

Strategies for Increased Seed Oil in Camelina

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Yield10 is currently accelerating the development of *Camelina sativa*, a high yielding oilseed crop, to meet the growing global demand for low carbon intensity vegetable oil feedstocks for renewable diesel and sustainable aviation fuels. There are two types of Camelina, spring and winter, named for their respective growth seasons. Winter Camelina is particularly interesting in that it can be used as a cash cover crop for oil production with the added benefits of reducing nutrient runoff from agricultural fields during the fall and winter months. Yield10 is developing stacked herbicide tolerance traits in Camelina to enable seamless introduction into crop and ag chemical rotations. Based on discussions with farmers, over-the-top spray weed control is a critical need to enable large acreage Camelina production. The Company is also developing disruptive gene technologies to increase Camelina oil production per acre by engineering traits to increase seed yield and/or oil content. These traits are identified by leveraging our unique expertise in metabolic engineering and our GRAIN gene discovery platform with subsequent experimental validation. Elite Yield10 Camelina lines will be used to produce feed stock oil for fuels (renewable diesel, sustainable aviation fuels) and the deployment of an omega-3 oil trait to produce novel oils with high levels of EPA and DHA fatty acids for aquaculture feeds. Results from programs to increase seed oil content in Camelina will be discussed including the development of a line with multiple genome edits for increased oil content.