Paper 2 English 103

Myths and Perception of the Organic Farming Movement

Organic farming. The name alone immediately produces mental pictures in the mind of anyone who hears it. However, the image that is produced is likely vastly different between those who have studied the subject, and those who rely on second-hand information or advertisement. According to Ryan Anderson, Professor of Agriculture at Sauk Valley Community College, "There are many myths surrounding organic and conventionally grown crops." So, what is the current fascination with organic food then? I believe the answer lies in humanities innate distrust in things that we have no knowledge of. Regardless, I think it is high time we have an honest conversation: Organically grown crops are no better than their conventionally grown counterparts.

To make the comparison and to make a judgement on organic crops compared to conventionally grown crops is a multifaceted question. It is important to look at how they stack up against each other not only from a consumer standpoint, but a business standpoint and a environmental standpoint as well. As a consumer, it is important to be able to trust the products you are purchasing. Are the claims of the organic marketing sector true? Are organic foods more nutritional? Are they more natural? As a business, it is important to know that you can profit from your product in an ethical and honest way. When considering the environmental effects, it

is important to consider how an industry or practice interacts with wildlife, water, and soil, as well as how much land is required to create or grow the product.

The first things that many people think of when they think “organic farming” are crops that have been grown without the use of pesticides. However, this is demonstrably untrue. The United States Department of Agriculture(USDA) maintains a list of approved chemicals, both synthetic and nonsynthetic. According to the USDA, for example, sodium hypochlorite is usable as a pesticide. The common name for sodium hypochlorite, as some may recognize, is bleach. Of course, as the USDA has cleared it for use, the application of bleach to consumer products is likely not a health risk. As a note, it should be stated that there are fewer approved pesticides for organic farming than conventional farming, but the fact that there are any at all clearly contradicts the popular notion that organic crops are produced without pesticides. In fact, bleach isn’t even organic, so to speak. It is something that is synthesized, completely contrary to what organic companies would have you believe about what is used on organic farming.

To delve further into pesticide use, copper sulfate is also a popular material used in organic farming. To its defense, it is naturally occurring; however most is synthesized. Beyond that, though, copper sulfate is a fungicide used on many types of crops. Copper has been shown to be relatively safe for humans, but for many other organisms it has not. Most notably, copper is extremely toxic to many variety of earthworms. A Cornell University website on pesticide management states that “Most animal life in soil, including large earthworms, have been eliminated by extensive use of copper containing fungicides in orchards.” Many no till farming operations rely on earthworms to help alleviate compaction of the soil year after year, and all farms benefit from the additional organic matter earthworms make available in the soil.

To reflect on this use of non-organic pesticide in organic farming, it should be made clear of the logic here: organically sourced materials are superior, except when they aren't. If the use of organic-only materials aren't an absolute necessity when growing these crops, then how can we condemn the conventional farmer for using scientifically sound materials as pesticides, especially when they are specifically formulated to target certain pests and do a better job at eliminating those pests? How can we find the foods grown by the organic farmer to be of higher quality, when they too have been contaminated by those pesky synthetic pesticides? Especially a pesticide that is known to be a danger to most forms of life? Perhaps organic farming makes up for what it clearly lacks in being only organic materials somewhere else.

Another long-held belief of many of those who support organic farming is that the seeds, and therefore the crops, are natural and not designed. This is an interesting claim because it seems to drive at the fact that natural means safe. When you look at all natural things, however, it becomes immediately apparent that natural and safe are not interchangeable. Arsenic, for example, is completely natural. As it turns out, arsenic is extremely toxic. Another possible approach to this is that organic food is natural and safe, independently of one another. Perhaps the meaning behind natural is that it hasn't been fundamentally altered by humans.

According to Matt Smith, National Program Leader of Sustainable Agriculture Systems, "ARS's [Agricultural Research Service] work[s] on new plant varieties that are more resistant to pests and drought…[they] will not need to be treated…[as such] will be more useful to organic farmers"(2). This very clearly points out that organic crops can, and typically are, intentionally hybridized. Smith also goes on to say that these very same hybrids will likely be used in conventional farming as well, since they have less need for chemical application, thus being cheaper to produce. Of course, there are conventional crops with transgenic properties, but they

are few and far between. The most notable type of crop is corn, of which nearly all in the United States is transgenic.

So, organic crops aren't 100% organically sourced, aren't free from pesticides, and are intentionally bred for the the same reasons conventional crops are. The pattern seems to show that there are virtually no differences between the two. The next best place to look may be a better nutritional value.

When first thinking about these claims, it is hard to distinguish why one might believe that organic food might be more nutritious. It seems counterintuitive that any work that science may have done to alter a crop would have a reduction in quality of the crop. Ryan Anderson states that "There is no known double-blind peer reviewed research studies that have found any added nutritional value of organic vs conventional food." This is a very typical opinion of many scholars in agriculture. It's very unusual to find a hardline stance one way or the other, because science is rarely in the business of making such bold claims. Instead, most literature says that there is no difference one way or another. Jack L. Roberts, author of numerous educational books for students and teachers, writes that " Twenty-three categories of nutrients were analyzed. Twenty categories showed no significant differences between nutrient content between organically grown and conventionally grown products" (48-49). Roberts interpreted these results from a study from American Journal of Clinical Nutrition. Overall, it seems the final conclusion drawn from this study seems to fall in line completely with that of Dr Anderson: there is no significant between the two.

So far, organic crops have completely fallen short of the many wondrous claims by those that support it. Perhaps this comes as no surprise to those that have previously studied the

subject, as wondrous claims require wondrous evidence. There is one more avenue that could possibly be searched before offering a full review of the findings; that of environmental impacts.

The environmental impacts of farming are far to oft forgotten, but farming has an enormous ecological effect. It can have a large carbon footprint, destroy entire ecosystems through deforestation, it has the potential for waste runoff of pesticides and fertilizers, and in general it take a lot of space to grow the food required to feed the world. Even though it is typically forgotten in the overall discussion, if organic farming has some type of advantage over conventional farming as far as environmental impact is concerned, it may still have a case to make in the grander scheme of things.

When looking at environmental impacts, there are two major issues which need to be recognized: land use and contribution to greenhouse gasses. With an ever-expanding global population, crop yields must be ever-increasing to mitigate land requirements for crops. Greenhouse gasses are those that contribute to the warming of our planet, resulting in climate change.

The best way to tackle land use is to compare yield averages of organic crops compared to conventional crops. Ryan Anderson, commenting on the environmental impacts of farming, states that “we also know organic crops require more land and more resources to produce the same amount of crops”. This is certainly an issue, as we are losing farmland to development. Another downside to this is deforestation. Historically, when people needed land for farming, we just slash and burn whatever is in our way. This has been a large problem in South America, where they have cleared rainforests to plant fields of soybeans.

The other side of the environmental question is the carbon footprint. Interestingly, literature seems to be somewhat split regarding what kind of effect organic farming will have.

According to Fiona Harvey, enviromental correspondent for The Guardian, “converting land from conventional agriculture to organic production could reduce greenhouse gas emissions..”, reporting on a study from a scientific journal. However, within the same article, she writes that some scientists are skeptical of this report, as it makes assumptions that are not verifiable, particularly regarding what crops will be grown in the future.

Apparently, it seems there is some merit in the idea that organic could have a positive effect on the carbon footprint of farming, however that has yet to be proven. Still, this is the first claim investigated that did not fall flat on its face. On the other hand, at least given current technology and farming practices, more land will be required to grow the same amount of food, which is not sustainable in a growing population. This is especially harmful towards ecosystems around the world that would need to be destroyed in order to expand land allotted for farming procedures.

It seems that organic farming can be shown to have very little in terms of differences from conventional farming, in terms of what is offered by organic crop products in nutritional value, the use of pesticides and breeding techniques, and impact on the environment. So what does this all mean for the businesses that produce and sell organic crops? Not a lot, in reality. Many conventional farmers as well as agricultural figureheads will say that there is plenty of room in the markets for organic produce. Ryan Anderson states that “we certainly see a market for organic crops here and have used organic fertilizers on our field.” This is an important idea, because it shows that for most people involved in agriculture, what matters is results, not whether something is organic or conventional.

Finally, the question becomes is it honest and ethical to sell organic products. The easy answer is yes, because organic produce is no any worse than conventional counterparts. The

complicated answer is somewhat of a mixture. The issue lies in the amount paid for organic crops. Andrea Carlson and Edward Jaenicke, co-authors of a book published by the USDA on the price of organic foods, write that “Retail-level organic price premiums were more than 20 percent of the nonorganic price for all but 1 (spinach) of the 17 products analyzed…” (5). Certainly, there must be some issue with allowing people to pay extra for a product that is in essence no different that anything else. This would be much less of an issue if those that market organic products did not claim things such as pesticide free or natural breeding or better for environment, and instead focused on things that could be substantiated, such as marketing locally grown products, or products that are carefully managed to reduce the impact on the environment, neither of which organic necessarily implies. Such is the way of capitalism, however, and many people pay for the name of a brand in many business sectors.

There is an issue of honesty within the organic products in general within American markets that is often overlooked: imported foods that are labeled organic are do not meet USDA requirements to be certified as organic. Carrie Dennet, Master of Public Health, writes that certain imported products labeled organic do not meet these requirements, and is especially a problem related to food for organic livestock. “In order for milk and meat to be sold as organic, the animals can only eat organic feed”(4). This is a disaster in terms of honesty for the organic market, because even though there are no proven differences between organic and conventional crops, consumers still deserve to get what they pay for, especially when prices for organic variants of products are so much more expensive. According to Edward Jaenicke, Carolyn Dimitri, and Lydia Oberholtzer, the production of organic food in the United States hasn’t increased with increased demand, meaning that we are importing organic labeled food now more

than ever (598). This certainly compounds upon problems with imported food labeled organic not meeting standards.

So, organic farming, organic produce, organic marketing: while there is nothing necessarily wrong with them, looking deeper at what they truly are, leaves a lot to be desired. The perceptions of many consumers do not meet the reality at all. Most people who purchase organic food are doing so because they believe that organic food is pesticide free, which they aren't. They also believe there is some nutritional benefit, while there has never been a study that conclusively supports such an idea. Many believe that the products they are purchasing have a natural breeding history, which they don't as they are intentionally hybridized the same way conventional crops are. They have also been lead to believe that organic farming has less of an environmental impact. While the jury is still out on this particular fact, at least there is some support for this hypothesis in regards to overall carbon footprint.

As demonstrated throughout this entire paper, there is almost no difference between crops that have been grown conventionally and those that are produced organically. Organic marketing techniques have been extremely effective at bamboozling unwary consumers into paying extra for something that, at least to date, has shown to be no different than conventional products. This has lead to a gap between what is perceived by many looking to organic farming as a viable, safer, healthier replacement to conventional food production methods, and the reality behind what it means for a product to be organic. While it is likely doing no more harm on a health or environmental level than conventional food production, it is definitely worth re-examining what we as consumers find acceptable to be good natured marketing, and flat out misleading and dishonest marketing campaign. John Kell, journalist for a prominent magazine, writes "consumers now spend $39 billion a year on organic food (10 times higher than 20 years ago)"

(12). While this demonstrates there is certainly a place in the United States market for organic farming, we have a responsibility as consumers to dig a little deeper beyond labels to find what they truly mean.

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