we are developing both spring and winter varieties of Camelina to access acreage with the crop and expand oil production. Second, we are using our GRAIN platform to develop a pipeline of trait gene targets for increasing seed yield and boosting oil content in oilseed crops. Further, we have progressed the non-regulated Camelina line E3902 line to the early commercialization stage. In addition, we also anticipate that some of our traits, including those currently being evaluated by major seed companies under research license agreements, as well as more recent oil traits such as C3007 and C3020, may have licensing potential in canola and soybean to support the growing demand for feedstock oil."

#### About Renewable Diesel

As part of the energy transition, a substantial increase in renewable diesel capacity in the United States and Canada is currently underway, with proposed and funded renewable diesel facilities having a total capacity of [more than 5 billion gallons of biofuels per year](#). Renewable diesel expansion has surged due to its low carbon footprint, federal and local subsidies, and its ability to be used as a drop-in replacement for petroleum diesel. Renewable diesel feedstock is supplied mainly from used cooking oil, animal fats (e.g., tallow), and vegetable oil, with the former two feedstock sources in short supply due to limited production capacity. Yield10 therefore expects the increase in renewable diesel feedstock demand over the next few years to be filled by vegetable oils, which itself have a global production of only 50 billion gallons per year. Moreover, a third of vegetable oils produced globally are palm oils, which do not qualify for many biofuels subsidies because of its high carbon footprint. In contrast, Camelina's low carbon footprint, and ability to be grown as a cover crop on otherwise fallow land, make it an attractive choice to fill the renewable diesel feedstock supply gap.

#### Background on C3020

Yield10 identified C3020 among four new genetic targets for increasing seed oil content in crops using its GRAIN ("Gene Ranking Artificial Intelligence Network") platform. Yield10 researchers achieved proof of concept showing that four novel gene targets identified using the GRAIN platform impact seed development and/or oil content. In greenhouse testing C3020 produced a 10% increase in seed oil content when engineered in Camelina. Data obtained from increasing activity of the other three targets, C3019, C3021, and C3022 indicates these represent good targets for CRISPR genome-editing.

#### Background on C3007

Yield10 obtained an exclusive worldwide license to C3007 from the University of Missouri in 2018. The protein encoded by C3007, also known as BADC, is a novel, negative regulator of an essential enzyme acetyl-CoA carboxylase (ACCase) in fatty acid biosynthesis. Its normal function slows down oil biosynthesis such that inhibiting BADC has the effect of allowing more oil biosynthesis to occur. Yield10 modified C3007 using CRISPR genome-editing and has deployed the trait in Camelina and canola to evaluate its ability to boost oil content in seed.

#### About Yield10 Bioscience

Yield10 Bioscience, Inc. is an agricultural bioscience company that is using its differentiated trait gene discovery platform, the "Trait Factory", to develop improved Camelina varieties for the production of proprietary seed products, and to discover high value genetic traits for the agriculture and

food industries. Our goals are to efficiently establish a high value seed products business based on developing superior varieties of Camelina to produce feedstock oils, nutritional oils, and PHA bioplastics, and to license our yield traits to major seed companies for commercialization in major row crops, including corn, soybean and canola. Yield10 is headquartered in Woburn, MA and has an Oilseeds Center of Excellence in Saskatoon, Canada.

For more information about the company, please visit [www.yield10bio.com](http://www.yield10bio.com), or follow the Company on [Twitter](#), [Facebook](#) and [LinkedIn](#).

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### **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 intentions with regard to plans to conduct further field tests of oil content traits in Camelina and canola in spring of 2022, the results and outcome of, and information gathered from, those tests, the ability to use the results of the tests in future studies or licensing activities, whether the new traits will create new pathways to boost oil production in canola and soybean, whether the field tests will advance the development of the new traits toward commercialization, whether the new traits have licensing potential in canola and soybean to support the growing demand for feedstock oil, expectations with regard to the timing of obtaining results of the field tests, and our expectations related to the economic value of oilseed crops and the market for renewable diesel feedstock, 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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