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LETTER TO THE EDITOR

Revisiting agricultural science and organic farming

The decision whether to manage agriculture according to organic farming principles or conventional farming is a question bigger than scientific inquiry; it constitutes a political question. Similarly, deciding the regulations governing organic and conventional production does not fall within the pursuit of science. Rather, science should show how different management practices influence the environment. The regulatory framework of organic farming is derived from normative values rather than scientific principles, which now categorizes the production.

McGuire (2017) contend that ideology and science do not blend well. However, researchers inherently possess normative values, which shape their research interests and perspectives. It could be argued that this is only problematic when the goal of the scientific pursuit and ideology crosses, thus becoming activistic. This can harm the scientific process by drawing wrongful conclusions upon poorly constructed experiments, and thus the scientific process in general. All scientific decisions—for example., formulating a research question, designing the study, and analyzing the data—are conducted by humans, with values and experiences influencing their choices, therefore including some normative values (Reed, 2011; Risjord, 2016). While this is generally recognized by social sciences, natural sciences often neglect it.

Analysis of studies comparing the environmental impacts of organic and conventional farming show variation in environmental impact, as for dairy production (Cederberg & Mattsson, 2000; De Boer, 2003; Kristensen et al., 2011; Thomassen et al., 2008). When assessing the two production regimes the production level between the systems is seemingly important. This is because emission or environmental impact are often divided upon the emission per produced product, which as an effect of production levels obtained is favoring higher production. Organic farming utilizes less resources per produced product, but often has a lower productivity. Organic farming, however, often claims other ideologic values besides production, such as health, ecology, fairness, and care (IFOAM, 2005).

Comparison of organic and conventional management also raises the question of whether the production systems are similar enough to be comparable. Both organic and conventional production can be described with the goal to produce goods to sell, while somehow having different aims. Organic farming emphasizes different values, complicating direct statistical comparisons with conventional systems, since these values are not described with a reductionistic approach. The external values in organic production seem to have a cost, often resulting in lower productivity than conventional production.

The reasoning of McGuire (2017), who advocates that organic agriculture should change its means to become environmentally friendly (by increasing yields), could also imply that the conventional production has something to learn from the organic production that is, reducing its input in production without strongly compromising output. The article also possesses a normative opinion that science should change the attitude toward organic farming, while the main role of science is to evaluate the impact of production, rather than being political.

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CONFLICT OF INTEREST STATEMENT

The author declares no conflicts of interest.

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