ORGANIC FARMING IN FRANCE: À LA MODE OR A MODE OF LIFE?

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A thesis presented in partial fulfillment of the requirements for completion
Of the Bachelor of Arts degree in International Studies
Croft Institute for International Studies
Sally McDonnell Barksdale Honors College
The University of Mississippi

University, Mississippi

May 2014

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ACKNOWLEDGMENTS

I would like to first thank my three advisers, Dr. Quinney, Dr. Schenck, and Dr. Tonnerre, for their excellent commentary and support not just throughout this thesis but also throughout my undergraduate experience. They all have pushed me in different ways to work harder and achieve certain goals, and they have been immensely reassuring and encouraging. They're also just really cool people.

I would like to thank my parents and friends for letting me rant to them when things were difficult and still allowing me to get them to read my material when I was unsure about it. They have been extremely helpful and supportive in every endeavor of mine throughout life, and I truly could not have done much without their encouragement. They're really cool people too.

Lastly, I would like to thank the Croft Institute for International Studies, the Sally McDonnell Barksdale Honors College, and the Luckyday Program for allowing me to receive one of the best undergraduate educations possible.

Thank you all.

ABSTRACT

Organic farming, as opposed to conventional or traditional farming that employs the use of chemicals, is a method that was begun in the middle of the twentieth century, shortly after the end of World War II. In many ways it is a return to farming practices that were conducted for centuries until about the late 1800's when pesticides and fertilizers were introduced. The rise of organic farming has been occurring all over the world to varying degrees over the past few decades. The French have always had a strong connection to agriculture, food, and the preservation of tradition, so organic farming has a notable presence throughout the country because of its association with these ideals. It is, however, still a small sector in the farming industry, warranting study of its extent. In this thesis I examine its origins, development, regulation, connection with other countries, motivations for its promotion, deterrents to its progress, and projections for its future based on other academics' and my own analysis. I conclude that organic farming in France is certainly rising and shows definite signs of growth in the upcoming years because of consumer interest and governmental support. While it is highly doubtful at this time that organic farming could wholly replace conventional farming, it is likely to create more transparency in the farming industry and lead to the breakdown of large agricultural businesses.

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INTRODUCTION

Agriculture is one of the most essential aspects of life all over the world, and food systems and production practices are constantly in flux, changing to meet the needs and desires of consumers. France has set itself apart for centuries as one area where the food system surpasses necessity and becomes cuisine or even art, some might say. Therefore, it makes sense that one of today's leading oppositional food movements, organic agriculture, holds a lot of ground in France, philosophically and territorially because many of its basic ideals are aimed at creating food that is of the highest possible quality, nutritious, fresh, and attentively made. France, even as a developed state, has a large percentage of land devoted to agriculture, and that land area is becoming increasingly devoted to organic farming. French people readily identify with their high quality of well-sourced food and its balance in taste and health. Because organic food is very frequently thought of as being of superior taste and health quality, it is closely linked to French national and cultural identity.

This thesis topic began in the spring of 2012 in Dr. Anne Quinney's French 304 class where we watched a documentary by Jean-Paul Jaud entitled *Nos Enfants Nous Accuseront* or *Food Beware: The French Organic Revolution*. The film follows a small town, Barjac, Gard, in southern France where the central canteen has transitioned to using solely organically produced foods. These meals go to the school children, elderly, and disabled members of the town. It follows their commencement in this endeavor and their

reactions, motivations, and possible future actions. The film also shows scenes from a UNESCO conference in Paris where people discuss their beliefs and offer evidence for the promotion of organic.

This documentary that spurred this project touches on many of the issues that are more fully examined in this thesis, including context for organic farming's development, arguments for fostering it, issues that it faces, and projections for its future. These matters address the question of whether organic farming in France is "à la mode or a mode of life." That is to say, I analyze the aspects previously stated to determine whether organic farming is a trend, fad, something temporary, or primarily applies to a small minority of the population, or if it seems to be a movement that is developing solid roots and becoming a larger and more ingrained part of daily French life, and what it aims to do in the future.

I have chosen this topic to study because issues such as environmentalism and conservation have always intrigued me. Additionally, while I spent time abroad in Angers, France, I perpetually encountered organic farming via local farmers markets that were packed every week, frequent newspaper articles offering new findings or opinions, and even classroom exercises that incorporated it into the lesson. Despite its buzzword status, organic farming remains a surprisingly small portion of the goods produced in France, with only 3.8 percent of the utilized agricultural area being devoted to it. This discrepancy fueled my interest to study its basis in French society, how it came about, and how it connects to other parts of the world.

My research began by getting a closer look at organic farming by spending two weeks in June of 2013 on an organic farm in Provence via the program World Wide

Operations on Organic Farms (WWOOF), which was recommended to me by my adviser, Dr. Quinney. During those two weeks, I gained a first-hand experience of the production, distribution, and marketing processes of this small and rural farm. Sandrine Pilati, the owner and operator of the establishment, not only taught me how to milk sheep by hand and make her specialty, *confiture du lait de brebis*, she allowed me to interview her on her perspective of organic farming in general and its place in contemporary French culture. Her responses are included in a later section.

The methodology involved more in-depth research, primarily from online sources because printed documents on the matter tend to be outdated, even if they are just a few years old because this is a sector that is continually changing, and the many organizations involved in it are highly active and doing new things every day. My primary sources were the International Federation of Organic Agriculture Movements (IFOAM) and L'Agence Bio because they are the largest European and French organic organizations, and they provide extensive statistics. While those two provided a large portion of information, particularly quantitative information, I also used many outside and independent sources. My aim for this project is to provide as comprehensive of a view of French organic farming as possible. I provide general facts and history while also including many specific examples. This rather middle-sized scope that I attempt to achieve is one that I rarely came across in my research. Most sources covered the movement as a worldwide whole, or they were highly precise to smaller regions of France or particular forms of scientific studies.

Throughout this thesis I employ terms such as "industrial," "conventional," and "traditional" to indicate farming that is not certified organic and uses chemicals. Also, it

is important to note regarding this work and any similar works that it is a complicated endeavor to divide the populations of producers and consumers by organic and conventional. Most people fall into a gray area of occasionally buying organic products in the store in addition to their regular groceries, and there are many farmers, such as the farmer with whom I worked, that are not certified organic, but many or most of their techniques are organic, protective of the environment, and ethical.

Chapter I of this thesis gives an in-depth history of organic agriculture in France. In it I examine how it started around the same time and nearly worldwide, what events and subgroups pushed its development, and how it has evolved for France in particular. Chapter II regards the legislation surrounding organic agriculture. It relays the process policy makers have taken over the past several decades, what the regulations state, and how they affect the farmers and the movement. Also included in this chapter is the European and worldwide frameworks because most countries' agricultural sectors are highly intertwined via trade and to give perspective of where France stands in its organic industry. Chapter III provides all of the reasons why people choose to produce and consume organic goods, and Chapter IV entails the counter-arguments to or criticisms of organic farming. I provide these sections because they are the deciding factors of its influence, size, and pervasiveness as an agricultural method and potential lifestyle. Lastly, the Conclusion offers more general information regarding French peoples' consumption and purchasing habits, their attitudes towards the industry, and their thoughts about their future involvement with it. I also provide the perspectives of several analysts and experts on the future of organic, and I provide my own evaluation of the situation.

CHAPTER I: The History of French Organic Farming

France in certain respects is one of the key countries in agricultural production, especially organic agricultural production. However, farming and its various movements have developed from influences worldwide. That is to say, France has certainly not developed its organic practices independently. Over the decades, there has been perpetual contribution from various countries that have allowed agriculture to be what it is today, organic or not. Therefore, in order to understand how the organic movement is developing in France today, it is necessary to initially examine all of the influences that have contributed to its formation, many of which came from different countries.

Farming is one of the oldest practices and professions and has taken countless forms to produce countless products. Even though it is such a permanent part of life, it remained relatively unchanged for about 12,000 years ("The Development of Agriculture," 1). With the Industrial Revolution, the agricultural world has seen more changes and developments than ever before, including bringing about unprecedented techniques and, in particular, machinery that did truly revolutionize the methods of production. One of the earliest forms of advanced farming machinery was the seed drill invented in 1701 by Jethro Tull. This machine allowed for farmers to reduce their required speed by 30 percent. Within the same century, the plough and threshing machine were also invented by Joseph Rotherham and Andrew Meikle, respectively

(Overton, 122). These innovations laid the foundation of the tractors, mills, and other farming machines that are virtually necessary in today's agricultural practices.

In France, the farming industry was hit by an economic crisis that happened at about the same time as the Industrial Revolution in the 1870's. With these occurrences, the agricultural practice of polyculture was abandoned in exchange for more specialized crops, a definite shift towards more contemporary practices. In the following few decades, there were massive levels of urbanization and population shifts. In order to face the challenges that this migration posed, farmers created unions. These developments instigated government involvement and subvention, which has continued, for example, via the Common Agricultural Policy, a European-wide post-World War II program which concerns itself with the economic and agricultural wellbeing of the EU ("A Look Back…," 1).

Advances in chemistry have also altered the face of agriculture, initially that of the work of Justus von Liebig, a German chemist who is known as "the father of the fertilizer industry" because of his discovery of nitrogen as an essential plant nutrient and for his popularization of the Law of the Minimum.[1] Another crucial chemical development in agriculture is the Haber-Bosch Process, which combines nitrogen and hydrogen to form ammonia. This process was generated in the early twentieth century and was first produced on an industrial scale in 1913 and was used heavily in the German war effort during World War I (Smil, 116-117). Fertilizer generated from ammonia produced by the Haber process is estimated to be responsible for sustaining one-third of the Earth's population (Wolfe, 88). Since these developments, the industry has rapidly

[1] The Law of the Minimum determines that growth is controlled not by the total amount of resources available but by the scarcest resource.

grown to today's production levels of pesticides, insecticides, hormone injections, and other chemical-based products used in farming.

In the early part of the twentieth century, organic farming practices were developing nearly simultaneously in several countries all over the world, primarily due to concern over the maintenance of soil health and preservation. The increased use of chemicals in farming since the First World War caused problems associated with soil health, root development, weakening plants, and erosion. Franklin King, a professor of agricultural physics, was dissatisfied with the policies of the USDA (United States Department of Agriculture) where he worked, so he resigned and travelled to China, Japan, and Korea to learn what he termed "permanent agriculture." As he worked within the first decade or so of the twentieth century, he urged others to adopt these practices as well (Paull, 94). In a similar fashion, the British botanists Sir Albert Howard and his wife Gabrielle Howard combined their formal scientific educations with the practices that they learned in India.[2] Sir Howard is widely considered to be one of the pioneers of organic farming because he was one of the original proponents of what is currently practiced. He is credited with helping start the organic movement because he bridged the gap that was between pre- and post-World War II agricultural philosophies—conservationism and health. He and other scientists and agriculturalists worked together to find a way to combine forestry conservation and health of the soil and subsequently of humans in a way that was as little invasive and depleting to the earth as possible (Barton, 168-179).

[2] India was developing its own organic practices at this time, and they later moved towards more industrial practices, but according to an article from *The Guardian* in 2011, there has been a return to organic practices in recent years.

In Germany at the end of the nineteenth century and throughout the twentieth, there was a small group of people that started their own version of science-based organic agriculture coupled with an entire life style focused on simplicity and rurality, even rejecting technology in some instances. This movement was called *Lebensreform* or Life Reform, and it focused on eating nutritious vegetarian diets more so than necessarily producing all forms of good quality organic products. Several publications came about from this movement that were dedicated to instructing others on nutrition, self-sufficiency, and returning to nature. They include *Soil Fertilization—Plant Growth—Human Health (Bodendüngung—Pflanzenwachstum—Menschengesundheit)* by Gustav Simons and *Natural Farming as the Basis for Natural Living (Der Natürliche Landbau als Grundlage des Natürlichen Lebens)* by Walter Rudolph (Vogt, 12-16). Hans Peter Rusch was a German doctor and microbiologist who contributed to the movement and developed a unique approach to farming. He believed in the existence of "living particles" associated with DNA that switch between healthy and ill states based on the state of the soil and water (18).

During the 1950s and 1960s there was also a rising movement in Switzerland. Hans Müller and his wife Maria created the Swiss Farmer's Movement for a Native Rural Culture (Schwizerische Bauern-Heimatbewegung), which coupled rural living styles with Christian living. Starting in 1946, the Swiss journal *Culture and Politics (Kultur und Politik)* reported on organic-biological agriculture. Farmers, including the Müllers, would write about their experiences, helping to spread ideas to other farmers, including ones living in Germany and Austria (Vogt, 18).

The earliest substantial organic farming movement was a method called biodynamic agriculture, which appeared in 1924 and is still employed largely today. Rudolf Steiner, an Austrian-German philosopher, was beseeched by a group of farmers who were concerned about the sustainability of farming. Steiner presented the world's first speeches based on organic farming where he proposed the idea of biodynamic agriculture. This policy views farms as a holistic entity that functions like a single organism. It encourages use of natural substances, such as manures and compost, local products, and biologically diverse crops. It also includes philosophical elements by emphasizing the spiritual and mystical forces. In his speeches, Steiner did encourage, however, that increased empirical evidence be researched to further study and develop the method of biodynamic agriculture. This research was conducted by the group Experimental Circle of Farmers (Paull, 94).

Biodynamic agriculture, which is described as "plus bio que bio," ("more organic than organic," *translation mine*) (Quoi de neuf la terre: Biodynamie, 7:45) is a practice that prides itself on producing quality food products based on stricter regulations than normal organic practices. According to the Association Romande de Biodynamie, the process focuses much of its attention of the quality of the soil, and it entails a very particular procedure. Cow manure is put into cow horns, and these horns or silica horns are then buried in particular containers throughout the winter months until spring when they are brought out. At this point they have turned into rich peat or compost that is dissolved in a barrel of lukewarm water by stirring it all together by hand for one hour, changing the direction of the spin every minute. This mixture is then sprayed over the crops. The process can only be conducted by an experienced person or by someone new

in the presence of an experienced person. They then take into account the internal and external biological and cosmic rhythms that affect plant growth. This includes the zodiacs, the four elements (earth, wind, fire, and water), and the interplay between the moon, the sun, and the earth. The techniques are detailed by such groups as Le Mouvement de L'Agriculture Bio-Dynamique, the Association Romande de Biodynamie, and La Clef des Terroirs, all of which are active today.

All of the crops that are produced by the biodynamic technique are sold within the regulations and bear the label of Demeter, an international organization specifically for biodynamic production. It includes eighteen members and six guest members from Europe, America, Africa, and New Zealand. It is a nonprofit organization that was started in 1928, very shortly after Steiner introduced the concept of biodynamic agriculture. France has 8,500 certified biodynamic hectares, which is the third largest Demeter participating country, placing behind Germany and Italy. The label, depicted below, allows biodynamic producers to promote their certification and sell their products in certain areas to particular consumers, much in the same way that the AB logo functions for organic foods, which will be discussed more in the following chapter.

The phrase "organic farming" did not appear until 1940 when Walter James, Fourth Baron Northbourne, coined it after the influence of Steiner's work and the idea of a farm being an "organism." He held the first British biodynamic farming conference, the Betteshanger Summer School and Conference. Later, he wrote the book *Look to the Land* where the term "organic farming" was first documented and where he illustrated his philosophy of holistic and natural farming techniques while also encouraging farmers to relearn their techniques and continually improve upon them to aid future generations (Paull, 94). Another notable British farmer was Lady Eve Balfour who worked throughout her life to promote and enhance organic farming. She is most well known for her book *The Living Soil*, published in 1943, and her creation of The Soil Association in 1946 (Gill, 1).

In 1942, the first major periodical devoted to organic farming was created. Jerome Rodale started *Organic Farming and Gardening*, which is still in production today and is simply titled *Organic Gardening*. Rodale combined his background in writing and publishing with his keen interest in healthy living and the growth and consumption of organically produced foods into this now seventy-year-old publication. He started Rodale, Inc. two years before the periodical, and it is still a thriving business, producing other magazines such as *Men's Health, Women's Health,* and *Prevention*. It also publishes books related to healthy living, the most notable example of which is Al Gore's *An Inconvenient Truth* (rodaleinc.com). Stemming from the precedent Rodale set, there exist today many different magazines devoted to organic farming and consumption, including *Mother Earth News, AgVentures,* and *Journal of Sustainable Agriculture*, and these periodicals are not limited solely to the United States ("Organic Periodicals," 1).

Another version of literature that made the organic movement gain ground is the book *Silent Spring* by Rachel Carson. Published in 1962, the international best seller, including in France, is credited with having launched the environmental movement. Carson, a naturalist and scientist, illustrated in minute detail the effects of pesticides and chemicals, primarily DDT (Paull, 95). Her book influenced the creation of the Environmental Protection Agency (EPA) during Nixon's administration, the passing of the Clean Air and Water Acts, the establishment of Earth Day, and the outlawing of DDT. However, some argue that her efforts simply created controversy and started the staunch partisanship in environmentalism that continues today. Carson was accused of being a communist, of "cherry picking" scientific studies that suited her opinions, and of causing the deaths of millions of African children from malaria.[3] Even with the dissention that exists over such matters, her ideas of how, "Our heedless and destructive acts enter into the vast cycles of the earth and in time return to bring hazard to ourselves," has undoubtedly influenced modern society's outlook on farming and the treatment of the land (Griswold, 2-5).

Once support was garnered, organic farming groups started appearing. The first was the Australian Organic Farming and Gardening Society (AOFGS), and it began in October 1944 (Paull, 2). Like the periodicals, there exist many support groups today that are located in many different countries and include producers and consumers alike. One such group is Slow Food, which does support organic agriculture but is more concerned with promoting traditional and regional cuisine. It was started by Carlo Petrini and is based in Italy but is now vastly international with more than 100,000 members (Petrini,

[3] Malaria is spread by mosquitoes that had previously been habitually killed off with DDT, but with the outlawing of its use, the mosquitoes thrived.

xvii). Here in the United States there are the Organic Consumers Association, Organic Trade Association, and The Environmental Working Group, just to name a few. The first French organic organization was Le Groupement de l'Agriculture Biologique de l'Ouest (GABO), which was created in 1958, and it later became l'Association Française d'Agriculture Biologique (AFAB) in 1961.

Even though there exist multitudes of groups that strive to achieve their organic principles, the largest organization in the world devoted to all organic goals is the International Federation of Organic Agriculture Movements (IFOAM), which is a French organization dedicated to four primary principles—health, ecology, fairness, and care. On November 5, 1972, in Versailles, five groups from different countries—Nature et Progrès, France; Rodale Press, USA; Soil Association, United Kingdom; Soil Association of South Africa; and Swedish Biodynamic Association—met in order to form the first international organic organization. Roland Chevriot, the president of Nature et Progrès, and Denis Bourgeois started the group and conducted the meeting. Chevriot first had the idea of conducting an international meeting when he travelled to the United States and met with Bob Rodale, son of Jerome Rodale, mentioned previously. IFOAM was intended to be a non-profit organization without a president or single person leading it, so three individuals headed the program: Roland Chevriot as Treasurer, Denis Bourgeois as Administrator, and Claude Aubert as Secretary (Paull, 95). Aubert was chosen because he wrote the book *L'Agriculture Biologique* that was published in 1970, and it became a significant basis for their ideas. Many notable proponents of organic agriculture contributed to IFOAM as well, including Lady Balfour, Kjell Arman from the Swedish Biodynamic Association, and Masanobu Fukuoka who was the leading Japanese

agriculturalist ("Pioneers," 1). IFOAM started out rather small for an international federation, but it rapidly grew. By 1975, there were fifty members from seventeen countries. By 1984, there were one hundred members from fifty countries. And now there are nearly eight hundred members in one hundred and seventeen countries, according to IFOAM's 2012 Annual Report (Paull, 96).

Starting in the 1950's, young French farmers began shifting their approaches to agriculture. They wanted to redefine it by treating it as a job like any urban career that necessitated an education and perpetual improvement and research while also maintaining it as a family-oriented enterprise. During this time, the practice of "*remembrement*" came about. *Remembrement* was a practice that consolidated land that had been parceled as early as the Middle Ages. It emphasized modernization by way of crop specialization and intensification and increased use of machinery and chemical products. It became a large practice in the 1960's through the 1980's. However, it received backlash starting nearly from its inception because of its environmental toll, particularly its water pollution and soil erosion. Today *remembrement* is highly regulated by the government and has to fulfill compensatory measures such as the preservation and restoration of natural habitats and allowing for impact assessments ("A Look Back…," 3). This method is focused on increasing acreage, shrinking the number of employees, and specializing in farm production; it is still the predominant form of farming in France. Even though France devotes more than half of its territory, including overseas regions, to agriculture in general, only 3.5 percent of the population is employed in this sector. The average farm encompasses around 55 hectares ("Agriculture in France…," 1). Today, 45 percent of all professional farms work with cooperatives or societies, such as GAEC

(Groupement Agricole d'Exploitation en Commun) and EARL (Exploitation Agricole à Responsabilité Limitée). This accounts for 61 percent of cultivated land in France ("Adapting the Agriculture…," 1).

During the 1970's the organic movement in France was rapidly gaining ground because of the increasingly widespread concern about pollution and the limitation of natural resources. Soon after the creation of IFOAM, about a dozen separate groups were started that fostered different aspects of organic farming, such as FNAB (Fédération Nationale de L'Agriculture Biologique), l'ACAB (Association des Conseillers Independents en Agriculture Biologique), and Biocoop. By the 1980's, France's organic agriculture was further developed than any other European country, comprising 40 percent of European organic land. On July 4, 1980, the French government officially recognized organic farming with the Agricultural Reform Law No. 80502. In conjunction with this, the government developed a national committee to head the organization and development of French organic farming. In 1985, the official AB (Agriculture Biologique) state logo was created. This image is placed on all organic foods that meet the European Union and French standards set for organic products. By 1991, The European Union provided a legal framework for organic agriculture *(*Organic Europe). In 2001, the Agence Bio was created. It's full title is L'Agence Française pour le Développement et la Promotion de l'Agriculture Biologique (The French Agency for the Development and the Promotion of Organic Agriculture). This is the official French organization that concerns itself with the standardization, promotion, and regulation of organic agriculture, which will be discussed in the next chapter.

The sale of organic products commenced rather slowly in the 1970s and 1980s and was thus facing sales problems; supply increased but venues for selling were limited. By the mid-1980s, farmers turned to another means of sale: supermarkets. There was debate initially among some farmers as to whether selling through conventional supermarkets took away some of the integrity of organic production, but many conceded. From the onset, there were issues, such as variable supply levels for consumers that were accustomed to uniformity in quality and quantity. In addition, these customers were confused about the wide variety of labels and exactly what they signified, therefore bringing about the legislation and governmentally ordained labels. By the 2000s, supermarkets were the most important sales channels for organic producers throughout Europe because they allowed for lower prices than specialty stores and "one-stop-shopping" (Aschemann, et al, 126-130). This is an ongoing trend that is prominent throughout France. There are supermarkets specifically focused on organic products, such as Bio Generation, Naturalia, and Les Nouveaux Robinson. The more mainstream supermarkets, such as Carrefour and Casino, participate as well by featuring certain sections of their stores that are devoted to organic items in addition to conventional ones. In fact, organic consumers buy at supermarkets 80 percent of the time, as opposed to markets 32 percent of the time, farms 26 percent, specialty stores 25 percent, artisan locations 23 percent, and self-production 6 percent of the time (Baromètre, 89).[4]

Organic farming has had a long and extensive history but is arguably more prominent today than ever before. Studies are ongoing because information such as

[4] These percentages are based on a survey where people indicated all of their preferred organic shopping places, and responses were not limited to one choice. Therefore, the figures exceed 100 percent.

consumer techniques, health benefits, and market effects are still only vaguely understood. For example, there was an article published in October entitled "Qui Sont Les Mangeurs de Bio?" ("Who Are The Consumers of Organic?" *translation mine*), which arrived at the conclusion that the majority of organic consumers are not necessarily rich but are well-educated and are less likely to be overweight. Also, just this year, Stéphane Le Foll, the French Minister of Agriculture, Food Industry, and Forestry, announced a plan to double France's area of land devoted to organic farming by 2017. It will additionally increase research and training in modern growing techniques that aim to maintain quality with the increase in quantity (Trompiz, 1).

Organic farming in France has clearly developed with many influences from various countries, but the French population has adapted it to suit its particular needs and desires, particularly in terms of food. It is still developing and perpetually changing, as will be discussed in later chapters. Today, France produces 19 percent of European agricultural goods ("Agriculture in France…," 2). The organic sector employs more than 36,700 people, has more than 2.47 million hectares (3.8 percent of French Utilized Agricultural Area), and accounted for 4.1 billion euros in 2012 ("Launch of the Organic Ambition…," 1). While these are small numbers in comparison to conventional farming levels, they are strong and worthy of further study. Knowing the history of organic farming is not only useful in itself but contributes to the understanding of where it stands today and how it can develop in the future.

CHAPTER II: Organic Farming Legislation

As mentioned in Chapter I, legislation concerning organic farming, particularly in France, came about several decades after organic farming practices were being employed in Western Europe, but this regulation is vital to the organic market today and has a great impact on it. It was created and is adjusted in order to maintain certain levels of quality and to try to eliminate confusion and externalities. Certainly not every country has legal standards for organic products, but most developed nations do, including all of the European Union, the United States, Canada, Japan, and Australia. Examples of organizations that supervise the organic sector for some of these countries are the National Organic Program[5] for the United States, the Japanese Agricultural Standard, Australian Certified Organic, and of course, L'Agence Bio for France. For each of these nations and their respective organizations that oversee the organic market, the regulations generally include the prohibition of synthetic chemical fertilizers, pesticides, hormones, genetically modified organisms, and sewage; the use and maintenance of land that has been chemical-free for generally at least three years; and periodic on-site checks of crops, lands, and documentation.

[5] The National Organic Program is a part of the United States Department of Agriculture (USDA) and is equivalent to USDA Organic.

Reasons for Legislation

As organic consumption rose, so did the need for uniformity and regulation for multiple reasons. For several decades in the early to mid-1900s when organic farming was beginning, most farmers sold independently, through local cooperatives, or to small-time markets where the customers generally had a more direct connection to the farmers. As production, sale, and consumption increased, the process became more depersonalized. Organic foods are now being sold in supermarkets and even traded internationally, thus increasing the distance between producer and consumer. Variability was a growing concern in terms of the farms that produced the goods and their production techniques, the packaging, the stores' policies, and the crops themselves. Consumers were becoming increasingly confused about the labels and their exact significance, so uniformity had to be put in place. This confusion was not unfounded because many products had similar yet vague labels, such as "green" or "natural." Furthermore, regulation became necessary because of production and labeling fraud. Organic products are typically more expensive than conventional products, potentially several times more expensive, so some distributors were taking advantage of the situation and designating their products as organic or some similar derivative in order to charge more for them.

When organic farming first started appearing after World War II, many European governments disregarded it or even discouraged it because it threatened traditional agricultural developments and technology. However, this sentiment changed as the consumer base for organic products grew, and policy makers saw the benefit of supporting it for a few reasons. At this point in the 1980s, overproduction was a concern

for mainstream agriculture because it drove down prices and profit. Organic farming typically has lower yields, so it helped alleviate this problem of overproduction. It was also seen as beneficial for the public because of its environmental and health advantages. This new industry broadened consumers' options with the hope that it would grow to provide healthy market competition and rural growth (Padel and Lampkin, 94-95).

The Rules and the Labels

France was the first European country to make these considerations concrete and to officially recognize organic farming on June 19, 1980 with the Blois Charter. Soon after on July 4, 1980, the Agricultural Reform Law No. 80502 was put in place. This law expressly includes the promotion of continued education, technology, and market solidarity; the improvement of land quality and use; and the maintenance of consumer standards and food quality (Legifrance.gouv.fr). In 1984, the AB (Agriculture Biologique) logo, displayed below, was introduced. According to the Agence Bio website, 93 percent of French people know the AB brand, and 83 percent of consumers use it as a reference when buying organic products. This mark guarantees the following:

> Food made from ingredients of 100% organic production or at least 95% organic agricultural products in the case of processed products, if the remaining portion is not available in organic and is expressly authorized. The organic production method implementing agronomic practices and friendly livestock balance of nature, the environment and animal welfare, compliance with the regulations in force in France, certification under the supervision of an authorized government agency, and fulfilling the criteria

of independence, impartiality, competence and efficiency as defined by the European standard. (Agence Bio)

According to the 2005 GAIN Report, French labeling based all of its food labeling according to the percentage of organic materials within the product. As stated above, 95 percent or higher can be labeled as organic and can feature the AB logo. If it is less than 95 percent but more than 70 percent, it cannot use the phrase "organic farming" on the packaging but may state, "X percent of the agricultural ingredients were grown in compliance with organic farming methods," and it must further specify which ingredients are organic. Goods that are produced with less than 70 percent organic processes may not use the term "organic" at all. Farms that are in conversion to organic production may specify that on the packaging if the conversion has been underway for at least one year (Journo, 7).

Once regulation began being implemented, specificity became an issue. Therefore, France developed standards for crops and livestock in 1986 and 1992, respectively. Later in November of 2001, the French government instituted L'Agence Française pour le Développement et la Promotion de l'Agriculture Biologique, or known more simply as L'Agence Bio. It is the organization that oversees all of the organic

production in France. Its primary missions include communicating and learning about organic farming and its products, its environmental, social and territorial impact; developing and deepening the national observation of organic farming; facilitating dialogue between partners and contributing to the structuring of sectors, market development, and inter-professional dynamics; managing notifications from producers and other certified operators; and managing the AB brand communication purposes. L'Agence Bio acts with eight organizations that certify contributors, whether they are producers, distributors, processors, or importers, and conduct random and thorough on-site inspections of farms. These groups are Ecocert, Agrocert, Certipaq, Qualité France, Certisud, Alpes Controles, and Qualisud (l'Agence Bio).

In response to increasing label confusion and the need for trade regulation, the European Union began to create legislation on organic farming in conjunction with IFOAM at about the same time that France and other EU nations were developing their own laws. In 1991, it created the EU Regulation 2092/91, which concerns crop production, and in 1999 it created the EU Regulation 1804/99, which is for livestock. These laws have been amended over the years, but the primary system of maintenance is left to individual EU nations (Padel and Lampkin, 97). They were originated on the basis of standards that had already been set. By 1972, Demeter, the biodynamic organization discussed in Chapter I, had formulated a set of international standards for their agricultural practices. In 1976, a general meeting for IFOAM established its common definition for organic farming, and by 1980 their Basic Standards, which are highly

extensive, were formed (Schmid, 154).[6] Today all EU countries must follow Regulation (EC) No. 832/2007, which is based on Demeter's and IFOAM's stipulations (Agence Bio).

Just as France and other European nations have their own official organic logo, so does the European Union as a whole. Known as the "Eurofeuille," displayed below, it signifies approximately the same standards as the AB logo. This updated version became mandatory on July 1, 2010, for prepackaged foods produced within Europe, but it is optional for imported goods.[7] In addition, near the logo the packaging has to include the place of production as "EU Agriculture," "Non-EU Agriculture," or "EU Agriculture/Non EU" with the option to put the specific country if at least 98 percent of the materials originated in that country. In order to be able to use the label, a farm has to be certified organic, and the minimum amount of time is two years of a conversion period from conventional to organic. The image used for the logo is on a green background, obviously signifying the environmental factor for organic foods, and it contains twelve stars in the shape of a leaf, again pointing to the natural significance. The twelve stars are used as an equivalent to the twelve stars on the European flag (Agence Bio).

[6] The most recent version of Basic Standards is available online: http://www.ifoam.org/sites/default/files/page/files/ifoam_norms_version_august_2012_with_cover_0.pdf

[7] More specific regulations concerning the updated logo are available online: http://www.agencebio.org/sites/default/files/upload/documents/3_Espace_Pro/guide_utilisation_Logo_UE.pdf

Government Funding and Support

In 1962, Sicco Mansholt, a Dutch farmer, led the creation of the Common Agricultural Policy (CAP), a fully European policy that aims to maintain food production by ensuring quality food at sufficient levels while controlling prices and promoting rural development. It encompasses all European agriculture, not strictly organic agriculture, and it is the oldest wholly European policy. The CAP is funded by the EU budget, as opposed to nationally based support. Although it has decreased over the years (from 75 percent of the annual budget in 1985 to 45 percent in 2012), it is still the largest EU expenditure, totaling approximately €55 billion currently. With organic legislation appearing in the 1990s, the CAP honed its focus on backing organic production in addition to increased quality control. Specifically, in 1992 it implemented a reform package that requires farmers to assume responsibility for environmental damage and for sustainable practices, while providing income support for these increased demands. Today its concentration, in addition to encouraging organic production and sustainability, is promoting more direct market participation for farmers, stimulating diversification of products, and increasing the number of young entrepreneurs as the population of farmers ages. In 2011, the CAP developed a Ten Point Reform Plan intended to be more green, fair, and efficient (The Common…, 3-21). In December of 2013, the European Commission, EU Member States' Agriculture Ministers, and the European Parliament formally agreed upon four Basic Regulations and Transition Rules as part of a CAP reform, which center upon rural development, "horizontal" issues such as funding and controls, direct payments for farmers, and market measures. This is a part of the grander

Europe 2020 plan and the Lisbon Plan, which aim to better the European economy as a whole ("The Common Agricultural Policy After 2013").

While the CAP does occasionally face criticism in its scope and usefulness, it is generally agreed that a European-wide organization is necessary for agriculture since there are so many regulations placed on production and distribution, especially for organic products, and the EU countries differ in their levels of control. French regulations tend to be stricter than EU regulations. For example, for poultry production, the conventional slaughter age is 45 days, the EU organic standard age is 81 days, and the French organic standard is 91 days. The poultry farm buildings area can only be 800 square meters in France, while the EU dictates a maximum of 1600 square meters, allowing a larger number of chickens in the same area and thus more risk for problems such as overcrowding and poor sanitation. The EU does allow certain allopathic or antibiotic treatments, while France has outlawed nearly all treatments, unless specifically excused for exceptional cases (Sylander and Le Floc'h-Wadel, 98).

Some of the most important components of these policies are the government subsidies for farmers and the agricultural market and the support programs that go along with the financial aid. In 1991, the EU developed its LEADER initiative. LEADER I was focused on bottom-up rural development projects conducted at the local level. LEADER II, which was in operation from 1994 through 1999, encouraged models of rural development plus created goals of protecting the environment and increasing the quality of life. The LEADER program was officially integrated into the 2007-2013 Rural Development pillar of the CAP. These programs were conducted in nine EU countries and spurred the creation of smaller efforts outside of EU legislation, such as movements

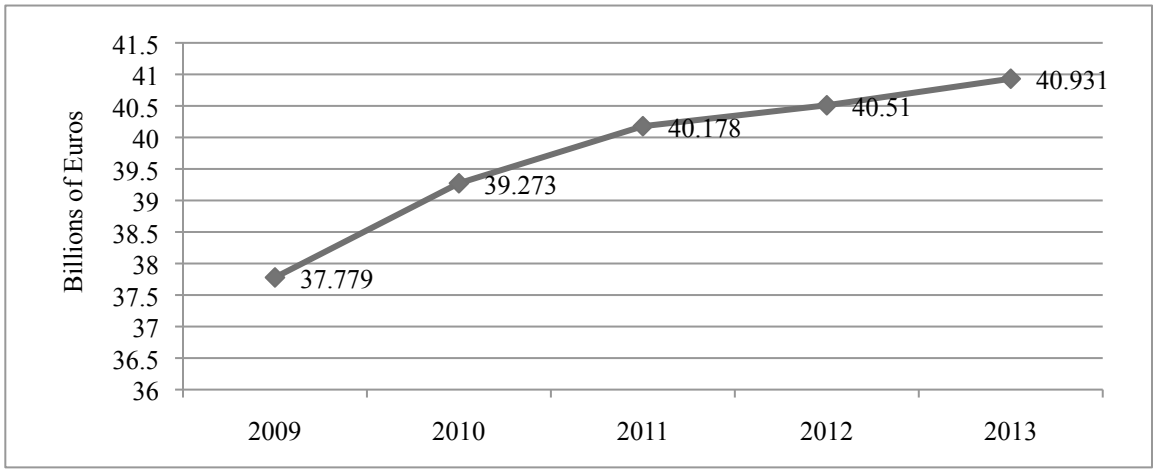
in the Rhône-Alps and Pays de Loire regions of France since 1997 (Padel and Lampkin, 110-113).

Many European countries have started their own integrated action programs, the first of which was Denmark in 1987. These initiatives seek to integrate various policy goals in a market-oriented fashion while also maintaining standards such as environmental and animal protection. One such collection is the Plan Pluriannuel de Développement et la Promotion de l'Agriculture Biologique (Five-Year Plan 1998-2002). Its primary goals were to have France as the leading organic producer in the EU by 2010 and to convert one million hectares and 25,000 farmers by 2005. A more current integrated action plan is the Organic Action Plan (ORGAP) created by the European Commission in June 2004. It analyzes current risks, boosts development, and pushes scientific advancements. This financial aid has stimulated progress in research, market capabilities, and number of farms, among other things (Padel and Lampkin, 113-115).

Financial support for farming has been growing since it began and seems to be continuing. Starting in 1992, the CAP began producer subsidies, as opposed to direct market support, with EC Reg. 2078/92, which included their increased support for environmentalism and sustainable farming practices. The European Commission via CAP allotted direct aid for Agriculture and Rural Development in 2000, and figures for the past few years are shown in the chart below. France pledged in 2004 an allotment of €4.5 million for the following three years with the goal of enhancing consumers' knowledge of the organic sector and €50 million over the following five years to farmers to aid in the conversion process (Journo, 8-9).

Figure 1

Direct EU Aid to Agriculture and Rural Development



Sources: 2009-2010 data "Agriculture and Rural Development Budget: 2010 General Budget." P. 1.
2011-2013 data "Agriculture and Rural Development Budget: Section III Commission." P. 278-279.

The French Ministry of Agriculture launched a program on September 12, 2007 called Horizon 2012 that aimed to reach 6 percent of utilized agricultural area by that year and hopefully 20 percent by 2020.[8] As can be seen, this plan did not fully succeed because France currently stands at approximately 3.8 percent of utilized agricultural area as organic ("Agriculture in France…," 1); however, according to the Agence Bio website under "La Bio Aujourd'hui," farmland did increase by 25 percent from 2011 to 2012. Along with the Horizon 2012 plan, the "Avenir Bio" ("Organic Future") was created. This program aimed to allot €3 million per year for five years. Headed by L'Agence Bio, this plan was structured to contribute to existing efforts to increase and ameliorate organic farming efforts across France. In order to receive aid, a farmer has to apply to the regional organization, such as Ecocert or Certipaq, and be granted permission to convert to organic production after their farm, products, inputs, and documentation have

[8] Oftentimes abbreviated to UAA. In French it is *surface agricole utile*, or SAU.

been verified. The monetary figures of aid for farmers is displayed in Table 1, below ("Plan de Développement…," 1). One of the most recent developments in French governmental support for organic farming is the Organic Ambition 2017 program created in May of 2013. It will primarily be funded by the CAP and will add €1 million per year to the already existing €3 million. It will also push increased use of organic in the restaurant industry, research and development, education programs for farmers, increased regulations, and hopefully double the area of organic farmland in France ("Launch of the Organic…," 1).

Table 1

French Government Aid

Farm Type	Aid for Conversion (In Euros, per hectare per year for five years)	Aid for Maintenance (In Euros, per hectare per year)
Market Gardening/Truck Farming and Tree/Fruit Farming	900	590
Open Field Vegetable Crops, Viticulture, and Fragrant, Aromatic, and Medicinal Plants	350	150
Annual Crops and Temporary Prairies	200	100
Prairies and Chestnut Groves[9]	100	80

Source: "Plan de Développement. Agriculture et Alimentation Biologiques: Horizon 2012." *L'Agence Bio*. 2010.

[9] Original French: Maraîchage et arboriculture; Cultures légumières plein champ, viticulture; plantes à parfum, aromatiques et médicinales; Cultures annuelles et prairies temporaires; Prairies et châtaigneraies

Starting in 2006, L'Agence Bio has been conducting annual international seminars in late February or early March with the goal of discussing market developments and strategies for the progress of organic farming. The 2013 seminar focused on the dynamics of development with the participation of the Food and Agriculture Organization (FAO) and the European Commission. The meeting discussed such issues as continued research in determining the level of economic, environmental, and social impacts of organic farming and revision of the 2004 European Action Plan for Organic Agriculture and EC No. 834/2007 (Onofre, 1-6). The European Action Plan is a series of 21 initiatives aimed at, "developing the market for organic food and improving standards by increasing efficacy, transparency and consumer confidence…, improving information about organic farming, streamlining public support via rural development, improving production standards or strengthening research," ("European Action Plan," 1). EC No. 834/2007 is a European law and an updated version of EC 2092/91, mentioned above, and concerns the production and labeling of organic products ("Council Regulation," 1).

In addition to an annual international meeting for European organic agriculture, L'Agence Bio holds an annual conference more specifically for French actors and concerns. Les Assises Nationales de L'Agriculture Biologique is held every October since 2007. At the most recent one in 2013, the French Ministry of Agriculture, Food Industry, and Forestry, led by Stéphane Le Foll, was given an advance of €3.61 billion from the CAP. The aid, normally distributed in December, will offer advance aid of 50 percent to 98 percent of potential conversion farms, 50 percent to nearly 26,000 sheep and goat farmers, and 80 percent to cattle farmers ("Stéphane Le Foll…," 1).

It is evident that European and particularly French governments support organic farming and its continued growth. In France it has even become a major campaign issue. During the 2012 presidential campaign, more than one candidate based a large portion of their platforms on sustainable agriculture and all that it entails, including health benefits and economic growth. Eva Joly, who ran for the Europe Écologie—Les Verts (EELV) party, pushed for ecological transformation of the economy and is well known for her bright red glasses, which she substituted for green during her campaign. Jean-Luc Mélenchon, the Left Front party candidate, also encouraged an ecologically-supported economy with the backing of a "green rule" that would be added to the Constitution.

François Hollande announced shortly after winning the election in 2012 that he offered continued support for local and organic agricultural efforts in France. He has shown that he is interested primarily in creating jobs and improving the economy, and thus supports all quality agriculture in helping to achieve these goals. While he is by no means oppositional to organic, he is more focused on improving overall health of the people and the economy, even by means of traditional agriculture ("Le Discours…," 1-2). He insisted that the CAP budget be maintained, that water supplies be protected, and that the unachieved goal of 20 percent of organic food in restaurants by 2012 be replaced with a goal of 40 percent of restaurants' food coming from local sources, organic or not. According to L'Agence Bio, restaurants have already increased their use of organic from barely 4 percent before 2006 to 46 percent at the beginning of 2011 and 56 percent in 2013 ("La Bio En France…" 2013, 32).

A Little Perspective

Although France was the first European nation to develop laws regarding organic agriculture and was temporarily the largest market for it, other European nations have developed their organic industries as well as, if not more than, France has. This can be attributed to the fact that the French government developed its support more slowly than other EU nations. Despite this slow start, France's involvement has rapidly increased over the past five or six years due to its support programs and subsidies. The Nordic nations and Italy tend to have the highest rates of production (Bonny, 3, 17-18). In 2013, IFOAM and FiBL (Research Institute of Organic Agriculture) issued statistics on 2011 market shares, the most recent of which is available in their system. The world market value for organic farming was estimated at nearly $63 billion (a $4 billion increase from 2010). The leading market shareholder is the United States with €21 billion, followed by Europe. The leading European country is Germany with €6.6 billion (31 percent of the European market), with France in second place with a share of €3.8 billion (17 percent). France contains nearly a quarter of the organic food processors in the EU and accounts for 19 percent of European consumption of organic. However, the countries with the highest spending per capita on organic products were Switzerland and Denmark, and France came in at the eighth highest ("New Impluses…," 1).

Within Europe France's ranking varies between high and middle tier, depending on market share, production rates, and consumption rates. It comes in fourth in terms of percentage share of organic land in Europe. Spain is first with 16 percent, Italy has 12 percent, and Germany and France have nearly the same, both measuring at approximately 11 percent. The overall percentage of farms also has France in fourth place: Italy has 18

percent of European farms, Spain has 12 percent, Poland has 10 percent, and France has nearly 10 percent. It comes in at number 17 when taking into account the size of organic land as a part of overall agricultural land in each country, but France prides itself on the diversity of its organic products. Its ranking against other top European countries by product type can be seen in the diagram below, which shows percentile rankings when available ("La Bio dans L'Union Européenne," 2-13).

Table 2

Top European Producers for Select Organic Products

Vegetables		**Pitted Fruits**		**Beef**		**Poultry**	
1. Italy		1. Italy		1. Germany		1. France	
2. Germany		2. France		2. France		2. United Kingdom	
3. France		3. Czech Republic		3. Austria		3. Austria	
4. United Kingdom		4. Spain					
Cereals		**Viticulture/Wine**		**Aromatic/Medicinal Plants**		**Honey**	
1. Italy	13%	1. Spain	37%	1. Lithuania	45%	1. Italy	21%
2. Germany	12%	2. France	28%	2. Spain	20%	2. France	19%
3. Spain	12%	3. Italy	24%	3. France	9%	3. Romania	16%
4. France	11%	4. Germany	3%				

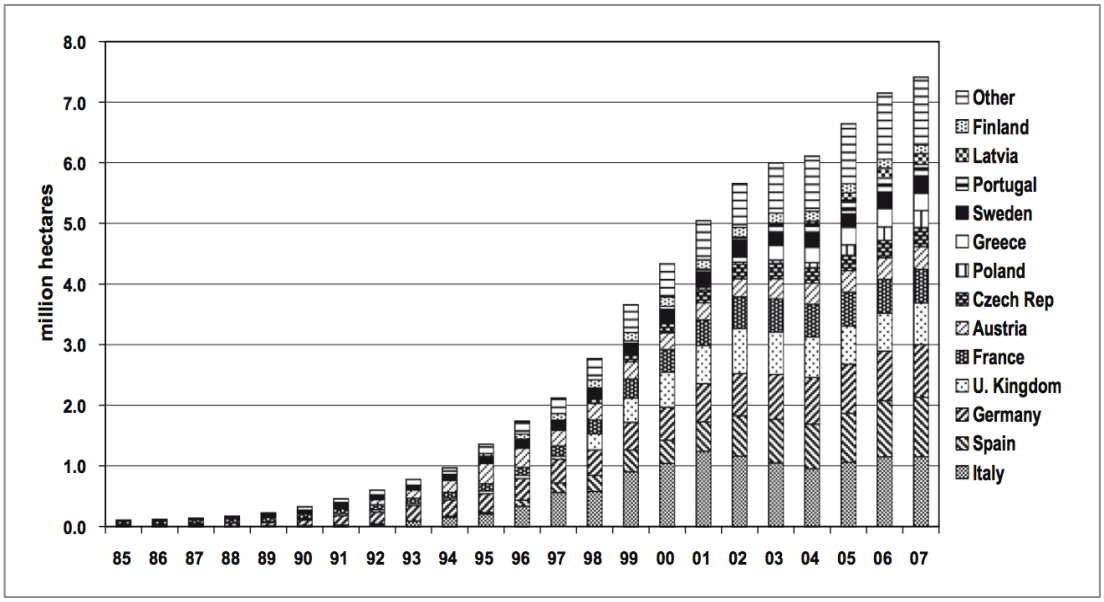
Source: "La Bio dans L'Union Européenne." Les "Chiffres Clés," édition 2013. *L'Agriculture Biologique : Ses Acteurs, Ses Produits, Ses Territoires.* Chapitre 3. L'Agence Bio.

Europe places second in the world in terms of organic land area with 29 percent, and it follows Oceana, which has 33 percent of the world's organic farmland. Latin America comes in third with 18 percent. By the end of 2011, the world contained 37.2 million hectares of organic land: 3.7 million hectares in Asia and 10.6 million in Europe, the two areas with the fastest growing organic production sectors, increasing by 34 percent and 6 percent, respectively. At the national level, the top countries in the world in

terms of the number of organic hectares are Australia with 12 million hectares (97 percent is devoted to grazing), Argentina with 3.8 million, and the United States with 1.9 million. In terms of organic land as a percentage of all farmland, the leading nations are the Falkland Islands with 36 percent, Liechtenstein with 29 percent, and Austria with 20 percent. FiBL also highlights how the areas with strong support measures are the ones that exhibit the most consistent growth, namely in Europe ("New Impulses…," 1). Figure 2 below illustrates how much the organic land area (in millions of hectares) has increased from 1985 to 2007 in Europe and is subdivided for each country. Figure 3 shows organic land area in European countries for 2005 and 2011, the most recent available.[10]

Figure 2

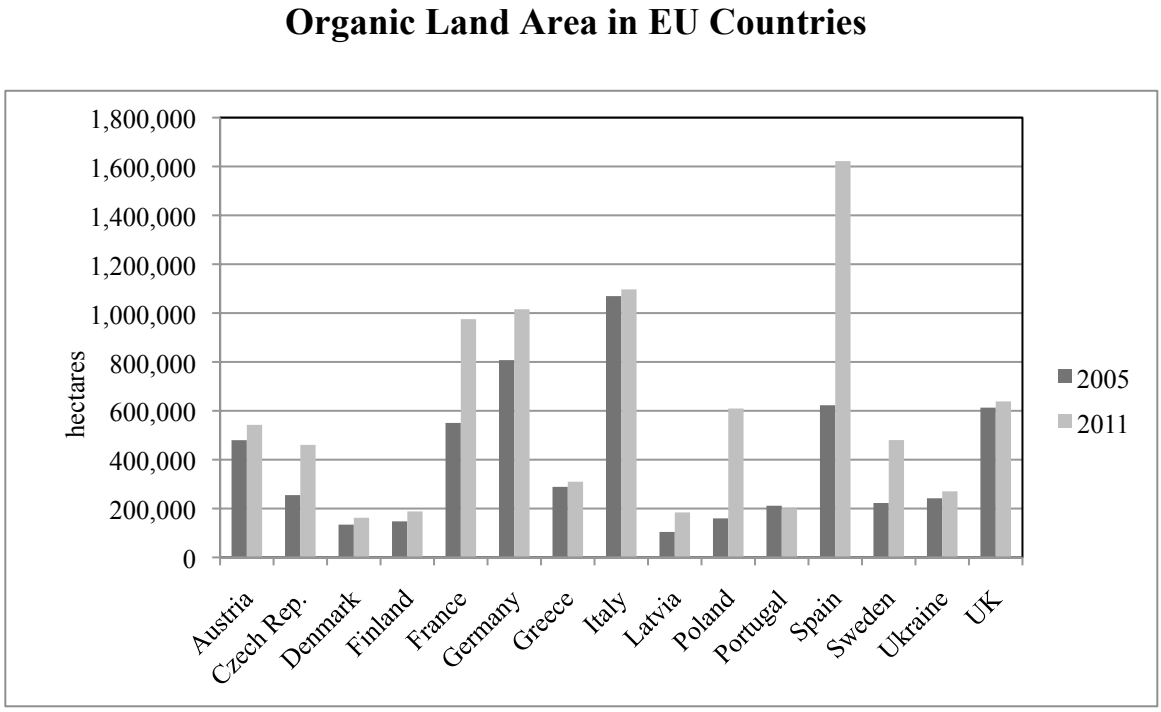
EU Organic Land Area Growth



Soruce: Stolze and Lampkin, 2009. P. 238.

[10] Figures include land area classified as under conversion because not all countries surveyed distinguish between in conversion and certified. Not all EU countries are featured, just those that had more than 100,000 hectares of organic land in 2005.

Figure 3



Source: Dynamic Data Table with Key Data from FiBL-IFOAM Survey. Organic World.[11]

Trade

As the organic market has grown worldwide, many countries have begun importing and exporting their goods to other nations to meet their supply and demand levels. EC Regulation 2092/91 made trade between European countries and those outside of the EU easier because of its strict regulations and uniformity among them. Many non-EU nations, including Australia, Argentina, Costa Rica, and Switzerland, have thus based their organic policies on this law in order to trade with the EU and have their own organic regulatory models as well (Aschemann, et, 131-132).

[11] Spain's organic industry rapidly increased because of increased production in cereals, and the fact that 80 percent of the organic crops are exported. The industry was also largely able to avoid the recent recession (Lucas, et al., 57-59).

International trade has primarily been made possible by the Codex Alimentarius Commission. The United Nation's Food and Agriculture Organization (FAO) and the World Health Organization (WHO), with the aid and participation of IFOAM and other organic regulatory bodies, created it in 1991 in order to further develop guidelines for production, processing, labeling, and marketing. In June 1999, the rules regarding plants were created, and in July 2001, those for animals were created (Codex Alimentarius Commission 1999/2001). These rules are an increasingly important part of the World Trade Organization (WTO), and will be reassessed every four years at minimum in order to meet updating demands for the world market (Schmid, 155-158). L'Agence Bio provides statistics illustrating the international organic trade for France. France's organic exports are estimated to have reached €309 million in 2012, 58 percent of which was wine ("La Bio En France…" 2013, 25). In 2011, according to the number of countries from which France imported, the goods that were brought in from the highest number of countries include fresh and dried fruits and vegetables, essential oils, oil-based products, cereals, tea, coffee, and sugar. The countries from which France buys organic goods most often are Morocco, China, Turkey, Madagascar, Peru, and Mexico, based on 2011 figures for authorized number of importations ("La Bio En France…" 2012, 21-23).

Organic farming is in many ways and for many people a return to past methods that had been forgotten or needed to be maintained, but it ironically is just as accurately a very modern movement, and this can be seen with the level of uniformity, regulation, labeling, and homogenization that it has had to undergo as it has grown within regions, individual nations, and even internationally. These developments have made it unique to the modern era and aim to further augment and ameliorate this ever-improving sector.

CHAPTER III: Reasons For Organic

Organic farming has been steadily growing for the past several decades in France and all through the world. Throughout this time the methods of production, distribution, and consumption have changed drastically. It has developed from a small-time venture for rural families to an international endeavor that warrants the influence of supranational organizations, i.e. the EU. For something to have grown to such an extent and to affect so many areas of the world, there are undoubtedly a wide variety of reasons for its inception, support, and maintenance that can differ for each region or even each person. It is worthwhile to examine the decisions that people make to purchase organic foods or not because the public's perception and motivations are arguably the strongest driving forces for the production of organic food and determine to a great extent the level to which it is produced. It is also important to examine how these preferences have changed over the years in order to better estimate the future projections of the field.

Who Buys Organic Products

Early studies of consumer demographics that were conducted in the 1980s generally portrayed the average organic consumer as a woman in the age range of thirty to sixty years and who was generally in the upper-middle to upper class. However, this result may be unreliable because of overestimation. The tendency at the time was for

women to conduct household purchases more frequently than men to. Today, the consumer demographic is much more diverse. They are typically from urban areas and often with young children (Aschemann, et al., 132). According to a recent article published in *Le Figaro*, French consumers are not necessarily wealthier, but instead tend to have higher levels of education, are less likely to be overweight, and participate in physical activity more often. In addition, they tend to choose healthier foods compared to those that do not consume organic food. For example, they tend to purchase less meat, milk, and fast food and in turn buy fruits, vegetables, and nuts. These consumers also more regularly inform themselves about nutritional topics (Bergez, 1).

Yet it is important to note that these consumer statistics are vast generalizations. In fact, the modern organic-consuming population is highly diverse and cannot effectively be put into specific categories. The profile continuously changes as the availability of the products change, allowing for a wider range of not only products but market channels as well. This change is attributed to three factors. First, income level is becoming a less influential factor as the influx of organic goods drives down prices, albeit slowly. Second, the higher availability and increased levels of promotion have spurred awareness, resulting in more people willing to purchase higher priced goods in exchange for higher benefits. Third, organic consumption has become more a part of a way of life and attitude or habit for many people, rather than an individually reasoned choice made for each purchase of an organic item (Aschemann, et al., 136-137).

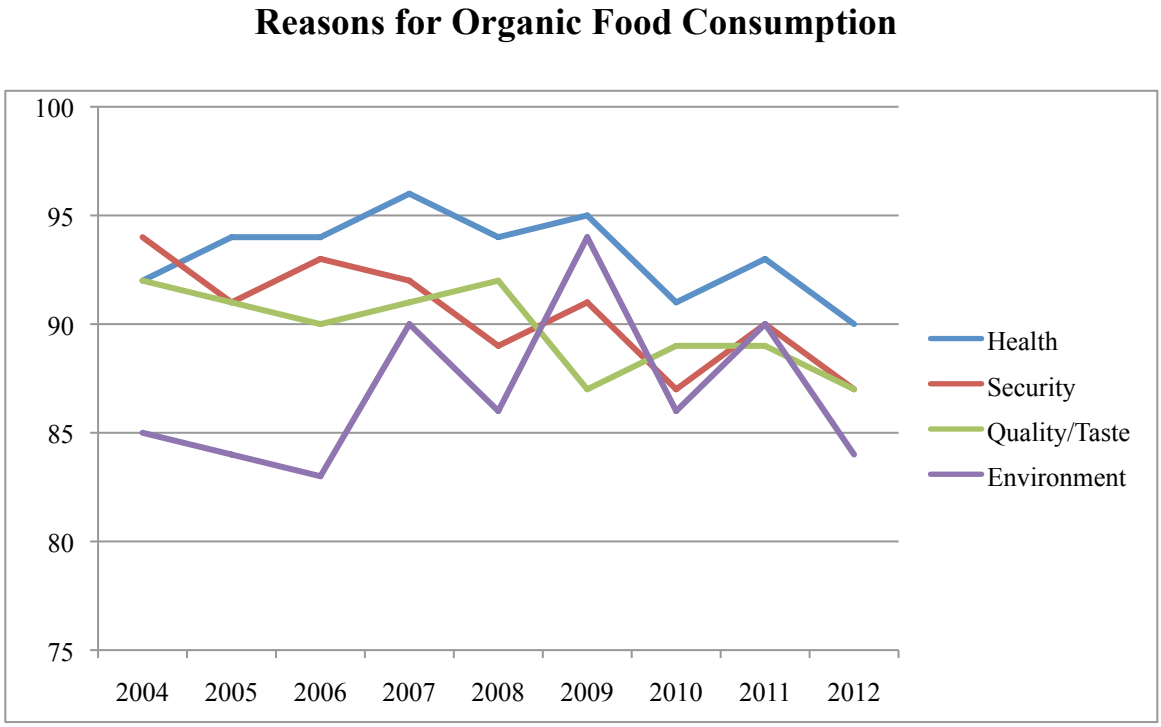
Motives for Buying Organic Products

The chart below is a concise view of the relationships between the reasons for consuming organic food in France between the years of 2004 and 2012. Category 1 represents "To preserve my health;" Category 2 is "For my security, to be certain that the products are healthy;" Category 3 is "For the quality and taste of products;" Category 4 is "To preserve the environment." It appears in the chart that the motivations are waning; however, this is simply the result of the decreasing disparity among them. In other words, those that participated in the study gave more equal significance to all of the choices, rather than having a single factor as their source of encouragement. The three lower categories—the security and certainty of healthy products, the quality and taste of the products, and the preservation of the environment—are extremely closely ranked. The only category that is consistently emphasized is that of general health preservation.

The study conducted also gave information about a few other categories, but they became options later than those represented below. Some of the more recent additions are "For the well being of animals," which ranged from 66 percent to 77 percent in the years of 2006 to 2012, and "For ethical reasons," which had results between 50 percent and 70 percent from 2006 to 2012. Four options added just in 2012 are "Having children" ranked at 67 percent, "Greater availability of organic products in normal shopping places" at 59 percent, "Family habit" at 45 percent, and "A particular event in my life, other than having children (such as disease, allergies, or the discovery of an available store)" at 10 percent (*translation mine*).[12]

[12] Original French: Category 1: Pour préserver ma santé; 2: Pour ma sécurité, pour être certain que les produits sont sains; 3: Pour la qualité et le gout des produits; 4: Pour préserver l'environnement. Uncharted responses: Pour le bien-être des animaux; Le fait

Figure 4



Source: "Baromètre de Consommation et de Perception des Produits Biologiques en France." P. 63.

Just as the demographic of purchasers has changed, so have their motives. As stated in Chapter I, many of the original communities that promoted organic living, such as the *Lebensreform* group in Germany, did so as a rejection of the industrial world, to live healthy lives, to be vegetarian, and to have close-knit kinship groups that were more connected to the land than those that lived in cities. In the United States and Britain, the key motivation was a preservation and rehabilitation of healthy elements for soil, in addition to a desire to return to ancient practices and healthy food choices. The opinions and driving forces have changed over the years, and now there are more varied reasons

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d'avoir des enfants; Plus grande disponibilité des produits bio dans les lieux d'achat habituels; Pour des raisons éthiques; Une habitude familiale; Un évènement particulier dans ma vie (autre que enfants).

that tend to be, in no particular order, health, environment, taste, and ethics. These forces, interestingly, tend to follow the same pattern all over the world.

Health has generally managed to remain the primary influence for purchasing organic food. The consumers are typically more concerned with personal health and avoiding chemicals that can be found in conventional foods, such as hormones, pesticides, and synthetic additives. Many people also believe that organic food not only presents a healthier option by a lack of harmful substances but also additional nutrition.[13] It is oftentimes associated with an overall sense of well-being and quality of life, and even more frequently it is related to major occurrences in life such as pregnancy, child rearing, ageing, and disease (Aschemann et al, 140). The documentary that inspired this thesis, *Food Beware*, concerns itself primarily with the health risks associated with conventional foods and the benefits that organic provides. For example, Jaud claims that in Europe 70 percent of cancers are linked to the environment: 30 percent of them to pollution, 40 percent to food (Jaud, 3:53). Farmers were interviewed, and they revealed in several instances that they themselves or their children had suffered from varying types cancer. These rates of cancer are higher among the farmers and their families than the rest of the population because of their more direct exposure to the chemicals. In addition, the documentary provides such information as the materials that can be found in food: nitrates and pesticides in water; lead, cadmium, and pesticides in bread; and heavy metals (lead), preservatives, nitrites, and phosphorous in sausages (6:45).

While the aspect of health is primarily geared towards the people who consume the food, it is also a large concern for the health of the animals and plants. The concerns

[13] Studies show, however, that organic foods do not offer better nutritional value and can generally only be healthier in terms of a lack of chemical residue (Brandt, 1-2).

are directly linked, but many people care about the overall health of these creatures in order that they might not have to receive medicines and hormonal injections to simply keep them alive. It is an increasing point of interest to have, for example, free range cows and chickens because people have become more aware of the terrible conditions in the factories and mega farms. One major instance of animal welfare that has concerned many buyers is tail biting among pigs that are raised indoors. While it is not precisely known why the pigs sporadically bite others' tails to the point of injury and infection, it is known to be linked to any combination of the following factors: dietary deficiencies, crowding, poor air quality, uncomfortable temperature, lack of bedding or other rootable substrate, floor type, feeding method, insufficient water supply, etc. The most common remedy to this problem is tail docking, which has warranted the concern of many animal welfare activists because it does not solve the problem or remedy the causes, it merely deters the side effects (Widowski, 46-49). Dilemmas such as this cause not only fear of infection or toxins via the consumed meat but also a desire among activists to protect the quality of life of these creatures.

A closely related point of interest is concern for the environment. Oftentimes consumers will group animal rights into environmental efforts, but generally the primary point of contention is pollution and its effects on the flora, fauna, and human populations in the surrounding areas. Rachel Carson and her research into the effects of the chemical DDT, as mentioned in Chapter I, heavily spurred this movement. Problems such as runoff of insecticides, mercury poisoning, and fertilizer surplus have attracted more attention over the past few decades as use has increased and as people have become more aware of them. Environmentalism is one of the primary tenets of organic farming

because of its goal to reduce or eliminate chemical use since it has been proven to have harmful effects on the physical world. Not only are fewer chemicals being added to the land, organic food contributes to a reduction in pollution due to shorter travel distances. Because organic food has fewer preservatives, it generally cannot travel great distances before spoiling and is thus oftentimes, although certainly not always, sold locally. Conventional foods regularly come from across the country, if not an entirely different country. This causes an increase in pollution because of gas use for trucks. *Food Beware* focuses on environmental side effects nearly as much as it does on health issues because they are so closely related, and it provides many statistics on this front as well. For instance, the documentary shows a farmer at a conference among local industrial farmers and organic farmers who said, "The plants are sick because they grow in dead soil, which we killed with pesticides and a lack of humus. A plant growing in dead soil can't be healthy, so we have to use these products. And it all starts again. That's why I went organic," (Jaud, 1:06:40).

An additional motivation that is one of the primary reasons that people choose to buy organic produce is a perceived improvement in quality or taste. Many people notice a difference in organic food versus conventional food in terms of richness of flavor, freshness, and overall quality. This is oftentimes attributed to the time in which the food is eaten. Organic products, because they do not contain preservatives, have shorter shelf lives than most foods; therefore, they have to be eaten when they are ripe or fresher. An increase in the longevity of a food's duration is frequently thought to contribute to a blander taste, unless flavor enhancers are added artificially. Some people also believe in

a connection between the lack of chemicals and the taste. In other words, the added chemical products have a direct relation to a reduction in flavor (Bonny, 16-18).

Supporting local communities and economies is yet another reason people choose organic over conventional foods. While shopping locally does not necessitate organic, many people highly connect the ideas of organic and local, so they oftentimes go hand-in-hand. Buying locally supports local farmers, keeping money within the community and contributing to the strength of smaller businesses. People oftentimes personally know the farmers and thus would like to help finance them in practical ways. There are even groups of people that take this effort one step further and create community supported agricultural groups, or Association Pour le Maintien d'une Agriculture Paysanne (AMAP) in France. It is a farm, more than likely organic, that is run and operated by a collection of members of the town, not just one family or business. These types of consolidations were started in Japan and now take place all over the world (miramap.org).

Simply knowing the origin of foods is also a key factor in buying locally. In a 2012 study conducted by L'Agence Bio, when asked what type of information they would like more of, consumers responded most frequently with the origin of products and the mode of production. Fifty-nine percent of consumers said they would like more information regarding the origin of products, which increased from 55 percent in 2011, and 54 percent requested information on the mode of production, as opposed to 49 percent the previous year ("Baromètre…", 31). According to Aschemann, et al., local origin is a very strong influencing factor in the United States, Japan, and many European countries, particularly Sweden, Austria, Germany, Switzerland, Great Britain, and

France. Even when the products are not necessarily organic, people tend to trust their own products or the ones that have been produced nearby more because they seem friendlier, are usually associated with small-scale production, and have a more familiar standard of quality (Aschemann, et al., 143-144).

Another matter that is not necessarily but is frequently linked to organic farming is sustainability. This problem has been growing and coming more to the forefront of agricultural discussion over the past decade or so because the population is rapidly growing, and many people are concerned about the world's ability to produce sufficient amounts of fresh food. It is closely related to a desire for increased biodiversity in order to have a wider variety of foods and species of crops so that the plants stay healthier, and if one crop fails, others will be able to stand in its place. *Food Beware* includes scenes from a UNESCO conference in May of 2007, and one speaker says, "Farming all arable land according to organic precepts would produce enough to feed mankind. I assert that we can produce food in a different and sustainable way, healthy food in sufficient quantities, with economic performance well superior to industrial methods, if we'd just stop replacing workers with chemical molecules," (Jaud, 1:00:00).

Traditional farming tends to be very intensive and can rapidly deplete the soil of nutrients, quickly causing the land to become useless or forcing farmers to continually add synthetic nutrients to make the crops grow. An organic farmer is interviewed for *Food Beware* at the border of his property and his neighbor's in order to show the condition of the different soils:

> My neighbor uses chemical weed-killer, and I've been organic for 30 years. So I leave the grass and deal with it in the spring, and he uses

> weed-killer. It's like life and death! His soil is stratified. The rain doesn't penetrate because there are no wormholes. The rain just slides over it. Every time it rains, a bit of the earth is taken away, so you end up with sand and pebbles. See here [on his organic property], the soil is in lumps and is complex, humus-rich clay. It has worms that aerate the soil, produce byproducts for the plant to consume. (Jaud, 1:07:00)

While he is not French, Joel Salatin of Polyface Farms is a good example of a farmer that has been able to attain sustainability like so many others wish to do. He is featured in Michael Pollan's book *The Omnivore's Dilemma*. This self-identified grass farmer from Virginia has many kinds of animals and crops on his farm, including chickens, cows, turkeys, corn, berries, and tomatoes, to name a few, and the only input that he buys is chicken feed. Everything else that he uses for his animals and crops comes from somewhere else on his farm. He and his family even make nearly all of their meals from food produced on their farm. Salatin does, however, insist that he is not organic. While the vast majority of his practices do follow organic standards, he does not ascribe to the label because he believes it has swayed from its original ideals, an issue that will be discussed in the following chapter. He also maintains that his method of farming is not necessarily a return to ancient practices that had been forgone. His whole process is, in fact, very calculated, well researched, and he himself is well educated, even priding himself on the authors he has featured on his bookshelf, including Jerome Rodale and Sir Albert Howard (120-133).

Aversion to Conventional Products

Many people are driven to produce and consume organic crops because of distrust of some influences in traditional foods. One such doubt is of genetically modified organisms (GMOs). In the 1970s, the harmful effects of externally applied chemicals became obvious, so scientists and chemists decided to work on the plants internally by changing their physiological makeup to make them capable of self-defense against diseases and pests. The organic community was not initially opposed to the movement because it eliminated chemical use on the farm. However, it eventually became a basic tenet of organic farming to not allow the use of GMOs because it became clearer after experiments were conducted that the modified crops were harmful and not as nutritive (Cellier, et al. 706). Both France and the United States, in addition to many other countries, outlaw the use of GMOs in organic foods today (Niggli, 85-86).

Food scares that occurred during the 1990s and 2000s have also inspired people to produce and consume more organic foods. Many occurred throughout Europe, but France specifically suffered the following, in addition to small cases of other afflictions: microbial related scares such as *Salmonella* in 2005, *Campylobacter* in 2003 and 2004, botulism periodically from 1988 to 1998, and *E. coli* in 2005; contaminant related scares such as sewage contamination of fresh meat in 1999 and dioxin in pork and poultry in 1999; and animal disease related scares such as mad cow disease (Bovine Spongiform Encephalopathy or BSE) from 1995 to 2005 and fibromuscular dysplasia (FMD) in 2000. These scares, particularly the cases of mad cow disease, spurred the implementation of stricter food controls and safety checks. Nearly every European country has now created an agency for handling these affairs. In France it is the Agence Française de la Sécurité

Sanitaire des Aliments (AFSSA) (Knowles et al., 43-56). One very recent scandal that hit Europe and particularly in France was horsemeat that was passed off as beef. The pharmaceutical company Sanofi had used these horses for medical testing. In February and December of 2013, horsemeat was found across Europe in ready-made meals that were labeled to contain beef. This food scare triggered many people to switch to organic because of its perceived improvement in quality and food source security ("Arrests in France Horsemeat Inquiry," 1).

Lastly, one of the most important reasons people choose organic over conventional foods is to take a stance against large food corporations. One of the earliest instances of this sort of opposition occurred in the late 1960s when millions of consumers and farmers in California boycotted agribusiness giants like Dow Chemical and Del Monte. Their major complaint was the excessive application of harmful pesticides that had severely harmed thousands of their farmers (Sligh and Cierpka, 34). A more recent, more famous, and more uniquely French example is that of José Bové, a sheep farmer and activist from the Midi-Pyrénées region. He is described as a modern day Astérix because of his activism in maintaining French traditional culture and food heritage by protesting McDonald's, GMOs, and what he calls *malbouffe*, a term describing bad food or junk food. Bové is the leader of the organization Confédération Paysanne, the second largest farmers' union in France. He is well known for dismantling the construction of a McDonald's location in the French town of Millau in 1999.[14] He has been active for decades and is very vocal and charismatic about his values, even having been arrested

[14] There are currently 1298 McDonald's locations in France, which feature the golden M on a field of green instead of red, to link it to a more natural image. France has the third greatest number of McDonald's locations in Europe, behind Germany and the United Kingdom ("McDonald's Europe Virtual Press Office," 1).

several times for them. He has vehemently opposed the United States and World Trade Organization's (WTO) efforts to import GMOs and hormone-induced beef into Europe (Northcutt, 1-18).

Many people all over the world, certainly including French citizens, are also driven to choose organic foods because of mega food engineering corporations, particularly Monsanto. This agricultural and chemical company was started in 1901 in St. Louis, Missouri. It is now operating internationally and produces 90 percent of the world's GMOs. It has elicited a great deal of backlash because its products have been accused of causing extensive damage and of eliminating the competition of smaller farmers many times. In the 1990's and early 2000's, Anniston, Alabama was the site of substantial controversy. Many individuals sued Monsanto because of the toxins, primarily polychlorinated biphenyl (PCB), that were leaked into the environment and causing many health problems for the citizens. The cases included Tolbert v. Monsanto, Abernathy v. Monsanto, and Owens v. Monsanto. The company was accused of knowingly disseminating PCB's, which caused such diseases as chloracne, lymphoma, and a host of other health conditions ("Anniston in Depth," 1-5).[15]

A French reporter, Marie-Monique Robin, directed a documentary in 2008 called *Le Monde Selon Monsanto*, which was later made into an English version called *The World According to Monsanto*. She also wrote a book of the same title and subsequently won the Rachel Carson Prize. Her three year long project highlights the corruption and truths behind Monsanto, such as its use and production of GMOs, Agent Orange, polychlorinated biphenyls (PCBs), and bovine growth hormone. The documentary shows

[15] Information regarding the health effects of PCB's can be found at http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/effects.htm.

several specific instances of harm and corruption in places such as Scotland, Canada, and, most importantly, Washington, D.C. where the company frequently worked with politicians, taking advantage of deregulation policies and reducing barriers for themselves. The company is well known for its product Roundup, an herbicide that is heavily used in conventional agriculture. It has also created what are called Roundup-ready soybeans, which are GMOs that have been developed to withstand the herbicide, allowing Roundup to be amply applied to crops to kill weeds. While the documentary is not able to reveal all of Monsanto's secrets, it undoubtedly clarifies and exhibits some of the most dramatic and problematic issues that the company has caused (Robin).

Monsanto still plays an active role all over the world, particularly with its GMOs. Recently, the European Union banned a second type of genetically modified corn, the American Pioneer TC1507. The only genetically modified corn currently allowed is Monsanto's MON810, which has been grown in Europe since 1998, primarily in Spain and Portugal. In August of 2013, France suspended its MON810 ban, but eight other countries have adopted the ban: Germany, Austria, Bulgaria, Greece, Hungary, Italy, Luxemburg, and Poland. It has been banned twice in France, but the state canceled the ban because it deemed it to not be a big enough risk. On February 4, 2014, a new ban bill prohibiting the use of any GMOs in France was introduced, and it was passed on Tuesday, April 15, 2014 (Picy and La Hamaide, 1). It has proven to be significantly more difficult for companies such as Monsanto, BASF in Germany, and Bayer to produce their GMO crops because the European system for regulation and legalization is much more complex than the United States'. Europe also produces significantly fewer GMOs;

United States, Brazil, and Argentina dominate the market. Despite this, there are still fifty-one GMO crops in Europe (Garric, 1-6).

Organizations' Motivations

Every organization that declares itself as organic or promotes the values associated with organic production has set reasons and goals that they perpetually strive to achieve. The leading organic institution in France is certainly L'Agence Bio whose three major axes are, "Inform the general public and professionals, [act] as an observer to know and anticipate, and develop and structure sectors." Its primary promotions of organic are the following: maintain or increase soil fertility, including recycling and composting, prohibit the use of synthetic chemicals; respect water quality; comply with animal welfare; promote biodiversity; ensure naturalness and authenticity; and support sustainable and innovative sectors ("Qu'est-ce que la bio?").

The largest international organic alliance, IFOAM, provides an eloquent reasoning for each of its driving principles. It follows four overarching reasons, described briefly below, and gives more in-depth explanation on its website:

> Principle of Health**:** Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.
>
> Principle of Ecology**:** Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.

> Principle of Fairness**:** Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities
>
> Principle of Care**:** Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment. ("Principles of Organic Agriculture")

The reasoning behind being organic is also very important for distributors, such as Naturalia, a French chain of grocery stores that sell solely organic products. Their statement of purpose says, "Conscious of ecosystems and clean business practices in ensuring a fair return to producers in developing countries, the farming practices in the organic universe are not just for simple environmental protection. From producer to consumer, each actor involved participates in respect of the same ethics that seek to preserve natural resources as well as the quality of life of men who work the land or the health of customers," (*translation mine*).[16] It goes on to mention their devotion to fair trade, natural and non-polluting ingredients, taste, and nutrition ("Qui sommes-nous?").

All of these large institutions certainly have broad and encompassing reasons for being organic, and while the reasons tend to be approximately the same from company to company, they are similar for individuals as well. As the information in the graph at the beginning of the chapter shows, there are many possible impetuses for the average

[16] Original French: De pratiques agricoles soucieuses des écosystèmes et non polluantes en pratiques commerciales assurant une juste rémunération aux producteurs des pays en voie de développement, l'univers bio ne se résume pas à la simple protection de l'environnement. Du producteur au consommateur, chaque acteur concerné participe au respect d'une même éthique qui veut préserver les ressources naturelles aussi bien que la qualité de vie des hommes qui travaillent la terre ou la santé des consommateurs.

consumer and producer, but it can certainly be different, even if only slightly, for each person. One example of a person's motivations is that of Sandrine Pilati, the farmer with whom I worked in the summer of 2013 through the program WWOOF (World Wide Operations on Organic Farms). In an interview that I conducted with her, I asked her, "Why did you choose organic agriculture instead of traditional agriculture?" She responded, "Because the quality of life and the legacy of the planet for our children are more important values to me than money and profit, and if we want to change the world so that it improves, we must start by changing our own behaviors when it comes to saving the planet. I am for all techniques that help sustainable development," (*translation mine*, 2013).[17]

While there have been studies and articles, including this chapter, that delve into the generalizations behind the organic farming movement, it is always difficult to group these people and philosophies. They have changed significantly from what they originally were as fringe movements, and they continue to change today. They are even rarely the same for any two people, let alone farms or companies. It is interesting to note that many of the same ideals motivate people all over the world, which can be a good indication as to the pervasiveness of ever-improving methods for agriculture.

[17] Original French: Parce que la qualité de la vie et l'héritage de la planète pour nos enfants sont des valeurs plus importantes pour moi que l'argent et la rentabilité et que si on veut changer le monde pour qu'il s'améliore il faut commencer par changer nos propres comportements face à la préservation de la planète, je suis pour toutes les techniques qui aide le développement durable.

CHAPTER IV: Criticisms of Organic Farming

In daily life, it is very easy to find positive information about organic farming. Most people have an approving viewpoint on the matter, even if they do not feel particularly strongly about it. However, there are many people who are enthusiastic about organic, and they create blogs, websites, farmers markets, social groups, and the like to promote these interests and expand their clientele and interest groups. Despite this passion that is becoming increasingly pervasive, organic farming remains a very small portion of the agricultural and gastronomic worlds. This indicates that there are certainly reasons for resistance and the majority of peoples' unwillingness to purchase non-conventionally grown foods.

Industrial Organic

Paradoxically, some of the heaviest criticism of today's organic movement comes from organic farmers or proponents of organic. While they, of course, do not criticize the movement itself, they are sometimes not pleased with its current situation. The growing market has seen the emergence of larger scale organic production companies and the participation of large conventional companies. For example, Coca-Cola has large shares of Green Mountain Tea, Odwalla, and Honest Tea. Kellogg owns Kashi and Morningstar Farms/Natural Touch. Campbell Soup Company owns Bolthouse Farms, Wolfgang Puck, and Plum Organics. The organization that owns the most organic labels is Hain

Celestial, which has control over two dozen brands, including Celestial Seasonings, Earth's Best, and Garden of Eatin' (Howard, 1).[18]

Many of these organic advocates who simultaneously criticize the movement do so because they feel that it is losing its original ideals. They argue that it has been promoted and marketed simply as a business endeavor. In order to combat this, many institutions that are some of the originators of the movement have basic standards that guide them. IFOAM, for example, has certain principles that they abide by and use to maintain their future endeavors (Schmid, 165-166).

One example of a farmer that feels that the organic movement has sold out on its ideals is Joel Salatin, mentioned in the previous chapter. He does not label himself as "organic," rather as "beyond organic" because he supports his fellow local farmers and believes that it is better to have fresher, better quality food from nearby rather than ship food that is legally organic across the country creating products that are "really coated in diesel fuel." He also states, "industrial organic is a contradiction of terms," meaning the organic method is inherently non-industrial and those who make it so are ignoring organic philosophies. In *The Omnivore's Dilemma*, Pollan devotes an entire chapter called "Big Organic" that discusses this industrialization of organic, particularly focusing on Whole Foods, one of the largest and most popular organic distributors in the country. He analyzes the "Supermarket Pastoral" image that Whole Foods portrays: "authentic experiences with a return to a utopian past with the positive aspects of modernity intact." Some of the major brands that are sold in the store include Earthbound Farms and Grimmway Farms, which own Cal-Organic, another large brand name sold in Whole

[18] "Who Buys Organic?" provides a flow chart detailing the ownership of every organic corporation in the United States.

Foods. These companies are California-based and are comparable sizes to conventional factory farms and engage in the same practices. For example, in dairy production sites, such as Horizon and Aurora, there are thousands of Holstein cows that are kept inside day and night who have to stand in their own waste. They are fed certified organic products and milked three times a day, and this milk is later ultra pasteurized to ensure a longer shelf life. Part of Pollan's Whole Foods meal included a chicken raised by Petaluma Poultry. It was labeled as a "sustainably farmed" and "free-range chicken" named Rosie. He visited the Petaluma farm, and he describes it as "more animal factory than farm" where "twenty thousand other Rosies…live lives little different from that of any other industrial chicken." They are housed in a shed for the first five or six weeks of their lives then allowed access to the outside via a single small door, but none of the chickens ever venture through it, and two weeks later they are slaughtered (Pollan, 132-140).

A French equivalent of Whole Foods is Naturalia, a natural and organic supermarket that was started in 1973 in Paris and which now has 79 locations in Paris, Lyon, Marseille, and Strasbourg. Multiple brands that are sold in the store originate and are imported from Italy, including Eurofood and Nature Med. However, most of the brands are produced in France, primarily southern France (Naturalia).

Additionally, the common means of production and distribution today have shaped people who are accustomed to being able to purchase organic products at supermarkets and who expect a certain level of homogeneity in their products. This amount of consistency is coupled with demands for fair trade and diversity of products, such as ones that are exotic or out of season. As these demands increase, the differences between organic and conventional products become more indistinct, forcing people to

create new strategies to make their products unique. For example, in some areas there is the option on organic farms to rent a layer hen, pick the vegetables, or donate in support of an endangered species to provide increased motivation to purchase their goods (Aschemann, et al., 130-131).

Lack of Health Benefits

While, or perhaps because, one of the primary motivations for producing and consuming organic foods is the perceived health benefits, discussed in the previous chapter, one of the largest counter-arguments is the perceived lack of health benefits that organic foods offer. Many people are unconvinced that organic is necessarily significantly healthier than conventional foods because the pesticide levels of conventional foods are almost always within a safe range. Most developed countries' governments set limits on the amount of chemical additives crops and foodstuffs can receive based on the level of detriment to physical health of the animals and people that consume the foods. Also, studies have shown that the nutritional value of organic foods is only marginally superior to traditional foods, if at all ("Criticisms…," 2-5).

A review of scientific studies in the *International Journal of Food and Technology*, relates that in some studies organic foods are shown to have more benefits, such as higher vitamin contents and lower levels of pesticides and nitrates. However, they also risk contamination of certain pathogens, such as *E. coli, Salmonella,* and *Listeria monocytogenes*, particularly from manure since it is frequently used as fertilizer in organic production. In a study conducted in 2005, the results were varying in terms of organic plants being contaminated by bacteria, with some crops having been tested as

positive and others as negative. In regard to overall quality, determined by firmness, titrable acidity, and content of soluble solids, a study conducted by Weibel, et al., showed slightly better results for the organic apples tests in comparison to the conventional apples. However, a similar study performed by Roussos and Gasparatos showed that there were no significant differences. The conclusion of the review of studies determined that there is insufficient information to confirm that organic foods are better than, worse than, or the same as conventional foods, and the outcomes of studies are highly variable depending on the type of foods being tested (Lima and Vianello, 1-10).

Some organic producers utilize natural pesticides, such as Pyrethrin and Rotenone, and some people claim that these pesticides are just as, if not more, harmful than traditional pesticides. Rotenone, for example, has been linked to Parkinson's disease and can be lethal to humans. It is a naturally occurring insecticide, acaricide (mite- and spider-killing), and piscicide (fish-killing), and it has been used since the mid-19th century. It is permitted in organic agricultural use according to EU Regulation 2092/91 because of its naturally occurring state and short time period of toxicity (it breaks down in one to six days, depending on the season). However, lethal cases are very rare because it is sold in small quantities and the side effects of consumption are fast acting, resulting in immediate vomiting or coughing. The development of Parkinson's has been linked to Rotenone, but it requires two to three milligrams per kilogram of body weight each day, an extremely abnormal dosage. The lethal dosage is 300 to 500 milligrams ("Rotenone," 20-21).

Environmental Toll

One of the various criticisms of organic agriculture in relation to the environment is its use of pesticides. Critics say that it is hypocritical to still use pesticides, fungicides, and insecticides in organic farming since it claims to ban their usage. Some also say that those chemicals, such as nicotine and pyrethrum, can be just as detrimental to the environment than conventional ones and are used in exceeding quantities, further damaging the surrounding areas. They are sometimes deemed less efficient than conventional pesticides, and are therefore added in higher quantities, polluting the land and water even more. It has also been said that because organic farming results in lower yields, it necessitates using more land area to expand farming into marginal and natural areas to grow the same amount of food as traditional agriculture. In order to fertilize organic crops, farmers oftentimes use animal manure, compost, or green manure crops, and the use of these products can create an imbalance in the nutritional quality of the soil, particularly for the phosphorous levels. The required nutrient levels are sometimes barely met, and other times they are exceeded ("Criticisms…," 15-23).

Cost

One of the most pervasive arguments in opposition to organic farming is its cost, and the high prices can be attributed to a number of factors. The supply of organic products is limited, which drives up the price of the goods. The economies of scale oftentimes cannot be achieved because the yields are lower than conventional yields. The farming methods are usually more intensive than with traditional farming, necessitating more time and physical labor, more attentive workers, larger staffs, and more expensive

inputs. Organic goods can sometimes require more careful and faster (because of the shorter shelf lives) packaging and transportation, further increasing the price, especially in comparison to the relatively small outputs. Because not all organic crops can be produced in all areas and during every season, the shipment time and effort that goes into transportation also escalate prices. In addition, marketing for the goods is more heavily present than for most conventional counterparts, making the industry as a whole more expensive ("Criticisms…," 31-41).

In 2012, 77 percent of those interviewed who do not purchase organic stated that they chose not to on the basis of the elevated prices ("La Bio en France…," 14). The price of organic goods tends to be at least 20 percent to 30 percent more than that of conventional goods in France, and they can reach up to double or triple the price. The table below gives specific prices, measured in euros, for various goods. The costs provided are those from the specialty organic store Naturalia, and the AB logo brands, name brands, and distributor/generic brands were found at the supermarket Ooshop. Some have argued that this gap between the goods' prices increases the inequality between the upper and lower classes of society because it enables the wealthier citizens the ability to buy healthier or better products and excludes many people who cannot afford them. Although the organic goods have been and are currently more expensive than traditional goods, this discrepancy has shown signs of diminishing. For instance, in a report published by the French Ministry of the Economy and Finances, the average gap in prices for carrots decreased from €1.28 per kilogram in 2008, €1.15 in 2009, €1.12 in 2010, and €1.02 in 2011. Likewise, the golden apple decreased its price disparity from

€2.65 per kilogram in 2008 to €2.24 per kilogram in 2011, and the cucumber decreased from €1.17 per kilogram in 2008 to €0.82 per kilogram in 2011 (Roux, 4-8).

Table 3

Organic and Conventional Product Price Comparison

Products	Market Organic (Naturalia)	Organic (AB logo)	Name Brand	Distributor/ Generic Brand
Olive Oil	7.47	5.83	5.86 (Maille)	3.70
Natural Yogurt	1.60	1.31	0.86 (Dannon)	0.65
Eggs	2.27	2.20	2.02 (Loué)	1.19
Emmental cheese	1.82	1.35	1.10 (Entremont)	0.90
Ground Beef	3.95	3.00	2.17 (Fleury Michon)	2.17
Orange Juice	3.28	2.27	2.35 (Andros)	1.75
Total:	**€20.39**	**€15.96**	**€14.36**	**€10.36**

Source: Mottez, Diane. "Le Bio: Combine Ca Coute (En Plus)?" *Journal Des Femmes*. 2013. P. 1-2.

Insufficient Quantities

It is well-known that organic farms regularly yield less than conventional farms do, so many people are concerned that an increase in organic farming will lead to a decrease in the ability to feed the world's populations. A study conducted by the USDA determined that the available manure would only suffice for a quarter of the farmland, if it were used as the sole means of organic fertilization. Animals are raised more slowly in organic production, thus making the process of providing food to people even slower ("Criticisms…," 50-57). In the documentary *Food Beware*, footage is shown of a meeting between the town mayor, conventional farmers, and organic farmers. One of the

conventional farmers offers his opinion as to why he has not switched to completely organic practices:

> I believe in an agriculture that's reasoned, one that most farmers practice. There are reasoned programs in wine production, in major crops too. Fertilizers with less nitrogen, to avoid leaching. Measures like this show that we care about protecting the environment. We saw the practices of our parents, and there were excesses. Youngsters, today, even in conventional agriculture, are aware that they must be careful. For two reasons: there's concern about protecting the people, but also about watching their wallets because products are expensive. So I believe in organic, but there's a niche market. But totally organic, I don't think there'd be enough to feed everyone. (Jaud 59:15)

Marketing Scheme

One of the largest works regarding opposition towards organic farming in general and particularly for France is *Bio: Fausses Promesses et Vrai Marketing* by Gil Rivière-Wekstein, published in 2011. Throughout the book he, the founder of the monthly publication *Agriculture et Environnement* and member of the French Association of Agricultural Journalists, outlines many grievances that he has with the organic movement as a whole. He begins by acknowledging that organic is an unavoidable (*incontournable*) trend, especially because large chains such as Carrefour, Auchan, Monoprix, Leclerc, and Super U in France have devoted sizeable portions of their stores to organic, and many of them have developed their own organic lines, much like Whole Foods has with its 365

brand (15). He mentions from the beginning that the main issues faced are cost, high necessity for employment (organic farms on average have 30 percent more employees than conventional enterprises), feeble yields, overly difficult logistics (transportation, packaging, labeling, stocking, etc.), inspection, problems of availability, and maintenance. He states that the ultimate question is knowing whether buying organic is really worth the better health, more environmental respect, and more solidarity to small-time and local farmers, and if organic can keep those promises (20-23).

Rivière-Wekstein initially questions and analyzes the claim that organic is healthier than traditional agriculture. He uses many of the same arguments discussed above, saying that there has been little to no data proving that organic has superior nutritional quality, sometimes even exhibiting lower quantities of vitamins, antioxidants, etc. He cites Dr. Alan Dangour of the *American Journal of Clinical Nutrition* who said, "From the point of view of nutrition, there is actually no element in favor of organic choices over conventional ones." He also references a study conducted where mice that were fed exclusively organic feed were two times weaker and more likely to die than mice fed solely regular feed. The studies that have shown that the organic foods tested were healthier than the conventional foods were limited in their scope, difficult to reproduce, and could not accurately represent the entire organic realm (33-38).

A large portion of the book is geared towards the argument that many, if not most, factions of organic beliefs stem from ancient and outdated practices and philosophies. In particular, Rivière-Wekstein looks at people like Rudolph Steiner who promote a return to way of life of previous generations and additionally encourage the belief of cosmic or life forces that only certain techniques, such as using creating fertilizer only from cow

horns, can channel for the growth of their crops. Moreover, he says that many of the same people as well as other groups utilize language that invokes apocalyptic sentiments. They state that eating foods grown with chemicals is catastrophic, for example, and they spread fear to people to encourage them to consume their products and literature. Rivière-Wekstein accuses the doctor and author Laurent Chevallier who propagates this fear by saying that these foods cause cancer and other life-threatening diseases, simply to promote his book *Mes Ordonnances Alimentaires* (40-61).

In addition, the author details his objection to the issue of organic farming being in opposition to chemical use for multiple reasons. First, he says that there is no agriculture that exists without some form of pesticide or fertilizer. Farmers have been using chemicals for generations, and they are oftentimes natural and not synthetic. These pesticides include nicotine, coal, copper sulfate, turpentine, soap, tobacco juice, mercury, and Bordeaux Mixture (*bouillie bordelaise*, a fungicide composed of copper sulfate and slaked lime). He believes that while there are many blights can be dealt with or prevented organically, there are others that necessitate more intensive intervention, such as aphids, caterpillars, moths, mildews, and diseases capable of killing whole crops. The natural pesticides have often not been tested for toxicity, and they have been reported to be more dangerous than synthetic chemicals. For example, the nicotine used on crops was 40 times more toxic for humans than DDT. Moreover, synthetic pesticides have oftentimes been developed based on naturally occurring ones. Even if pesticides are not used, the foods can still be contaminated with them from nearby farms or even different crops on the same farm. A study conducted in October 2009 in the Belgian laboratory Fytolab showed that it was not rare to find residues on organic products. Even if there

are residues on any food, organic or conventional, many people agree that they will not surpass the legal limits, which have been tested and determined on an international scale to be well within health safety regulations. The risk of contaminants is not one so great that one should forego eating fruits and vegetables, says Dr. David Servan-Schreiber, who took part in an interview concerning foods that protect against cancer. He also stated that the key issue is to maintain as balanced of a diet as possible, no matter the label (64-84).

The areas that Rivière-Wekstein makes the most concessions are taste and environment. He acknowledges that organic is certainly better in terms of authenticity, and it typically tastes better. However, taste is a highly subjective issue that cannot be a primary determinant for the market as a whole. Also, there are many food movements that are not necessarily organic that have superior taste as well, such as le Label Rouge, Appellations d'Origine Controllé (AOC), and Indications Geographiques Protégées (IGP). In terms of protecting the environment, organic does tend to be better, but there are limits to this superiority. This includes the use of natural but still toxic chemicals, and the fact that organic farms sometimes have to expand their land area in order to compensate for lower crop yields. This can cut into natural surroundings and further damage the environment (91-102). Rivière-Wekstein concludes his book by qualifying his argument and saying that organic is not innately detrimental or inhibiting to agriculture because it is most often driven by ecological and fair motives; he is more so against the extreme levels to which some people have taken it and particularly the misleading arguments that marketers use to gain supporters and buyers.

Conclusion

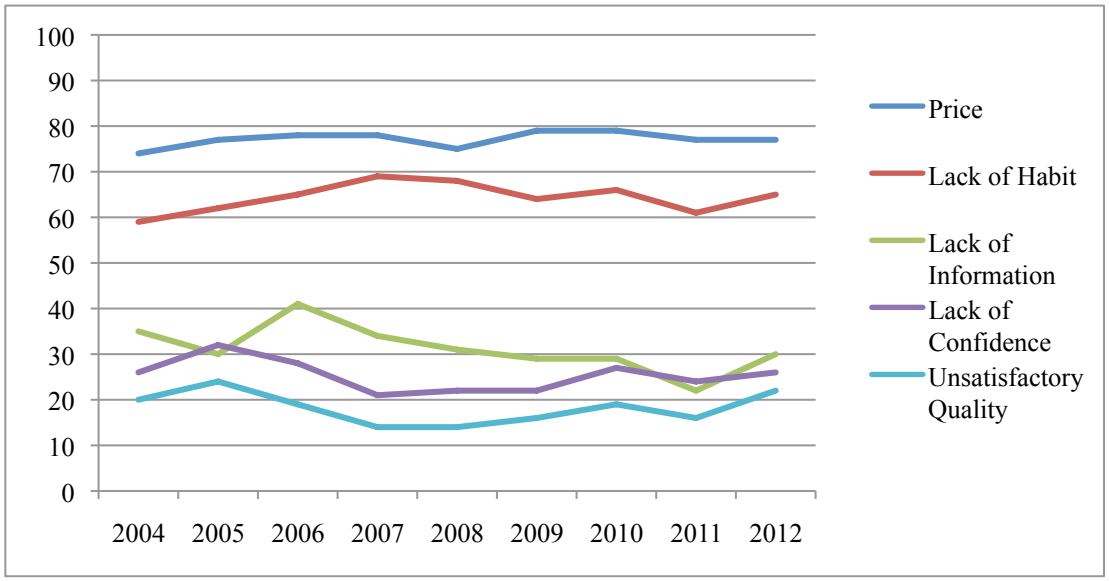
Below is a chart that displays the trends in French people's choosing to not purchase or consume organic food from 2004 to 2012. The results are shown as a percentage of the people who responded affirmatively that the reason cited is one that they follow. Category 1 is "Price of organic products is too high;" Category 2 is "Lack of habit of buying the products;" Category 3 is "Lack of information regarding the specifics;" Category 4 is "Lack of confidence in organic products;" and Category 5 is "Unsatisfactory quality." Not displayed in the chart are also the categories "Not interested in this type of agriculture or eating habits in general" and "Organic products are not easily found in habitual shopping locations," (*translations mine).*[19] They are not included in the graph because they were added to the survey after 2004. Both responses tended to rank in the low twentieth percentile, with 26 percent and 23 percent affirmative responses in 2012, respectively.

According the graph, it is clear that there is a large gap between the top two responses and the lower ones, indicating that the price and lack of habit are the most consistent rationales for purchasing conventional products instead of organic products. Additionally, all of the choices remain relatively stable over the years. The only category that ever overtakes another is Category 4 (lack of confidence) over Category 3 (lack of information), and it is only very temporarily. This stability can indicate that the industry

[19] Original French of the survey options are as follows. Category 1: Prix des produits trop élevé. 2: Pas de reflexe d'en acheter. 3: Manque d'information sur les spécificités. 4: Pas de confiance dans les produits biologiques. 5: Qualité pas satisfaisante. Uncharted responses: Pas intéressé par l'agriculture et l'alimentation en général; ne les trouve pas facilement dans le magasin habituel.

has grown in a regular manner, and it can suggest that it continues to face the same problems nation-wide and over time.

Figure 5



Source: "Baromètre de Consommation et de Perception des Produits Biologiques en France." P. 20.

While this chart and its counterpart featured in the previous chapter do not compare and contrast the strengths and weaknesses of each argument, they do illustrate the primary motivations or lack of motivation that French people have towards organic agriculture, and those strengths and weaknesses depend on each consumer and his or her lifestyle. Organic is still considered a fringe movement, to an extent, and it is understandable as to why when one examines the issues detailed above. Criticisms regarding price, lack of purchasing routine, unavailability, and insufficient information are the predominant grounds on which people choose, whether voluntarily or not, to buy

organic groceries. However, it is important to see that these reasons are never ones that directly attack the organic movement and philosophies at the core. They are more accurately the areas where the farmers and industry can improve their production and distribution tactics in order to achieve goals such as lower prices and bolster confidence.

CONCLUSION

Organic farming has been steadily growing for several decades now, and it does not show signs of stopping anytime soon. Therefore, most analysts do not question whether it will have a future or not, but rather, they question how strong that future seems to be, what issues it will be facing, and potential courses of action it could take. The extent to which these experts believe it will be a major market does vary. It is still technically considered a niche industry and geared towards fringe groups, but it is the most popular alternative to conventional agriculture that we see today, coming out ahead of home gardening, subsistence farming, and community supported agriculture.

Countries all over the world are continually improving their promotions, techniques, and marketing strategies of organic farming. However, much of the future will depend on new consumers' attitudes. The current and future markets will rely not on the devoted customers and farmers who make up the core of the organic consumers, but more so on the occasional buyers because they are much more sensitive to price fluctuations and convenience. This could cause a shift in more profit-oriented supply chains, which is already beginning to create controversy. Additionally, many of these occasional consumers feel that they are not well informed about production processes, label meanings, what characteristics in foods are the most important, etc. Producers are obligated to understand what their buyers want, but oftentimes the buyers are not entirely

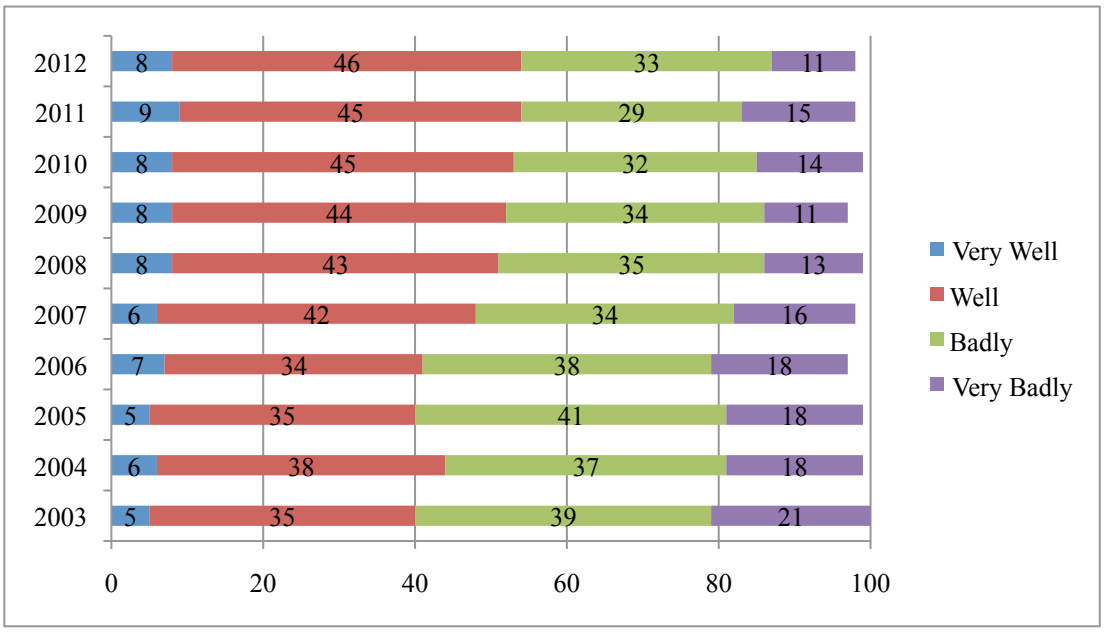
sure (Ashemann, et al., 146-148). Much of this can potentially be resolved in the upcoming years as information is disseminated more, particularly considering that one of the primary tenets of the French Organic Ambition 2017 program surrounds increased label clarification, knowledge about the specifics of organic, and availability ("Launch of the Organic…," 1).

The graph below demonstrates the level that French people feel they are informed on matters concerning organic farming when asked, "In a general manner, do you feel that you are very well informed, well informed, badly informed, or very badly informed on organic products?" (*translation mine)*.[20] The responses are displayed as a percentage each year, and the years where the results do not equal 100 percent, there is information unavailable. The people questioned were further divided into regular organic consumers and non-organic consumers. Organic consumers responded in the following percentages to the answer choices "very well informed," "well informed," "badly informed," or "very badly informed," respectively: 12 percent, 59 percent, 25 percent, 3 percent, and less than 1 percent whose responses are unavailable. Non-organic consumers resulted in the following: 5 percent, 37 percent, 38 percent, 18 percent, and 2 percent unavailable. The chart shows that since 2006, customers nearly consistently have felt that they are better informed than the previous year. As of 2008, the "very well" and "well informed" categories surpassed the "badly" and "very badly informed" categories. However, despite the two "well informed" categories being larger than the two "badly informed" categories for the last five years of the survey, the "very badly informed" response is

[20]Original French: D'une manière générale, pensez-vous être très bien, assez bien, assez mal ou très mal informé sur les produits biologiques ?

perpetually greater than the "very well informed" response. This could be attributed to the public's trust in government labels, enabling them to have confidence in the products that are labeled without having to know many details. Although not represented in the graph, L'Agence Bio also states that those who wanted more information wished for the following in order of greatest choice to least: the origin of the products, the mode of production, the inspections, the nutritional qualities, the mode of transportation, the type of packaging (recycled or reusable), the diversity of the available products, and the possible places of purchase (*translation mine*).[21]

Figure 6



Source: : "Baromètre de Consommation et de Perception des Produits Biologiques en France." P. 30.

[21] Original French: l'origine des produits, le mode de production, les contrôles, les qualités nutritionnelles, le mode de transport, le type d'emballage utilisé (recyclable ou réutilisable), la diversité des produits disponibles, les lieux possibles d'achat. This portion of the survey only shows percentages for 2011 and 2012. The 2012 results, respectively: 59%, 54%, 52%, 45%, 30%, 27%, 26%, and 26%. The 2011 results, respectively: 55%, 49%, 53%, 45%, 26%, 25%, 32%, and 29%.

Despite these increases in public interest and knowledge, there are certainly issues that will necessitate resolving in the near future. One of the most fundamental will be the debate between maintaining the original principles and standards or instituting increased regulations and making them more uniform across regions and countries. If more regulations are put in place, there will be a need for stricter focus on risk factors, perhaps requiring more frequent and thorough inspections for certified and in-conversion farms. However, if these standards are different for various regions, there could be the problem of creating competitive disadvantages, which could lead to consumer distrust or affect the integrity of the farming systems. There might need to be more regional variation in standards in order to increase regional productivity. Certainly not every part of the world can produce the same sort of goods in the same fashions. Therefore, more flexibility could be necessary to reach peak production standards. This could create tensions in the trade industry, however, as places, particularly France, have certain criterion for their organic foods, whether produced domestically or imported, and this could disallow other countries from being able to sell their goods there or to similar states. The regulations will need to be equivalent, not necessarily identical. Farmers need clear guidelines, not strict prescriptions. This will enable them to develop their techniques and products and be more innovative, creative, and self-sufficient. This malleability of regulations will further aid the industry by preventing overly complicated bureaucracies. It will be important to have cooperation among groups such as IFOAM and Agence Bio, but it will simply cause confusion, inefficiency, and lack of drive if they become too interconnected and directive (Schmid, 170-172).

Even with these upcoming challenges that the organic movement will face, it has already come a long way. Most of the innovators promoted practices in vegetarianism, rurality, religiosity, and a return to former techniques. Today's organic sector has altered these philosophies to be more inclusive of people with different life styles, backgrounds, and production techniques. There are now many people who live in urban areas, eat humanely produced meat, and are more secular but still consider themselves proponents of organic. Techniques have become more modern as researchers and farmers have learned more about which processes work. For example, Joel Salatin developed many of his farming procedures by knowing the biological makeup and systems of his crops and livestock. He shifts his herds of cows regularly to fields that he has studied and knows to be at the appropriate feeding time with the best strains of grass. Farmers today know exactly how and why activities such as composting and crop rotation work, even down to a chemical level. It is becoming increasingly entangled with every facet of society, including economics, politics, education, health care, trade, scientific and social research, public relations, sustainability, and consumer culture. Despite these developments, there are elements that have remained through the years: basic tenets of care, quality, taste, health, equilibrium, and an ultimate yet abstract goal of a better society and environment (in the double sense of nature and overall surroundings) for people of all levels of the community and throughout the world (Geier, et al., 264-267).

While most analysts believe that organic farming is a growing trend, albeit to different extents, there are those who see it as an ephemeral form of agriculture or one that will certainly not live up to the ideals that most proponents hope for. Rivière-Wekstein predicts that organic farming, although a relatively large sector that "has the

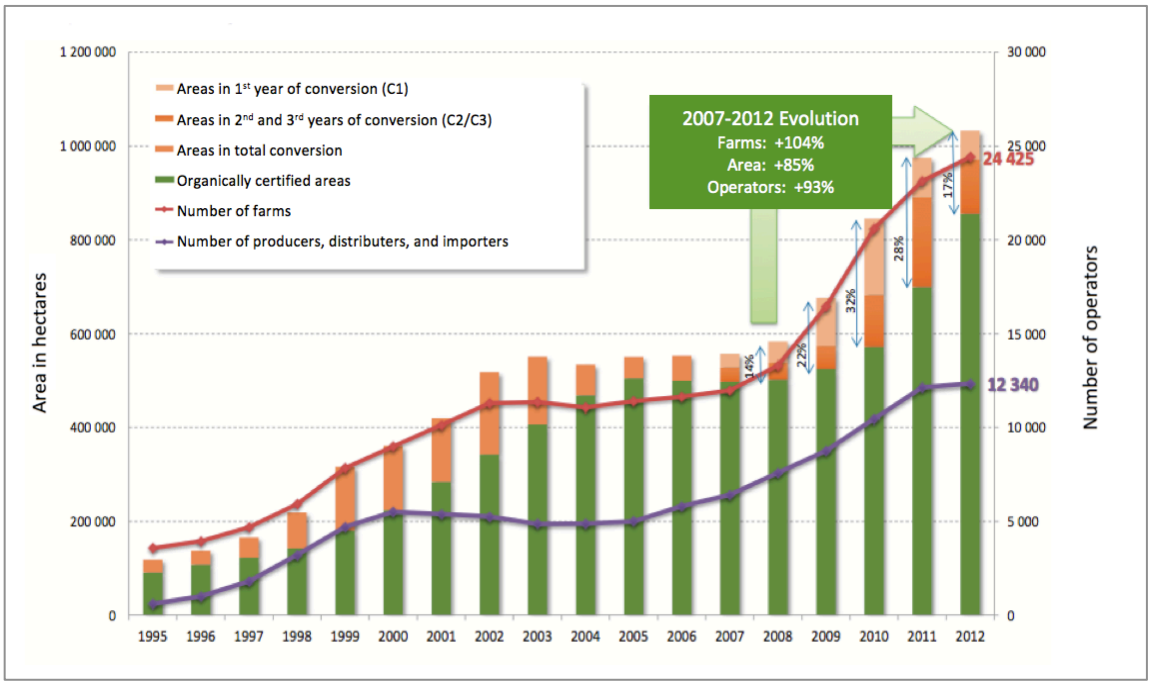
wind in its sails," will either be swept up into the global capitalistic system and become increasingly marketed and industrialized, or it will diminish and remain in the margins of agriculture, maintained only by the most steadfast advocates who utilize outdated techniques. He believes that consumers will realize that much of the organic system is merely marketing strategy, and more people will questions its values and intentions. He does ultimately concede and says that organic farming would do well do look towards the future positively but rationally. Rational, he argues, is loosening control to allow producers more flexibility and creative freedom in their products, allowing products (even chemicals) that have been well researched and tested, and by incorporating biotechnology. Biotechnology is particularly inevitable because while it is understandable that organic advocates have come to oppose GMOs because of their undeniable adverse effects, the technology behind them is not something to innately distrust or vilify. Studying plants' genetic makeup further is a worthwhile endeavor to create organisms that can facilitate ecology and life in general. Rivière-Wekstein even believes that as organic and biotechnology increase their relations, agricultural monopolies, such as Monsanto, can be weakened and brought down (238-245).

Although Rivière-Wekstein believes the organic movement will soon significantly decrease one way or another, it currently shows signs of growing in several ways. Logo recognition has increased every year since their inception. The European logo that is the stars in the shape of a leaf on the green field was at 13 percent recognition in 2010, jumped to 38 percent in 2011, and was 42 percent in 2012. France's Agriculture Biologique logo has been at high rates for the past several years with 81 percent recognition in 2007, 87 percent in 2009, and a soaring 93 percent in 2012. Non-food

organic products have been increasingly purchased over the years. Listed in order of most frequently bought, they include products for cleaning, cosmetics and hygiene, gardening, and textiles such as shoes and clothing (Baromètre, 33, 49). The chart below is one of the best indicators of increased organic practice in France. It illustrates the number of hectares and number of farms in France that are devoted to organic farming, which drastically increased from 2007 to 2012, a direct result of governmental funding.

Figure 7

Organic Land Area



Source: "La Bio En France : De la Production à la Consommation." L'Agence Bio. P. 2.

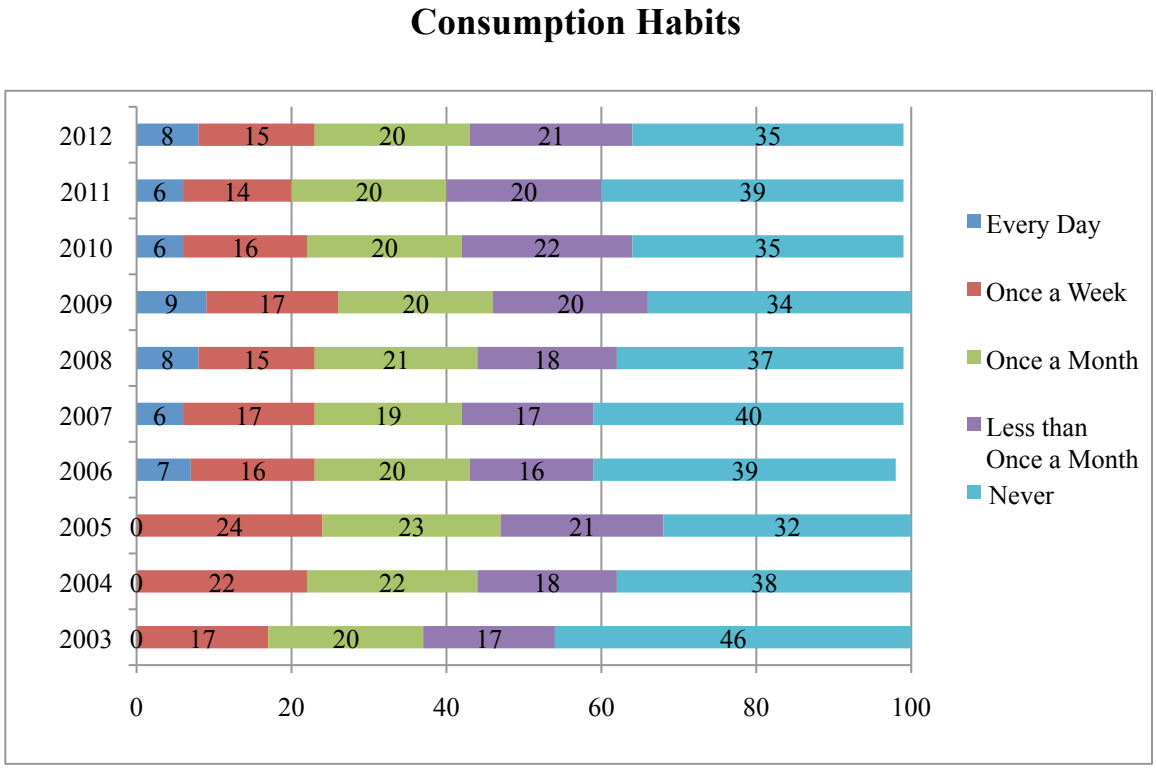
Despite these areas of growth, statistics regarding French population's consumption has remained relatively stable for the past few years. In 2012, when asked if they or a member of their household had purchased one or more organic products in the

last four weeks, 38 percent had, 19 percent had not within the last four weeks, and 41 percent had not at all (*translation mine*).[22] For those that had purchased organic products within a month, the rates from 2003 to 2012 ranged from 33 percent to 45 percent, with the average rate being 38.2 percent. Those who had purchased organic goods but not within the last four weeks had results that ranged from 15 percent to 20 percent, and the average was 17.6 percent. The consumers that do not buy organic goods resulted in 37 percent to 51 percent response rates, and averaged 42.8 percent (Baromètre, 15).

In a similar fashion, L'Agence Bio provided figures for more general consumption habits, and they are featured in the table below. The people who are represented in these figures were asked, "Do you eat organic products?" The response options are as follows: Category 1 is "Every day;" Category 2 is "At least one time a week;" Category 3 is "About one time per month;" Category 4 is "Less than one time per month;" and Category 5 is "Never."[23] These replies are measured as percentages for each year. In 2012, nearly two thirds of the French population consumed organic products, and four out of ten consumed at least one time per month.

[22] Original French: Avez-vous, vous ou quelqu'un de votre foyer, acheté un ou plusieurs produits biologiques au cours des 4 dernières semaines? Au cours des 4 dernières semaines; Pas au cours des 4 dernières semaines; N'achète pas de produit Bio.
[23] Original French: Consommez-vous des produits biologiques? Tous les jours. Au moins une fois par semaine. Environ une fois par mois. Moins d'une fois par mois. Jamais.

Figure 8



Source: "Baromètre de Consommation et de Perception des Produits Biologiques en France." P. 14.

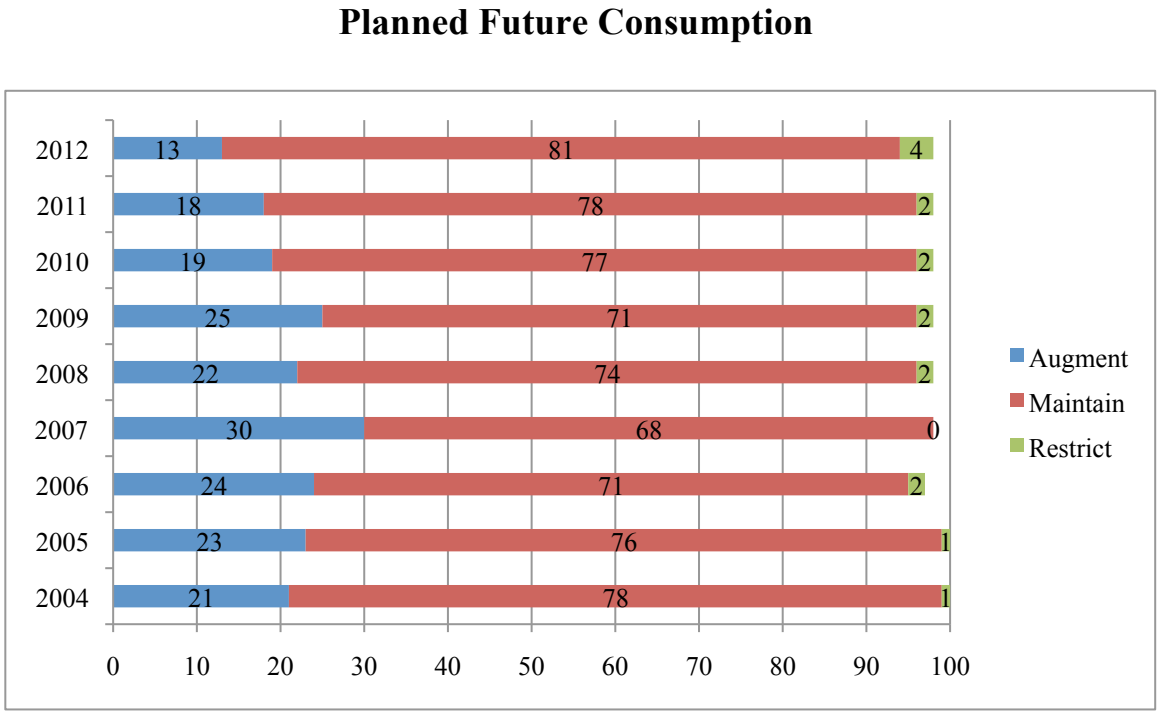
It is also becoming a larger part of eating locations outside of the home, such as restaurants, hospitals, schools, retirement homes, and vacation centers. Those interviewed responded most frequently that they were either "very interested" or "rather interested," (68 percent), and the results increased every year since at least 2003 (Baromètre, 7, 46). Restaurants have increased their use of organic from barely 4 percent before 2006 to 46 percent at the beginning of 2011 and 56 percent in 2013 ("La Bio En France…" 2013, 32). This is becoming a larger part of the government as well. President Hollande stated when he was elected that he wants to have 40 percent of restaurants' food coming from local sources ("Le Discours…," 1). The mayor of Grenoble, Eric Piolle, a member of the EELV party and who was just elected in March of 2014, has stated that one of his objectives is to reach 100 percent organic food in public

eateries during his time in office, which will last at least until 2020 (Fauquembergue, 1). This is still, however, an uphill battle for some local and organic advocates in France. A recent article published in *The New York Times* discusses how many French people are fighting to maintain and reinvigorate the use of fresh food in restaurants, as opposed to frozen and preprocessed foods. It states that last year was the first year that "more money was spent in fast food chains than traditional restaurants, 54 percent of the 34 billion euro French market," (Alderman, 4).

L'Agence Bio also conducted research on people's sentiments regarding their projected purchases of organic foods. This information is displayed in the graph below. The people were asked whether they have the intention, within the next six months, to maintain, restrict, or augment their consumption of organic products.[24] It is interesting to see that the rate of those who plan on increasing their purchases declines each year from 2009 to 2012, those who plan on maintaining their purchasing patterns increases, and those who plan on restricting their purchases stays the same for those years except from 2011 to 2012 where it jumped by 2 percent. This is seemingly contradictory to the vast increase in organic cropland and yields. The French citizens themselves are overall maintaining their organic purchasing habits, rarely restricting, and occasionally increasing but not at a rate to match the growth of available products. This can possibly be attributed to an increase of exports. France's organic exports for 2012 are estimated to be €309 million. These exports are primarily wine (58 percent), specialty items (16 percent), and fruits and vegetables (13 percent) ("La Bio En France…" 2013, 14).

[24] Original French: Avez-vous l'intention dans les 6 prochains mois, de maintenir, restreindre ou augmenter votre consommation de produits biologiques ?

Figure 9



Source: "Baromètre de Consommation et de Perception des Produits Biologiques en France." P. 93.

Taking everything that has been examined into consideration for the future of organic, it can still be a complicated analysis to clearly state whether it will be growing, stagnating, or even decreasing. In France, the public's purchasing behavior is rather lukewarm, but it is frequently discussed in newspapers, classrooms, and among friends. Fast food is becoming a continually greater part of everyday life, the cost of organic is currently still out of most people's budgets, and conventional agriculture is so large and ingrained in society that it may never completely go away. On the other hand, the core group of organic farmers and consumers is not disappearing any time in the near future, meaning the upcoming few years or even decade or so. People are becoming more aware and knowledgeable about organic, its labels, and what it entails exactly. There are still many myths that remain popular, and there will always be extremists who push organic

too hard. But there is also significant government support, which is one of the biggest factors in making the industry grow. It certainly requires the consumers' support and demand, but in France the movement stagnated in the late 1980s and early 1990s, and it was not until the late 1990s when the government reinstated its support, and the number of converted farms has not stopped increasing since then. In fact, there have been a few hundred farms to start converting to organic every month since at least the 2000s. The government intensified its organic support because it simultaneously listened to its highly vocal citizens who wanted more available organic products, and it realized that other European countries, such as Italy, Germany, and Spain, were quickly surpassing them as organic producers. The Common Agricultural Policy for the entire EU will devote over €100 billion between 2014 and 2020, and 30 percent of that funding goes directly towards organic agriculture in each of its member states ("EU Funding…," 1). Because the government has guaranteed funding for the next several years, the organic industry will certainly continue to grow. Even if the government eventually removes funding, it might be well enough developed to completely operate on its own.

As already stated, organic farming in France and worldwide will face many challenges in the future. It will require the strict cooperation of researchers, farmers, government officials, and customers in order to be as well developed as it hopes to be. Furthering scientific knowledge and disseminating this knowledge might be one of the biggest hurdles it will encounter, particularly when it comes to chemical use, biotechnology, biodiversity, and sustainability. It will require flexibility to enable regions to understand what works best for their environment. It will also probably still need to utilize multiple market channels, from large supermarkets to specialty stores to

direct farmer-consumer sales. Ultimately, organic does not seem to be just the most recent trend, fad, or a marketing scheme. It seems to be for some people a larger and larger part of their daily lives, particularly for the children of this generation whose parents want the best quality and healthiest food for them. It is virtually impossible that organic will wholly replace traditional agriculture and food production, particularly in France where organic currently only stands at 3.8 percent of utilized agricultural area ("Agriculture in France…," 1). Big businesses will be extremely difficult to break down, but it is highly possible that with the rise of organic the entire agricultural industry will become more transparent and have more appropriately sized production sites, as opposed to the many massive food factories that exist today. In other words, the food industry in a couple of decades may not altogether align with today's organic principles, but it is likely that it will embody more ecological, fair, healthy, and caring characteristics.

Ultimately to answer the question of whether French organic farming seems to be "à la mode" or a "mode of life," it will most likely be somewhere in between. There is a strong group of people who will grow and maintain their entirely organic ways of living, but there are many more people who will occasionally buy organic goods when it suits them, and they will fluctuate in their purchasing patterns. However, it is highly probably and almost certain that there will be an increase in the number of people who buy organic and traditional products and fewer people who buy solely traditional products.

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