

Summary for Public Release

Applicant Name: CleanJoule Inc

PI: Mukund Karanjikar PhD

Project Title: Developing Reliable Supply Chain of Camelina and Carinata for SAF

Project Goals: We propose to conduct cultivation studies of wheat-camelina system under no-till farming practice and compare it with baseline of wheat-fallow conventional tilling for production of sustainable aviation fuel. The outcomes are optimal cropping systems that will be recommended to improve soil health, water use efficiency, greenhouse gas mitigation, and biodiversity for pest control. Concurrently, we will evaluate the camelina + soybean relay cropping system in Minnesota, and carinata as a cover crop prior during winter fallow prior to cotton planting in Alabama. We will conduct a full lifecycle analysis (LCA) and techno economic analysis (TEA) for each site's produce along with collecting all relevant data that can inform future guidelines for the management of winter camelina production.

Participants

Dr. Chaofu Lu, Montana State University	Dr. Chengci Chen, Montana State University
Dr. David Mulla, University of Minnesota	Dr. Axel Garcia y Garcia, University of Minnesota
Dr. Vipin Kumar, University of Minnesota	Dr. Zhenong Jin, University of Minnesota
Dr. Desmond Mortley, Tuskegee University	Mr. Lokendra Chauhan, Qen Labs Inc.

Description of the Technology's Impact: Domestic feedstock availability, sustainable feedstock production for SAF, higher income to farmers, improved livelihoods for minority farmers, help meet SAF grand challenge target