## Regenerating soil, regenerating soul: an integral approach to understanding agricultural transformation

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## ABSTRACT ORIGINAL

Understanding what motivates farmers to adopt "climate-smart" regenerative practices is critical for developing the right policies, incentives, outreach, and support mechanisms. This article explores factors that motivated farmers in NSW Australia to transition from conventional to regenerative agriculture (RA), focusing on the role that their perceptions of agrochemicals and the microbiome played. Drawing on integral theory, the article takes a holistic approach to analyzing how farmer interiorities in personal and collective realms interacted with external behavior and the larger social-ecological system in which food and fiber is produced. A key finding is that negative experiences with agrochemicals associated with increasing costs and declining results were an important driver of change. Conversely, positive experiences learning about the microbiome and practicing ecological approaches to fertilization and pest control engendered enthusiasm and commitment to a transition away from high-input agriculture and a transformation in mindset. Further, conviviality associated with communities of practice, e.g. microscope groups, played an important role in the transition process, as farmers solidified new identities and participated in ongoing social learning. Based on these results, I argue that farmers' feelings of kinship with nature (animals, plants, microbes) resulting from learning about and working with soil are underappreciated drivers of behavioral change and powerful leverage points for larger-scale social-ecological transformation. The integral model facilitates recognition of the connections between soil condition, farmers' perceptions of and feelings about its condition, ensuing behavior including participation in new networks, and the creation of new norms, all of which create space for the emergence of institutional and systemic change. © 2021, The Author(s), under exclusive licence to Springer Japan KK, part of Springer Nature.