## Learning about food security through science education

## Alishia A. Valeri Faculty of Education

In science education, the topic of "food" is an important one, from physiological, biochemical and ecological standpoints. At the same time, food insecurity is on the rise worldwide due to a myriad of factors such as climatic instability, rising food prices and unsustainable food production practices. In other words, a broader understanding of the socio-scientific aspects of food can help navigate the existing complexity of the supply of and demand for food (Brown, 2012; Misselhorn, et al., 2012). That said, teachers in particular can contribute to fostering new ways of thinking and engaging with food premised on attaining ecological and sustainably just food systems (Carlsson & Williams, 2008). This presentation will utilize an ecojustice education framework, which states that understanding today's social and ecological issues begins with understanding how we think about these very issues through the language we use on a daily basis, and what ideologies are embedded in these ways of thinking (Bowers, 2001; Martusewicz, Edmundson, & Lupinacci, 2011). This presentation will discuss the ideologies that are discursively associated with "food" as contained within the Ontario Ministry of Education Science and Technology Curriculum documents. Analyzing these ideologies is a means to reveal the ways in which our thinking about food is shaped by the language we use: for example, if our thinking is anthropocentric, progress-oriented and/or community-oriented. Moreover, using an ecojustice-oriented way of teaching positions both the teacher and student of science education to look beyond identifying the scientific aspects of food (e.g. nutritional aspects) towards a focus on the social implications of the language used to describe food—and its security (See Martusewicz, Lupinacci, & Scknakenberg, 2010). In this way, ecojustice theory links with practice by advancing science education as mode for raising awareness of the connection between language and the building of knowledge around food.

## References

- Bowers, C.A. (2001). Toward an eco-justice pedagogy. *Environmental Education Research*, 8 (1), 21-34.doi: 10.1080/13504620120109628
- Brown, L.R. (2012). Full planet, empty plates: The new geopolitics of food security. New York: W.W. Norton & Company.
- Carlsson, L., Williams, P.L. (2008). New approaches to the health promoting school: Participation in sustainable food systems. *Journal of Hunger & Environmental Nutrition* 3 (4), 400-417.
- Martusewicz, R. A., Edmundson, J., & Lupinacci, J. (2011). *Ecojustice Education: Towards Diverse, Democratic, and Sustainable communities*. New York: Routledge (ebook)
- Martusewicz, R., Lupinacci, J., & Scknakenberg, G. (2010). Ecojustice Education for Science Educators. In D.J. Tippins et al (Eds.), *Cultural studies and Environmentalism, Cultural Studies of Science Education*, Vol 3.New York: Springer.
- Ontario Ministry of Education (2008). The Ontario curriculum grades 11 and 12: Science.