Place-based learning as part of Agriculture Food Natural Resource (AFNR) education pedagogy include concepts that highlight the agency of learners to problem-solve: *transdisciplinary* – learning focused on a phenomenon unbound by traditional disciplines; *systems-focused* – learning to recognize and understand the interactions of systems at varying scales related to specific phenomenon; and *problem-based* – learning by understanding, and applying solutions to, problems (Andenoro et al., 2016; Smith & Sobel, 2010). The Next Generation Science Standards provide a grounding framework for students to move from memorizing science to doing science in an applied and innovative manner. The Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting concepts move students toward understanding complex systems and taking action in their world. The Resilient Food Systems Learning Pathway is developed within a conceptual framework of agency-rich adolescent learning. New researchargues that if educational programs on climate change were implemented at scale, "the potential reductions in CO2 emissions would be of similar magnitude to other large-scale mitigation strategies, such as rooftop solar or electric vehicles."
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0206266 .
Overall Millennials are asking for more transparency about where their food is sourced and how it is produced, they associate healthy food with organic, locally sourced, and produced with fair labor practices. Demand for local food has increased significantly. A recent survey conducted by the Stone Barnes Center for Agriculture asked 240 farmers what will happen to their businesses if restaurant and farmer markets demand is down 50% through the summer. 40% of farmers responded that it would result in bankruptcy. In contrast, the Economist recently reported that the food system has proven far more resilient than expected. The fragility is in the economics for farmers livelihoods, businesses, and the unemployment that has led to food insecurity. There momentum to restore soils and improve livelihoods and little disagreement that this is not a good outcome to pursue. Scientists agree that there is potential to use soils to drawdown carbon but the uncertainty over how much and where and the longevity of that pool of carbon is still highly controversial. Science, culture, mindsets, innovation, policy, and disruptive innovations are all leverage points that are needed to support the shift. The recent Forum for the Future report "Scaling Regenerative Agriculture in the US" lists out these leverage points. This report is a signal of the future desired state of the food system and also highlights how relevant the role of education is in supporting the change in mindsets and building capacity for a generation of consumers, policy makers, scientists, farmers, and innovators is to achieve a regenerative food system. In New England forests are part of our resource economy, food system (maple

sugaring), and sense of place. As we intensify food production in the region we need to continue to value our forest system as well as acknowledge how it is changing with climate. (Source: https://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs99.pdf)