



Fellow Shareholders,

In 2016, we sold our biopolymers assets and restructured the Company around our crop science mission. We completed this transition in January 2017, and changed the name of our company to Yield10 Bioscience, Inc. with the new Nasdaq ticker symbol YTEN. Today, we are an agricultural bioscience company focused on the development of new technologies enabling step-change increases in crop yield to enhance global food security.

Yield10 is targeting a critical unmet need in agriculture based on the future disconnect between agricultural supply and the growing global population. According to a United Nations study, the global population is expected to exceed 9.6 billion people by 2050, resulting in a need for increased global food production to meet this heightened demand. Given the projection for population growth, recent studies show a “yield gap” for major food and feed crops that studies show cannot be addressed by incremental improvements to yield brought about by current technologies.

Yield10 is focused on addressing the yield gap for major crops by utilizing advanced biotechnology strategies to “build better plants,” in which technology is deployed to make the process of photosynthesis in plants more efficient and improve the overall yield of important food crops. Enhancement of the photosynthetic capacity of major crops is a fundamental first step followed by targeting the extra fixed carbon to increase the seed and/or biomass yield depending on the end use of a particular crop .

Our goal is to build a successful agricultural biotechnology company centered on demonstrating the value of our existing pipeline of yield trait genes discovered using our two proprietary technology platforms as we continue to discover additional targets.

### **Technology Platforms and Traits in Development**

We are developing proprietary, breakthrough plant biotechnologies to improve crop productivity and seed yield based on two proprietary discovery platforms:

- “Smart Carbon Grid for Crops Platform” — in which we are working to eliminate bottlenecks in plant photosynthesis and carbon metabolism by harnessing new metabolic capabilities from non-plant systems including microbes and algae, and;
- “T3 Platform” — in which we are leveraging three powerful global regulator genes in plants to control complex regulatory networks and gene cascades resulting in step-change increases in photosynthetic carbon fixation and biomass yields. Molecular genomic analysis of high yielding plants developed using these genes has identified a series of additional crop trait gene targets. Genetic engineering of this new series of crop trait gene targets can be accomplished using only DNA sequences from the crop target species or through genome editing, potentially reducing regulatory costs and timelines.

Under our “Smart Carbon Grid for Crops” technology platform, we have identified the C3000 series of novel yield traits based on establishing new metabolic pathways in crops. We have

tested our lead yield trait gene, C3003, in Camelina in both greenhouse and initial field tests and have reported results from these initial tests. In 2016, we conducted our first Fast Field Test of our lead novel yield trait gene C3003 in Camelina, a model oilseed crop. We reported encouraging results from this study in early 2017, when we reported seeing up to a 23 percent increase in seed yield in our best performing Camelina lines. We are moving this promising trait forward in additional crops including canola, soybean and rice.

Under our “T3 Platform” we have identified the C4000 series of novel yield traits and gene editing targets. This series of gene traits was discovered using our C4 monocot model crop switchgrass, which has the same C4 photosynthesis system as corn, and we expect to progress a select few of the C4000 series traits, in our key crop targets leveraging third party resources for soybean and corn. Internally we are also progressing the C4003 trait gene in rice, a key global food crop.

### **Academic Collaborations**

Yield10 has pursued academic collaborations that have led to the discovery of novel yield trait genes. Researcher Danny Schnell, Ph.D., discovered the C3003 trait in an ARPA-e funded collaborative project at the University of Massachusetts in which Yield10 was a partner. In 2015, Prof. Schnell moved to Michigan State University where he is Chairperson, Department of Plant Biology and remains a collaborator. Heike Sederoff, Ph.D. Professor, Department of Plant and Microbial Biology at North Carolina State University developed the C3004 and C3005 traits with ARPA-e funding which Yield10 is now progressing under a license agreement. Both Dr. Schnell and Dr. Sederoff are members of our Scientific Advisory Board. In early 2017, we took an option to a global license agreement from the University of Missouri. This license covers a genome editing target based on the recent discovery of a key regulatory mechanism controlling oil production in oilseed crops which can be used to increase the oil content. Oil content is the key economic driver in crops such as canola, sunflower and safflower. We plan to exercise this option later in 2017.

### **Financial Results**

We reported a net loss for continuing operations of \$9.2 million for the full year 2016, or \$0.33 cents per share and ended 2016 with \$7.3 million of cash. We expect that cash on hand, together with revenue expected under current government grants, will support our operations into the fourth quarter 2017. We estimate cash usage in 2017 to operate Yield10 will be approximately \$7.5 to \$8.0 million, including anticipated payments for restructuring costs due this year. We will continue to identify ways to access capital through the financial markets, generate revenue through grants and collaborations and manage our expense base. At the end of the year, we had 20 full time employees. We believe that with this profile we can achieve our 2017 milestones, while managing with a lean organizational footprint.

### **Outlook**

Our research and development plan for 2017 is aimed at generating a range of proof points in Camelina, canola, soybean, rice and corn. As part of this plan, we expect to conduct additional field tests of our C3003 trait in Camelina and, for the first time, in canola. We also anticipate reaching additional milestones in 2017 including reporting additional yield data in key crops, forming collaborations, capturing new sources of grant funding and filing for additional intellectual property around our crop science discoveries.

Thank you to our dedicated and talented colleagues who worked so hard to launch Yield10 and are getting us off to a good start in 2017—and thanks as well to our shareholders who have supported us through this transition to Yield10. We will work hard to address the opportunities and challenges ahead to continue earning your support.

Sincerely,

A handwritten signature in black ink, appearing to read "Oliver P. Peoples". The signature is fluid and cursive, with a prominent flourish at the end.

Oliver P. Peoples, Ph.D.  
President & Chief Executive Officer  
Yield10 Bioscience, Inc.  
April 10, 2017