



The University of Vermont

April 12, 2021

Ms. Diane Abruzzini  
Mr. Colin Riggs  
Rigorous, LLC  
63 Harvey Road  
Underhill, VT 05489

**Re: Design of High Tunnel Gantry System for Transport Cart and Automated Row Cover System to Assist Small Farm Production, Scalability, and Profitability**

Dear Diane and Colin,

I am writing to confirm my support for and direct involvement in the project you are proposing the NE-SARE Professional Partnership grant program.

One area of my work focuses on protected culture: growing under cover in greenhouses, high tunnels and other structures using a wide range of controls and automation. In my work with small to medium sized farms in the region, movement of materials and management of row cover in protected culture systems is a recurring theme needing attention, innovation, and improved accessibility.

I conducted a survey of growers in the region regarding high tunnels and row cover in 2019 and presented the results at the 2019 New England Fruit and Vegetable Conference. Among the 46 respondents to this survey the mean average of labor dedicated managing row cover was 0.4 person hours per day per 30'x96' tunnel. With most farms using multiple tunnels and with season extension becoming an increasingly popular practice, the management of row cover is an ideal candidate for automation using a system such as the one you have been developing.

With this letter, I affirm that I am prepared to have an active role in the project serving on your research and design review team. I am also ready to help with outreach and educational programs that would help extend your findings to larger audiences beyond the currently identified project participants. I do not require funding for this involvement, it is part of my currently funded work.

I wish you success with your proposal and look forward to continued collaboration with you on this important topic and to successful demonstration of the farm benefits I think it promises.

Sincerely,

Christopher W. Callahan  
Assoc. Ext. Prof. of Ag. Engineering