

External Limitations in Maine Agricultural Systems

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My research this summer was originally supposed to focus on how industries external to agriculture affect the decision making of small farms in Maine. These external industries include the feed suppliers, butchers, veterinarians, and farm equipment retailers that farmers rely on. I was aiming to create an understanding of how uncertainty and change in these external industries can impede or limit production on small farms. A thorough understanding of this could, in turn, potentially guide systematic change that helps external industries support rather than impede small scale agriculture. My research was originally supposed to be conducted through interviews and farm visits while living in Maine. However, I was unable to return to Maine and instead lived and conducted my research fellowship in the Otago region of New Zealand. I worked with Professor Starobin to adapt my research to these circumstances, using New Zealand as a comparative example for other questions around Maine agriculture.

At first, my research focused on building a foundational understanding of the differences between Maine and New Zealand agricultural systems. I was unable to conduct farm visits because of COVID-19 and related restrictions from the Institutional Review Board, but I used online sources and interviewed local professors to better understand the history and the relevant issues. The most fundamental difference between Maine and New Zealand is that New Zealand's agricultural system is uniquely export driven. Most farmers therefore operate within large collectives that provide external support and negotiate access to international markets. The New Zealand farms that operate outside of these collectives usually have exceptional circumstances and struggle in ways that are similar to small farms in Maine. I continued my research on agricultural collectives and external support for farmers, but I also worked with Professor Starobin and Beckett Slayton on questions related to how sustainable practices propagate and how farmers receive credit for these sustainable practices.

I plan to continue my research here in New Zealand in an independent study focusing specifically on the propagation of sustainable practices around soil and water quality. My summer research fellowship has allowed me to build theories for the propagation of sustainable practices and has helped me focus my research questions. My independent study will therefore focus on verifying these theories through conversations with farmers and industry professionals. The first case study that I will use is the growing popularity of regenerative agriculture—which is the rehabilitation of soil health through practices such as cover cropping, coplanting, and no till. Research on regenerative agriculture is still emerging, but it has already begun to propagate upwards through agricultural systems from small farms. I will use the propagation of organic practices as a comparative example, focusing on the potentially detrimental effects of certification schemes. The second case study that I will use is the development of sustainable water practices in New Zealand dairy. I will examine how and why large dairy collectives have changed prevailing practices to improve water quality on their dairy farms. My summer research fellowship gave me a deep understanding of the issues surrounding regenerative agriculture and clean dairying, and this understanding will continue to guide my research in the future.

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