Should I Become an Organic Farmer?

A Decision Case Study

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A recent college graduate, Brian Otten had plans to continue with advanced education, maybe get a law degree. But recently he had been exploring a completely different option: striking out as an organic farmer. He found himself at a crossroads in life—what factors does Brian need to consider when making the decision whether to jump into organic farming?*

At the age of 25, Brian Otten considered himself a lucky guy. Growing up in Minneapolis, his parents had supported him in his choice of college and a degree in political science at the University of Wisconsin-Madison. He'd enjoyed learning, and knew he had a good base of knowledge. Like many people his age, though, he wasn't entirely sure what he really wanted to do for the rest of his life. Maybe be a teacher, or a planner or a lawyer or a consultant, like some of his PoliSci colleagues?

As Brian considered his options, it soon seemed the most logical choice was continuing on in school to get a law degree. He decided to take the LSAT and applied to several law schools. "I'm so proud of you," his mom said with teary eyes when the acceptance letter from Marquette Law School came. Her father had received his MBA there long ago. Brian made plans to move to Milwaukee.

But, as the summer ticked on, something didn't feel quite right. Brian's thoughts began to swirl. Did he really want to be a lawyer?

* *While these cases describe actual situations, names have been changed to protect the identity of participants.*

With his love of learning he didn't feel intimidated by the schooling. But he had been doing some background reading; lawyers looked at the world in a pretty harsh, clear cut way. Also, there seemed to be a glut of people with law degrees in the marketplace. Was this what he wanted to do for the rest of his life?

Tradeoffs and Opportunities

While Brian was away at college, his family decided to buy 185 acres of good Minnesota crop land as an investment, planning to rent it to a farmer for the short term income. They also expected to gain a long term increase in the land's value over time.

While discussing life with a good friend, Michelle, Brian talked about his family's new land purchase. Michelle knew the struggle Brian was having with his law school decision. "Why don't you go try being a farmer?" Michelle asked. The comment brought back memories of a day when Brian was 18, standing in front of a mirror, thinking, "I wonder if I could be a farmer?" The idea was only fleeting at the time. Farming is not on the list of things people growing up in Minneapolis generally consider as a feasible occupation. But, as Michelle's words

refreshed the memory, Brian began to dream. "Could I learn to farm? Should I take the path I've laid out or trust my gut feeling?" he wondered.

Brian yearned to fulfill a passion in his life; farming was very exciting and attractive to him. He loved being outside, learning new things, working hard and putting together the pieces to solve problems. He thought he'd love the management decisions farming would bring, and the independent kind of life he could lead. What he knew about farming made it seem a good fit for the kind of person he knew himself to be, and the things he liked to do and think about. The idea began to grow but Brian knew he'd be taking a big chance in trying to make a living as a farmer. He didn't have any family who were in farming to ask for help or any equipment to borrow, and no idea of how to go about setting up a farming operation. He didn't have much in the way of money or other resources to start with. How could this possibly work?

His parents were committed to having their new land managed organically. Brian shared his parent's vision, believing organic production is better for the earth, and better for his and others' health. Organic was the only kind of agricultural production that made sense to him. He was attracted to learning and implementing ecologically sound production practices that, as a foundation principle, continually improve the soil and environment (*see EXHIBIT A: Introduction to Organic Practices*).

Brian did some research. He knew that the average starting pay of lawyers in the private sector was $84,000 per year, and that the median salary for all lawyers was about $115,000. Although he'd build up big debts, he'd also make big money when he found a decent position. If he went on to be a lawyer, his life would be stable, he could remain in Minneapolis, and he'd have a stable income. By comparison, an established organic grain farmer in Minnesota might net $60,000 per year, but it could be as low as $20,000 or as high as $100,000 depending on the year. Of course, these aren't numbers from those just starting out. Brian did not know how long it would take to get to this level, or how much he would need to invest as a beginning farmer.

What it Takes to Farm Organically

The list of equipment and other inputs needed to begin farming was long. The Otten's new 185-acre farm was set up for row crops. Brian would need to rent or buy several pieces of equipment, or consider custom hiring some of the fieldwork. Organic production rules mandate crop rotation, meaning he'd eventually need all the equipment to plant and harvest corn, soybeans, hay, and possibly a small grain crop. Examples of what he might need for grain crops include tractor, a chisel plow, row crop planter, small grain drill, a combine, rotary hoe and a field cultivator. Additionally, a hay crop such as alfalfa would require a mower, conditioner, and baler. If he didn't buy, who could he rent from, how much would that cost, and how functional or sustainable would that be? (*See EXHIBIT B: Farming Equipment Costs*). Alternatively, what custom hire services were available and at what cost?

In addition to solving production problems, Brian would need to consider housing if he decided to farm. Brian was living in Minneapolis. The farm was 40 miles away and didn't include a house. Could someone successfully farm while living 40 miles away? If not, where would he live, and how could he,

as a single young man, develop a social life and friends? If he took on farming, what would his life look like in 5 years, 10 years, or 30 years?

Brian had several things working in his favor. His family understood his vacillation with law school, and they were willing to let him start farming some of the 185 acres. They'd even forego the land rental income for a short time to help him get his operation started.

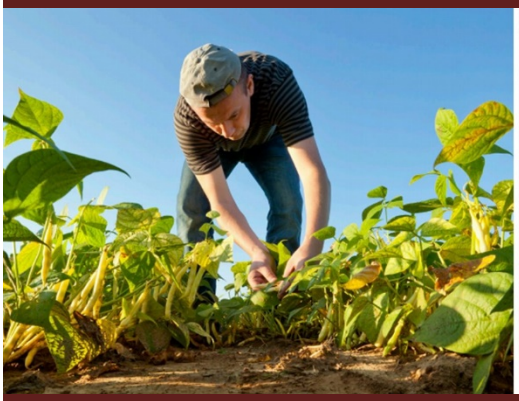
Donny Brown, the 70-year-old farmer the Ottens bought the land from, was willing to continue managing the land in the short term. Brian had met Donny and the two really got along; they shared a lot of the same philosophies about life. Donny was willing to show Brian the basics of crop production, including introductions to various kinds of equipment, but he had no experience with organic production. Brian would need to find other sources of information for that.

In order to fully understand organic crop production, Brian studied the organic regulations from the USDA National Organic Program (*see EXHIBIT A*). Crop rotation is mandated in organic production, and important for weed and pest control and in managing soil fertility. However, it makes farming more complex as each crop has specific equipment, management, fertility, storage and marketing needs.

Brian also found out that there were some good in-person learning opportunities nearby – there was a big annual farming conference put on by the Midwest Organic and Sustainable Education Service where he could learn organic production practices and meet other new organic farmers. And, once he got going, MOSES offered a farmer-to-farmer mentoring program that would connect him with an experienced organic farmer that he could ask about the specifics of organic production, to augment the non-organic practices Donny would be teaching him.

Brian learned that even while he was using organic methods, his land could not be certified as organic until 36 months after conventional use. This meant that even though those first few years of crops were grown using organic methods, they could not be sold as organic and would not receive any organic premiums. For example, conventional corn in November 2014 sold for $3.58 a bushel, while organic corn was $11.01 a bushel. As a result, his first crops likely would not be as profitable. He discovered that information on the economics of starting an organic farm was hard to find. But, the basics were clear: It would be really hard economically to get into farming, particularly if he planned to manage organically (*see EXHIBIT C: Farm Financial Information*). "With all the equipment costs, especially, the first two or three years I'll have to plan on losing money. The question is how to best manage the losses so I can survive into the profit-making years," Brian understood.

Brian knew that he had a lot going for him, but also a lot against him, if he chose to take the leap and manage an organic farm. He spent a lot of time making lists of pros and cons, thinking about what he wanted his life to look like, and what kind of impact he wanted to leave on the world. There were a lot of considerations that needed to be explored before he could make this important decision. Should Brian take the leap, turn away from his option of law school, and take on the learning curve and financial risk of becoming an organic farmer?



Introduction to Organic Practices

The USDA organic regulations describe organic agriculture as the application of a set of cultural, biological, and mechanical practices that support the cycling of on-farm resources, promote ecological balance, and conserve biodiversity. These include maintaining or enhancing soil and water quality; conserving wetlands, woodlands, and wildlife; and avoiding use of synthetic fertilizers, sewage sludge, irradiation, and genetic engineering.

Organic producers use natural processes and materials when developing farming systems—these contribute to soil, crop and livestock nutrition, pest and weed management, attainment of production goals, and conservation of biological diversity.

This factsheet provides an overview of some common practices that organic producers and handlers use to ensure organic integrity and operation sustainability.

Organic Crop Production Practices

Soil Fertility: Crops more easily resist disease, survive drought, and tolerate insects when grown in good soil. Organic crop producers build soil quality by adding compost, animal manures, or green manures. As soil organisms break down these inputs, they convert nutrients into forms plants can absorb and create humus that sustains soil quality. Organic producers must not apply sewage sludge or biosolids to soil. Additionally, organic crop producers use cover crops to protect the soil from wind and water erosion. Soil-conserving practices include the use of cover crops, mulches, conservation tillage, contour plowing, and strip cropping.

Seeds and Planting Stock: Organic crop producers use organic seeds and planting stocks to protect the integrity of their crops. Organic growers may use conventionally grown seeds when an equivalent organic variety is not commercially available, but only if the seeds have not been genetically modified or treated with prohibited substances, such as fungicides.

Crop Rotation: Organic crop producers practice crop rotation (rotating the crops they grow in a field or planting bed over time) to interrupt insect life cycles, suppress soil borne plant diseases, prevent soil erosion, build organic matter, fix nitrogen, and increase farm biodiversity. To effectively reduce insect and disease levels, farmers typically follow one crop with another from a different crop family, then wait a number of years before replanting the initial crop. While crop rotation is also practiced by many conventional farmers, organic producers are required to implement the practice by the USDA organic regulations.

Managing Pests, Weeds, and Diseases: Pest management on organic farms relies on the 'PAMS' strategy: prevention, avoidance, monitoring and suppression. Prevention and avoidance are the first line of defense against pests, weeds, and diseases. If pest or weed suppression becomes necessary, producers often use mechanical and physical practices, such as releasing predatory insects to reduce pest populations or laying down a thick layer of mulch to smother weeds. As a last resort, producers may work with their organic certifier to use an approved pesticide, such as naturally occurring microorganisms, insecticides naturally derived from plants, or one of a few approved synthetic substances.

Maintaining Identity and Integrity of Organic Crops: Organic crop producers are responsible for preventing contact between organic and conventionally-grown crops, as well as contact with prohibited pesticides or fertilizers. Split operations (farms that raise both organic and conventional crops) must make sure that organic crops don't contact prohibited substances through accidental sprays of conventional agrochemicals, spray drift, or

residues on equipment from non-organic fields. Fields from which organic crops are harvested must have defined boundaries and buffer zones, such as hedgerows or crops, separating them from conventional crops and roadways. Prohibited materials cannot be applied to land used for organic cultivation for 36 months prior to harvest of organic crops.

Organic Livestock Production Practices

Livestock Living Conditions and Facilities: Organic livestock producers provide living areas that encourage the health and natural behavior of their animals. Organic practices reflect concerns for animal welfare and a desire to balance productivity with both animal well-being and environmental quality. Organic livestock must have access to outdoor areas, shade, shelter, space for exercise, fresh air, clean drinking water, and direct sunlight. Livestock shelters should give animals protection from extreme temperatures, adequate air circulation and ventilation, and space to exercise.

Grazing: Organic producers must give ruminant animals (e.g., cattle, sheep, and goats) access to pasture during the grazing season. Livestock may not be continuously confined. However, temporary confinement is allowed under specific circumstances, mostly regarding the health and safety of the animal. By providing access to the outdoors, organic livestock producers convert forage, legumes and grasses into meat, milk, wool, and other products. Grazing livestock also provide producers with manure, a very important source of fertility in organic farming systems and an excellent means of recycling nutrients. Rotational grazing may improve forage quantity and quality, while preventing over-grazing.

Animal Health: Organic animal health, like organic crop health, relies on preventative practices and systems. Good genetics are important, as organic livestock producers should select breeds that are well adapted to their particular environment. Balanced nutrition, exercise, and a low-stress environment also contribute to building strong immune systems in animals. Vaccination and other preventative measures are common; antibiotics and growth hormones are prohibited. Organic livestock producers work to manage exposure to disease and parasites through grazing management, proper sanitation, and preventing the introduction of disease agents.

Organic Feed: Organic livestock must eat certified organic feed. Organic feed must be grown and processed by certified organic operations. Similarly, any pastures, forages, and plant -based bedding (such as hay) accessible to livestock must be certified as organically grown and processed. Certain additives, such as vitamins and minerals not produced organically, can be fed to organic livestock in trace amounts, but others, including hormones used to promote growth, are strictly prohibited.

Animal Origin: Organic livestock generally must be raised organically since the last third of gestation. Birds used for poultry or egg production, may come from any source, but must be raised organically beginning the second day of life.

Organic Processing Practices

Organic Ingredients: Under USDA organic regulations, organic processors must use certified organic ingredients (for a minimum of 95% of the product) and only approved non-organic ingredient in products that are labeled organic. Products labeled as "made with organic" specified ingredients may include up to 30% non-organic agricultural ingredients, but all other additives must be approved for organic use. No ingredients or products may be produced using genetic engineering, sewage sludge, or ionizing radiation.

Commingling and Contact: To preserve the integrity of organic ingredients and products, organic processors must:

- Prevent commingling (i.e. mixing) with non-organic ingredients and products throughout processing
- Prevent contact between organic ingredients and non-organic substances, including prohibited sanitizers
- Clean and sanitize processing equipment when changing from non-organic to organic products.; many processors run organic products first, after their cleaning with approved materials

Managing Pests: Similar to pest management on organic farms, organic processing facilities must emphasize prevention over treatment. Organic processors may use approved synthetic substances if all other approaches have failed but must ensure that these substances do not come in contact with the organic products they handle.

Additional Information

For more information on organic practices, visit USDA's Organic Agriculture page at **www.usda.gov/organic** or the Agricultural Marketing Service, National Organic Program's "Is Organic an Option for Me?" page at **www.ams.usda.gov/organicinfo**.

Exhibit B.

Example start-up costs for farm equipment, June 2015.

Implement	Net Cost (New)
200 Horse Power Tractor	$225,000
275 Horse Power Tractor	$284,000
Chisel Plow 23'	$34,000
Field Cultivator 47'	$71,000
Row Crop Planter 12-Row	$102,000
Rotary Mower/Conditioner	$33,000
Round Baler	$40,000

From Lazarus, W.F., Machine Cost Estimates, University of Minnesota Extension, http://www3.extension.umn.edu/sites/default/files/download/Machinery%20Cost%20Estimates%20June%202015.pdf

Exhibit C. Farm Financial Information

New farmers face a challenge in finding information about the financial aspects of setting up a farm. There are very few published numbers available for new farm startups, primarily because each situation involves unique circumstances. Owning or renting property or equipment, paying off loans or paying rent, and many other key elements will vary from farm to farm.

The FinBin Farm Financial Database created by the University of Minnesota Center for Farm Financial Management can help provide some base estimates of average expenses for farms throughout the U.S. Reports can be generated which summarize data for a wide diversity of crops. While these numbers will not be the same as your numbers, they can help you get started with predictions until you generate your own records.

It is highly recommended that you create a business plan before you start a farm. This will include doing financial predictions. Anyone applying for loans will also need to do one- and multiple-year cash flow projections.

For more information visit FinBin at http://www.finbin.umn.edu. Also explore the resource book *Fearless Farm Finances*, with detail on setting up and assessing farm financial management, http://mosesorganic.org/fearless-farm-finances

Expenses and returns for organic corn, soybean, spring wheat, oat, and alfalfa in Minnesota, 2014. Report generated from FINBIN, 2015.

Crop	Total Direct Expenses* per acre	Total Overhead Expenses** per acre	Gross return per acre	Net return per acre
Corn, organic	$566.98	$202.99	$1,294.56	$524.59
Soybean, organic	$392.26	$165.99	$779.96	$221.71
Spring wheat, organic	$341.70	$115.72	$698.68	$241.26
Oats, organic	$283.48	$108.72	$357.16	-35.04
Alfalfa hay, organic	$258.43	$142.75	$583.39	$182.21

* e.g., seed, organic fertilizer, etc.
** e.g., hired labor, taxes, etc.

Teaching Notes:

Case Objectives:

- Understand barriers to young people new to farming, who may not be inheriting a family farm.
- Explore what considerations must be understood to get started in organic crop production.
- Discuss what steps may be taken by government, society, etc. to decrease barriers faced by beginning farmers.

Use of the Case:

This case is developed for use by extension educators, post-secondary instructors, state agency personnel, and others interested in increasing understanding of the organic transition process.

Materials Needed:

- Copies of the decision case study/ies on which to make notes as participants read.
- A laptop and projector to show slides of the farm, the markets, and the farm family. It could also be used to project discussion questions, certification requirements, or other materials of interest.
- A "U" or horseshoe-shaped seating arrangement for maximum participation among participants and the facilitator.

Dealing with Controversy:

Often in the discussion of a decision case study, participants will disagree about certain issues. While this is a mark of an effective case, the facilitator should keep the discussion from becoming argumentative and unproductive. Participants should be reminded that there are many points of view and to keep the discussion atmosphere constructive and nonthreatening. If desired, techniques such as role-playing or role reversal can help participants discuss the issues in a less personal way.

Use the following strategies to facilitate a productive, healthy discussion where controversy may be involved:

- Establish ground rules. These may include: allowing only one person at a time to speak; no one should speak twice before everyone has had a chance to speak once; no criticizing of others' comments, etc.
- Encourage participants to use "I" messages when stating their viewpoint. Avoid using "you" or blaming statements.
- Ask clarifying questions such as, "Why do you think that?" A major communication problem is misunderstanding what was said.
- Ask participants to try to imagine the situation from the other person's point of view. (Role-playing can also help with this.)
- Encourage participants to focus on what they want in the future or where they would like to go, rather than where they have come from or what has happened in the past.

Lesson Outline:

Discussion of this decision case study can last from 20 to 60 minutes, depending on the degree of preparation by the participants and the desired depth of the discussion. The outline below is one example of the way a facilitator might structure the discussion. In general, a decision case study discussion is a forum where participants talk to each other in addition to the facilitator. The format described here is useful when advanced preparation of the participants is not possible. If desired, the facilitator can include additional information on local crop production and social issues to enhance discussion and create a broader understanding of those topics.

- Introduction
- Facilitator introduces the case study and describes the goals and approach to be used
- Focus on a real situation
- Practice problem solving
- No single right answer – each person and situation is unique
- The Decision Case Study
- Facilitator introduces the decision case study.
- Participants read or reread the narrative of the decision case study
- Facilitator divides the participants into small groups of 2-4 people and asks them to discuss questions.
- Participants return to large group and share key points of their discussion
- Facilitator guides a group discussion on the remaining questions
- Conclusion
- Group members may select a preferred option or facilitator may have participants write individually and describe their decision in response to the dilemma and the rational for the response
- Closing comments

Discussion Questions:

Below are examples of the kinds of questions the decision case study facilitator can use to stimulate discussion of the issues in this case. Participants may discuss some of these questions in groups of two to four and some questions as a large group. The questions used can vary depending on your time limit and the issues you wish to discuss. Other questions may be added as needed and appropriate to the situation.

1. What issues led Brian to apply to law school, and then reconsider?

2. What does Brian have in his favor if he decides to farm?

3. What are some challenges Brian is facing as a potential beginning farmer?

4. What does Brian need to learn to succeed at organic farming?

5. How feasible would starting a farm be without his parents' help?

6. What factors could be changed to remove some of the challenges or barriers that Brian, like many other beginning farmers, is facing?

7. Have you been in a position similar to Brian's? What factors have you considered/are considering to make your decision?

The following resolution to the case study, along with an analysis, is offered for the benefit of the instructor in preparing for leading a discussion of the decision case study. The information it contains and the final resolution of the decision case study may or may not be disclosed to discussion participants, at the instructor's discretion. Should the resolution be shared with participants after the discussion takes place, the authors suggest debriefing the epilogue and final decision with the students.

Epilogue:

Brian Otten did decide to learn to farm. He started the first year by working side-by-side with Donny, the farm renter, driving tractor and fixing machinery. The two really hit it off and spent a lot of time talking about farming and life while riding inside the tractor cab. Donny and Brian attended the MOSES Organic Farming Conference together the next spring, where they learned and talked about organic production methods and collected additional resources.

In the second year Brian took over full management of 76 acres. He chose to lease most of his equipment and has found a lot of support from local equipment dealers. He is using savings and took out a loan to buy a few pieces of equipment that he uses regularly, such as a rotary hoe. He plans to buy more equipment as he sells more crops. He is renting a shed to keep the equipment in, but hopes to put a shed up on the farm in the next year or two.

In the third year Brian joined the MOSES Farmer-to-Farmer Mentoring Program and worked with a nearby organic farmer to get tips on specific organic production practices. He has found this especially useful when selecting organic varieties and learning about timing of cultivation for weed management. He applied for organic certification of the land at the end of this year. He would like to start using cover crops in the next few years.

Brian broke even on the farm this last year, and thinks he will make a small profit in the coming crop year. However, he still has lots of equipment to invest in, and so sees that the profits will just go back into the operation for some time yet. Brian is still living in Minneapolis, but hopes to find a house to rent near the farm this next year.

While the financial sustainability of the operation is still a question, Brian is very happy with his choice. He loves learning about the crops and the equipment, and enjoys the day-to-day work. He feels proud that he's had fair success with crop yields. He's looking forward to the farm becoming financially sustainable so he can continue. He is very appreciative of everyone that has helped him to get as far as he has in reaching his dream.