



## Yield10 Bioscience, Inc.

[www.yield10bio.com](http://www.yield10bio.com)

NasdaqCM: YTEN

### Third Quarter 2023 Financial Results and Business Highlights

Nov. 14, 2023

*Sustainable Growth Starts with a Seed*



# Safe Harbor Statement

*The statements made by Yield10 Bioscience, Inc. (the “Company,” “we,” “our” or “us”) herein regarding the Company and its business may be forward-looking in nature and are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements describe the Company’s future plans, projections, strategies and expectations, including statements regarding the availability of sufficient cash resources to continue the Company’s operations, future results of operations and financial position, business strategy, prospective products and technologies, expectations related to research and development and commercialization activities, timing for receiving and reporting results of field tests and likelihood of success, current and future collaborations, regulatory approvals, scalability and potential profitability of Camelina product lines developed by the Company, the potential for technology developed by the Company to provide sustainable alternatives to existing means of omega-3 oil production, and objectives of the Company for the future, and are based on certain assumptions and involve a number of risks and uncertainties, many of which are beyond the control of the Company, including, but not limited to, the risks detailed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022 and other reports filed by the Company with the Securities and Exchange Commission (the “SEC”). Forward-looking statements include all statements which are not historical facts and can generally be identified by terms such as anticipates, believes, could, estimates, intends, may, plans, projects, should, will, would, or the negative of those terms and similar expressions.*

*Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and may be beyond the Company’s control, you should not rely on these statements as predictions of future events. Actual results could differ materially from those projected due to our history of losses, lack of market acceptance of our products and technologies, the complexity of technology development and relevant regulatory processes, market competition, changes in the local and national economies, and various other factors. All forward-looking statements contained herein speak only as of the date hereof, and the Company undertakes no obligation to update any forward-looking statements, whether to reflect new information, events or circumstances after the date hereof or otherwise, except as may be required by law.*



## An Agricultural Bioscience Company

### *Yield10 Strengths*

- ✓ *Deep intellectual property portfolio*
- ✓ *Experienced leadership and BOD*
- ✓ *Leveraging partnerships in key markets*

## Focused on the Oilseed Camelina

### *Using genetics to maximize value of Camelina*

- ✓ *Improved agronomy for large acreages*
- ✓ *Low CI value feedstock for biofuels*
- ✓ *High value Omega-3 oils*



# Yield10: Progress on Key 2023 Business Goals

## Numerous Milestones Achieved in Biofuels, Herbicide Tolerance (HT) and Omega-3

### Biofuels: Demonstrate the value chain from Y10 seed to commercial offtake of grain

- ✓ Successfully established “Camelina Seed Genetics to Biofuel” Platform
- ✓ Generated proceeds from seed shipments to growers and grain shipments to biofuel customer
- ✓ Completed grower contracts for winter 2023 (2024 Q3 harvest)
- ✓ Progressing announced and confidential partnership discussions

Camelina harvest, 2023



### HT: Develop HT and stacked HT Camelina varieties

- ✓ Regulatory applications pending at USDA-APHIS and EPA
- ✓ Reported data on Spring HT, Spring stacked HT; winter stack HT in field testing
- ✓ On track for launch of spring HT as early as 2025, spring & winter HT stack expected to follow

### Omega-3: Develop project timelines and launch plan

- ✓ Exercised option to finalize global, exclusive commercial license with Rothamsted
- ✓ Signed LOI for partnership with BioMar Group, one of the largest aquafeed producers in the world
- ✓ Initiated seed scale-up of EPA8 Camelina in Chile

# Establishing Production – Grain Production and Offtake

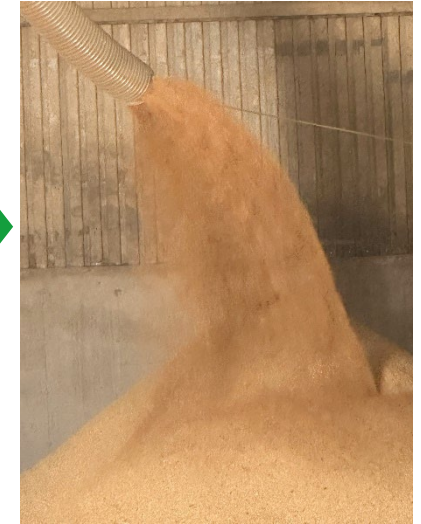
- **Established the value chain** by partnering with private crusher/biorefiner ✓



Spring Camelina 2023



Spring Camelina Grain Harvest



Grain Delivered to Biofuel Facility

- 2023: Established “Camelina Seed Genetics to Biofuel” Platform
- All winter and spring fields harvested
- Winter 2023/2024 grower contracting completed in Q3/Q4 2023





# Progress on Herbicide Trait for Robust Weed Control

## Herbicide Tolerance for weed control

- Provide state-of-the-art broadleaf weed control for growers
  - Designed to increase yield by reducing weed pressure
  - Designed to enable growers to leverage HT Camelina to manage their crop rotations
  - USDA-APHIS has determined that our HT Camelina is not subject to regulation
  - Response pending from EPA

## Anticipated Timeline and Milestones for HT Camelina Development

		2022	2023	2024	2025
<b>HT Trait Development</b>	Trait Validation Field trials	✓ →	✓ →	✓ →	→
<b>Regulatory</b>	RSR USDA-APHIS (est.)	→	→	✓	
	EPA label amendment (est.)	→	→	→	
	Self determination, meal		→	→	→
	FDA, voluntary submission, meal			→	→
<b>Commercial</b>	Seed scale up	✓ →	✓ →	✓ →	→
	Commercial launch (targeting ~5,000 ac)				★

### Spring 2022 field trial

Drone image, Lead events identified



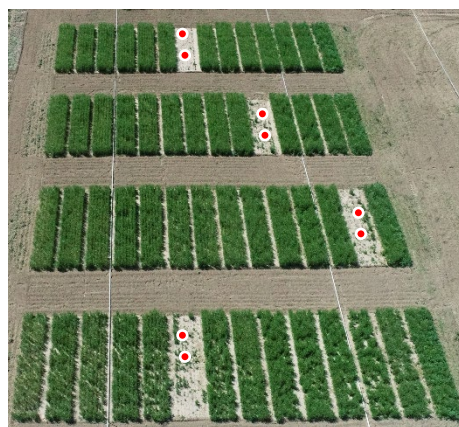
### 2022 Contra-season trial

Robust tolerance of lead event



### 2023 spring HT trial

Lead events & controls



### 2023 spring HT commercial seed scale-up

Lead event



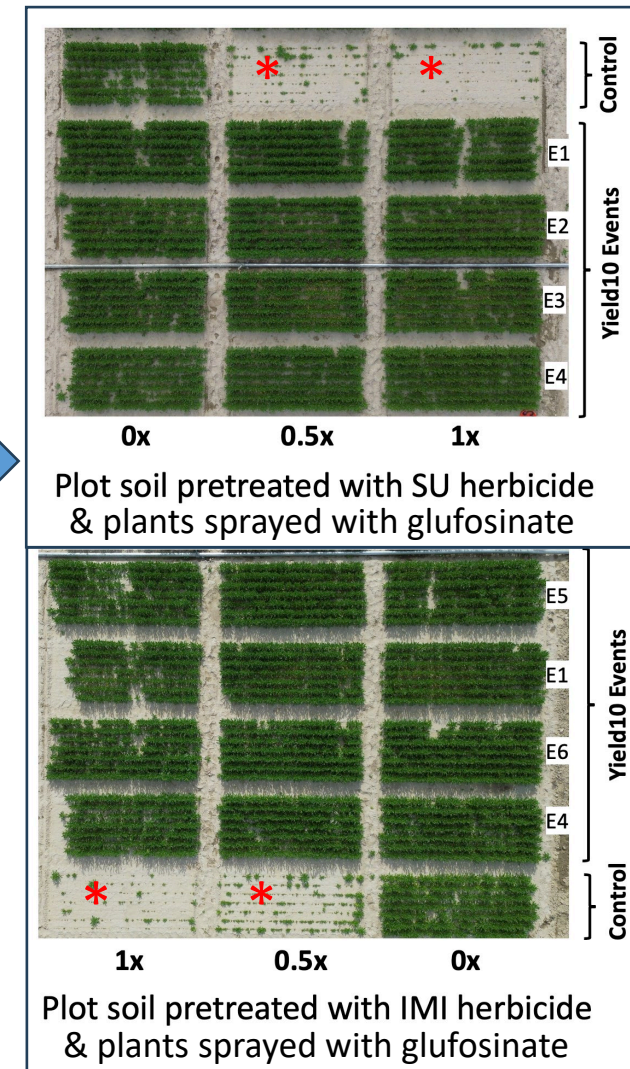
• Red dots in photos, control plots where plants died with herbicide application

# Stacked HT for Weed Control and Soil Residue Tolerance

“Stacked HT” - Combine over-the-top broadleaf herbicide tolerance & Group 2 herbicide soil residue tolerance

## Development of stacked HT Camelina is on track

- Would enable growers to use land previously treated with Group 2 herbicides
  - *Would expand acreage available for growing Camelina*
- Aim to increase revenue by increasing production acres and yield
- ***Spring 2023 – demonstrated tolerance to both broadleaf herbicide application and Group 2 soil residues in field in spring Camelina***
- Selecting lead candidates and back ups for commercialization
- USDA-APHIS has determined that our stacked HT Camelina is not subject to regulation
- Initiating plan to de-regulate meal
- Winter 2023 – conducting field tests of stacked HT winter Camelina for the first time



\* Control Camelina plots are significantly compromised with presence of SU and IMIs in soil based on stand counts.



# Technology Vision: Molecular Stacks

Stacked Traits Designed to Enhance Camelina Crop Performance, Potentially Increasing Revenue and Margin

## Strategy

- Create a pipeline of highly engineered elite Camelina varieties to deliver ongoing performance improvements in agronomics, yield, oil content, meal profile and other desirable attributes
- Deploy novel traits through genome-editing, genetic modifications and breeding to create new varieties
- Deploy combinations of traits for additive effect
- Evaluating C3004, C3007 and C3020 and others
- Commercially protect Camelina varieties through plant variety protection filings and patent filings



**E3902 HT stack is a highly engineered plant**

**Germplasm: elite spring**

**8 edits: C3008a, C3008b, C3009**

**GM: gene for glufosinate tolerance**

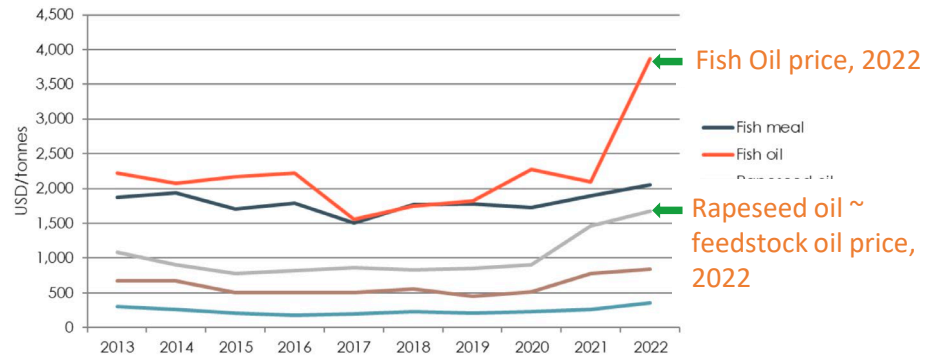
**GM: mutated gene for IMI & SU tolerance**



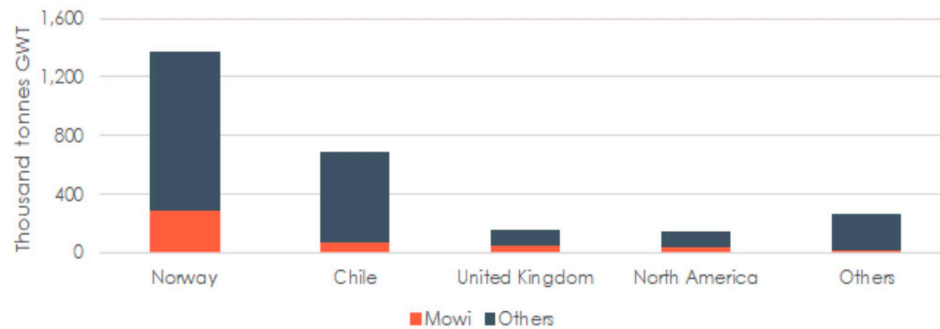
# Yield10 - Omega-3 Oil Opportunity

## Tailwinds for sustainable, scalable sources of omega-3 oils

### Aquafeed Raw Material Market



### Farmed Atlantic Salmon Harvest Volume, 2022



**Norwegian authorities approve genetically modified rapeseed oil for use in fish feed <sup>3</sup>**

The Aquaterra product has been produced by Nuseed, which is owned by Australia-listed Nufarm.

June, 2023

PRESS RELEASE — Jul 26, 2023

**Yield10 Bioscience Files Request for Regulatory Status Review under USDA-APHIS's SECURE Rule Covering Elite Camelina Designed to Produce the EPA Component of Omega-3 Oil**

July, 2023

Market Demand

Positive Regulatory Environment

Fish Oil Supply

**Peru cancels all-important first anchovy fishing season <sup>1</sup>**

The findings of an exploratory fishing expedition have sent a warning shot across the bow of one of the world's most important aquaculture feed fisheries.

June, 2023

**Peru starts second anchovy fishery season after cancellation of first cost seafood industry over USD 1 billion**

By Christian Molinari  
October 27, 2023



Peru produces about 20% of global fish oil<sup>2</sup>

- <https://www.intrafish.com/fisheries/peru-cancels-all-important-first-anchovy-fishing-season/2-1-1464552>
- <https://www.seafoodsource.com/news/supply-trade/global-fishmeal-production-up-30-percent-in-2023-iff-finds#:~:text=%E2%80%9CThis%20announcement%20is%20of%20strategic,fishmeal%20and%20fish%20oil%20production.%E2%80%9D>
- <https://www.seafoodsource.com/news/aquaculture/aquaterra-s-omega-3-oil-gets-norwegian-approval-for-use-in-aquafeed>
- [Peru starts second anchovy fishery season after cancellation of first cost seafood industry over USD 1 billion | SeafoodSource](#)

# Yield10 - Omega-3 Camelina Development Status

- **EPA8 Camelina line – 16% up to 29% EPA in oil,**
  - Target pharma/nutraceutical markets
  - Filed RSR with USDA-APHIS for regulatory approval
  - Scale-up ongoing in South America
  - HT varieties in development pipeline
- **DHA1 Camelina line - ~ 10% EPA + 10% DHA**
  - Target market for drop-in fish oil replacement in aquafeed
  - RSR document in preparation for filing with USDA-APHIS
  - Scale-up planned to begin in Spring 2024
  - HT varieties planned
- **Pipeline of HT varieties and product improvements**

Yield10's Camelina Omega-3 vs Fish Oil and Competitors

Comparison Point	Fish Oil	Yield10's Camelina Omega-3	Competitors' Canola Omega-3	Competitors' Algae Omega-3
Cost	\$\$	\$ Vegetable Oil Costs	\$ Vegetable Oil Costs	\$\$\$\$ ~3-4x more expensive
EPA/DHA Levels <sup>4</sup>	✓	✓ ~9% EPA, 11% DHA	✗ EPA or DHA	✓
Ability to Meet Demand	✗ Overfishing	✓ Crops are Scalable	✓ Crops are Scalable	✗ High CapEx
Sustainability	✗ Overfishing	✓	✓	⚡ Higher CO2 Emissions
Crop Segregation Risks	✓	✓ Not a Food Crop	✗ Significant Risks	✓

Yield10 BIOSCIENCE			
>>>> 2016-2021 UK, Canada, US	2017-2020 Published Studies	Q4, 2020 -2022	2023
Multi year, multi acre field tests	Product validation in aquafeed & human trials "Camelina DHA 1 oil effectively replaces fish oil"	<ul style="list-style-type: none"> <li>• Yield10 secures commercial rights</li> <li>• Funds RRES R&amp;D program</li> <li>• Assists with patent prosecution</li> </ul>	<ul style="list-style-type: none"> <li>• Yield10 establishes the commercial development plan and program</li> <li>• Business development outreach</li> </ul>
✓	✓	✓	



# Yield10 Q3 2023 Summary Financial Results<sup>1</sup>

## Investment ongoing to achieve key strategic objectives

Operating Results	Q3 2023	Q3 2022	9-months ended 9/30/2023	9-months Ended 9/30/2022
Revenue	—	\$ 0.1 million	<b>\$ 0.1 million</b>	\$ 0.4 million
R&D Expense	<b>\$ 2.2 million</b>	\$ 2.1 million	<b>\$ 6.4 million</b>	\$ 5.9 million
G&A Expense	<b>\$ 1.5 million</b>	\$ 1.5 million	<b>\$ 4.9 million</b>	\$ 4.7 million
Net Loss	<b>\$ 3.7 million</b>	\$ 3.5 million	<b>\$11.2 million</b>	\$ 10.3 million

### Operating Results and Balance Sheet

- Booked first shipments valued at \$0.1M from harvest of Camelina grain as an offset to R&D expense
- \$2.8 M in cash and cash equivalents at the end of third quarter of 2023
- Net operating cash usage of \$2.6 M for the third quarter of 2023
- Estimate total net cash usage of approx. \$12.5 M to \$13 M for FY 2023

<sup>1</sup> Current as of date of conference call on November 14, 2023. Press release, including financial tables, available at [www.yield10bio.com](http://www.yield10bio.com).

# On Track to Achieve Key Milestones in 2023 and Beyond\*

Corporate, Commercial and R&D Milestones	Period
<b>Expand commercial activities targeting the Biofuel market</b> <ul style="list-style-type: none"> <li>- Generate first proceeds in 2023 from Camelina grain under fall 2022/spring 2023 grower contracts</li> <li>- Advance partnership discussions across the biofuel value chain</li> <li>- Complete grower contracts for winter Camelina and offtake of grain to crushers/refiner</li> <li>- Build seed inventory to ramp up contracted acres of spring and winter Camelina</li> </ul>	<b>2023</b> <i>Achieved in Q3</i> <i>Ongoing</i> <i>Achieved in Q3</i> <i>Ongoing</i>
<b>Continue to build industry leading, differentiated Camelina varieties</b> <ul style="list-style-type: none"> <li>- Obtain regulatory clearance for HT and HT Stack Camelina (USDA &amp; EPA)</li> <li>- Generate data demonstrating tolerance in Camelina to target herbicides</li> <li>- Build seed inventory to support launch of HT and stacked HT Camelina</li> <li>- Plant winter and contra season Camelina field trials, including HT, HT stack, yield, and omega-3 traits</li> <li>- Deploy additional traits in Camelina using molecular stacks to expand portfolio of commercial Camelina varieties</li> </ul>	<b>2023</b> <i>Pending</i> <i>Completed</i> <i>Ongoing</i> <i>Ongoing</i> <i>Ongoing</i>
<b>Progress technology and commercial development activities to address key market opportunities in omega-3</b> <ul style="list-style-type: none"> <li>- Obtain regulatory clearance (USDA) for EPA trait for growth of line in the US</li> <li>- File RSR with USDA for EPA+DHA trait for growth of the line in the US</li> <li>- Develop business plan for launch of Omega-3 oils</li> </ul>	<b>2023</b> <i>Pending</i> <i>Ongoing</i> <i>Ongoing</i>
<b>Expand intellectual property portfolio</b>	<b>2023+</b>

\*Subject to availability of sufficient cash resources to continue operations.



# Yield10 Investment Highlights

## An Agricultural Bioscience Company

### LEADERSHIP

- Strong leadership and R&D team  
(Boston, USA and Saskatoon, Canada)
- Experienced Board of Directors

### COMMERCIAL VISION

30 million acres of Camelina

- Camelina grain contracting
- Revenue from seed product  
offtake agreements



## Focused on the Oilseed Camelina

### MARKET FOCUS

- BIOFUEL FEEDSTOCK OIL
- Next – Omega-3 oils
- Future – PHA Bioplastics

### TECHNOLOGY FOCUS

Goals to Increase revenue and margins

- Increase production acres
- Increase harvest value
- Next - higher value omega-3 oil

### EXECUTION FOCUS

- Grower contracts
- Grain/oil Offtake Agreements
- Technology and regulatory  
approvals





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