

GRADUATE STUDENT CLIMATE ADAPTATION PARTNERS (GRADCAP) WEBINAR SERIES

RAIN, RAIN GO AWAY: EFFECTS OF CHANGING PRECIPITATION ON DAYS SUITABLE FOR AGRICULTURAL FIELDWORK

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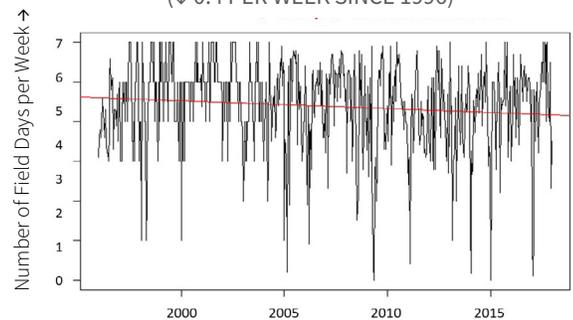
Better understanding of the relationship between rainfall and soil conditions—specifically, whether conditions are suitable for agricultural fieldwork—may aid farmers in climate change risk assessment.

Risks associated with variable weather are a key consideration in farm management. In coming decades, farmers in the Northeast U.S. will experience new challenges and opportunities as a result of climate change. We expect average temperature, precipitation, and prevalence of heavy precipitation events to increase in our region throughout this century. It is unclear, however, how this will impact the number and timing of field working days, or days when soil conditions are warm and dry enough to conduct farm operations.

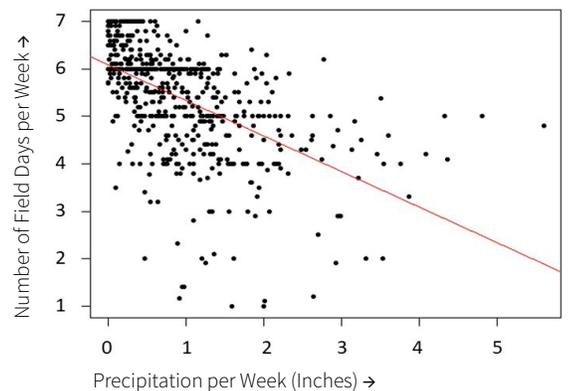
A longer growing season could lead to an increase in field working days per year. However, increased precipitation could result in fewer field working days at crucial times of the year, such as planting or harvest.

We analyzed historical records of days suitable for agricultural field work in comparison to historical precipitation over 21 years in Maine. We found that over this timeframe, the number of field working days per week has decreased by nearly half a day per week on average. We also found that more rain over the course of a week was related to fewer field working days. In the future, we hope to look into changing field working day patterns by season and month of the year, and to construct more sophisticated models predicting field working days under projected climate change scenarios. Ultimately, we hope to create outreach materials to assist farmers in climate change risk assessment and planning.

FEWER FIELD WORKING DAYS IN MAINE
(↓ 0.4 PER WEEK SINCE 1996)



FIELD WORKING DAYS ↓ WITH PRECIPITATION



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