

Dairy CAMF Success Stories

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Rick Villnave: Using Cover Crops to Protect Soil From Erosion

Dairy Climate Adaptation and Mitigation Fellow Rick Villnave uses cover crops and tile drainage to protect his soil from erosion and improve the soil's health.

As a fellow for the Dairy Climate Adaptation and Mitigation Fellowship (CAMF), **Rick Villnave** focuses on using cover crops to improve his farm's soil health and productivity. Rick owns and operates a Villnave Family Farm in Cortland County, NY. His farm consists of field and vegetable crops, including oats, corn, hay, sweet corn, pumpkins, cabbage, and winter squash. The 250-acre farm has a unique history. Once part of a ski slope, Villnave Family Farm has crop fields that are very steep and highly erodible.

Before joining the fellowship, Rick was unsure how he would fit in as a member of the program. However, he ultimately decided to join the program because he wanted to learn more about the role of climate change in agriculture. The seminars offered by the program helped Rick learn ways to improve his soil health and about grant opportunities available to farmers.

One practice Rick is using to improve his soil health is the use of cover crops. For Rick, the use of cover crops has increased soil moisture and helped hold the soil together, combating the farm's erosion challenges.



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Erosion is the most significant threat that climate change poses to the Villnave Family Farm. In the past, erosion has washed away soils and entire crop yields, necessitating retilling to restore the field to its original level. To prevent this, Rick has begun planting perennial hay as a cover crop to slow the movement of rainwater. He is also working towards utilizing more no-till crop practices, though the expense of replacing his machinery is daunting. Rick has found that not tilling his field protects his fields against erosion during intense rainstorms. Rainstorms have also caused challenges with spillover in his ponds. To reduce the risk of runoff, pollution, and washout, Rick has installed a tile drainage system that safely discharges excess water.



In recent years, Rick has been involved in numerous outreach projects related to his efforts to combat climate change. He has hosted multiple classes of Cornell University students to share his climate-adaptive farming practices.

He has hosted multiple classes of Cornell University students to share his climate-adaptive farming practices. He has also traveled to the Cornell University campus to give a presentation on the damage climate change has caused to his farm and what he has done to adapt. Today, Rick continues to focus on cover crops as a means of reducing risk on the farm. In the future, he plans to implement no-till practices to protect his farm from the increasing threats related to weather variability.

The Climate Adaptation and Mitigation Fellowship (CAMF) supports farmers with climate adaptation and mitigation strategies. The program trains farmers and ag advisors to develop and implement resiliency plans for their farms.

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