

# What is Organic Farming - and why should you care?

## What is organic?

Organic food was once limited to health food stores, but thanks to an increase in popularity it is now available in most grocery aisles. But what *is* organic produce? What's the difference between organic and non-organic farming? And why should you care about the difference?



On November 15th, the global population surpassed a staggering 8 billion. This is an enormous figure, and is quadruple the population a century ago which was a small 2 billion. By 2050, the global population is expected to reach 9 billion. What are the implications of this? It means farmers must feed 8 billion mouths now, and face the daunting task of feeding an additional billion in just over two decades time.

The problem is that meeting the current demand is already challenging, let alone an increase of another billion. As a result, farming methods which may be considered 'artificial' have emerged. The use of artificial fertilizers, synthetic pesticides, and genetically modified crops have all emerged as means of increasing crop yields to accommodate for the increase in demand for produce. Some of these practices have faced scrutiny due to potential health risks and causing damage to the environment.

Naturally, you wouldn't willingly put your health at risk. However, organic farming offers an alternative set of farming practices. Organic farming produces crops that are free from chemicals or artificial agents,

with a focus on natural solutions as opposed to artificial. “Organic” refers to the way farmers grow and process their crops and products, including things like fruits, vegetables, grains, dairy products and meat.

## So what does organic farming involve?

Well, organic farming focuses on natural methods to produce crops and livestock. This means certain practices are prohibited, such as:

- The use of artificial or synthetic fertilizers.
- Application of sewage sludge as fertilizer.
- Utilization of synthetic pesticides to eliminate insects (with a small amount of exceptions).
- Using radiation to control pests or preserve food.
- Planting genetically modified crops or genetic engineering of crops.
- Administering excessive antibiotics and external growth hormones in livestock.

Instead, organic farmers adopt natural, chemical-free alternative techniques, such as:

- Utilizing compost and plant waste to improve soil quality and nutrient content.
- Employing crop rotation to maintain soil quality and break pest cycles by changing the crop type grown on a given patch of land.
- Using cover crops to prevent soil erosion and preserve soil quality by planting vegetation in areas that would typically remain bare during that given season.
- Applying mulch to control weeds.
- Introducing natural predators of pests or using insect traps as means of pest control.
- Utilizing specific natural pesticides or ‘biopesticides’ and selected approved pesticides permitted for organic farming only as a last resort.
- Providing livestock access to fields and pastures, ensuring pasture feeding makes up at least 30% of the livestock’s nutritional needs during the grazing season.
- Creating healthier living conditions and providing access to the outdoors and fields for livestock.
- Providing organic feed for livestock .



Now that we understand what organic farming is, let's delve into its benefits.

## Why make the effort to farm organically?

Here's a brief summary of the benefits organic farming brings:

- Improved soil and water quality.
- Reduced environmental impact, including lower pollution levels.
- Safer, happier, and healthier livestock.
- Promotion of natural farm animal behavior.
- Supports better sustainability and natural biodiversity.
- Potential for a self-sustaining cycle of resources on a farm.

## So how can you identify organic products?

The US Department of Agriculture has an organic certification program that requires all organic food to meet specific guidance standards controlling how the food has been grown, handled and processed. There are different types of organic products, which are categorized as follows:

- 100% organic: Applies to single ingredient produce, such as fruits, vegetables, eggs and meat. This can also be applied to multi-ingredient foods if all of the ingredients are certified organic.
- Organic: This applies to multi-ingredient foods which have 95% of the ingredients being organic, while non-organic ingredients must be on the USDA-approved additional ingredients list.

- Made with organic: Refers to multi-ingredient products containing at least 70% certified organic ingredients. These products do not carry the official organic seal, and they must list which ingredients are organic.
- Organic ingredients: These products cannot be labeled as organic or carry the organic seal but they may contain ingredients which are organic, typically indicated in the ingredients list.



Beware of confusing "organic" with "natural" on product labels. Natural and organic are similar in values but do not mean the same thing. While natural signifies the absence of artificial preservatives, colors, and flavors, it does not mean the product or ingredients adhere to organic farming methods. Non-organic products can still be labeled as natural, as the "natural" label refers to products free from non-natural ingredients, while the "organic" label refers to products free from non-natural farming practices.

You should also be aware of labels which are similar to organic. Products can have labels such as "pasture raised", "free range", or "hormone free". While these labels offer positive attributes, it is likely that they do not meet complete organic standards, otherwise they would be labeled as such.

In conclusion, organic farming offers a viable and beneficial approach to agriculture. There are many potential issues surrounding the use of artificial farming techniques, and organic provides a healthier alternative.

## Are you interested in organic?

By understanding the impact and benefits of organic, you are able to make informed decisions when selecting your produce. If you would like to make a positive impact on your health and the environment

through going organic, then we offer the perfect place to start. Visit our website and shop at our very own digital farmers market, where you can purchase certified organic produce and take the steps to a healthier, greener future!

Best regards,

OrganicaFarmingCo

(This is a fictional company and is in no way associated with this blog. This blog has been created as a demonstration piece)



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# The benefits of organic

Welcome to another post in the organic blog series, where we discuss all things organic with you!

In this post, we discuss the benefits of organic farming and how it compares to its non-organic counterpart. Find out how organic can directly affect you and your health, and by the time you have finished reading this you will be well on your way to being an organic expert. We'll discuss the nutrition of organic food, the taste difference in comparison with non-organic, and important considerations when it comes to the origin of your produce. Lets dive in!



## Is organic food better for you?

The question of whether organic produce is more nutritious than its non-organic counterpart produces varying results from studies. Some reports indicate that organic and non-organic have similar nutritional value or that any differences are minimal. However, there are also studies that support the idea of organic produce being superior, including studies showing increased nutrient levels and higher concentrations of healthy antioxidants in organic produce.

## An increase in antioxidants

A recent study found that organic fruit, vegetables, and grains offer several nutritional benefits compared to non-organic counterparts. The study found that organic produce can have an 18-69% higher concentration of antioxidants. This means that individuals following an organic diet could be consuming the equivalent of two additional portions of antioxidants every day without needing to eat any more food

compared to a non-organic diet. Although, it's worth noting that this could be due to a decrease in the antioxidants of non-organic foods, rather than a direct increase in organic.

Antioxidants are natural compounds that plants produce to protect themselves against harm and prevent damage in response to stresses. When consumed by humans these antioxidants provide similar benefits, helping to protect against damage and contributing to overall health. Antioxidants have been linked with numerous benefits to human health, such as reducing the risk of heart disease and helping improve skin quality.

## Does organic taste better?

Higher levels of antioxidants may also cause a plant to taste better. Antioxidants have their own unique flavors, which contribute to the overall flavor of the plant, fruit or vegetable they are produced by. Studies have found that higher antioxidant levels can therefore lead to improved taste and aroma in organic produce. Antioxidants also help prevent the food oxidizing (hence the name “anti - “oxidant”), meaning that foods maintain their color, smell and taste for longer.

However, non-organic crops often rely on the use of chemical pesticides for protection, reducing the need for plants to produce their own antioxidants which results in lower levels of antioxidants.

Scientific research on the taste superiority of organic food is limited, as taste perception is largely subjective and varies among individuals. However, anecdotal evidence often supports the notion that organic food tastes better, even from the perspective of food experts and chefs. As well as higher antioxidant levels, the improved soil quality resulting from organic farming is also believed to contribute to this enhanced flavor experience. Well-nourished soil yields better-nourished plants, which ultimately leads to more nutritious and flavorful food.



## More nutrients or more water?

In contrast to higher antioxidant levels in organic crops, non-organic crops tend to have higher water content. This is attributed to the use of nitrogen in synthetic fertilizers. A study by Science Daily Magazine discovered that organic oranges contained up to 30% more vitamin C than conventionally grown oranges. This is due to conventional farming's heavy reliance on nitrogen fertilizers, which lead to a greater water uptake. As a result, the non-organic oranges become more diluted, containing less nutritional content and instead containing a higher water content.

## Beyond plants: animals and omega-3 fatty acids

The benefits of organic farming are not just limited to crops and plants, organic animal products such as eggs, dairy, and meat contain more healthy omega-3 fatty acids. A 2013 study revealed that organic whole milk had significantly higher levels of omega-3 acids compared to non-organic milk. Omega-3 fatty acids have numerous benefits such as contributing to improved heart health and healthy brain development in children. This difference is believed to stem from the healthier and more natural diet of livestock raised on organic farms, due to increased access to grass and pasture for nutrition.

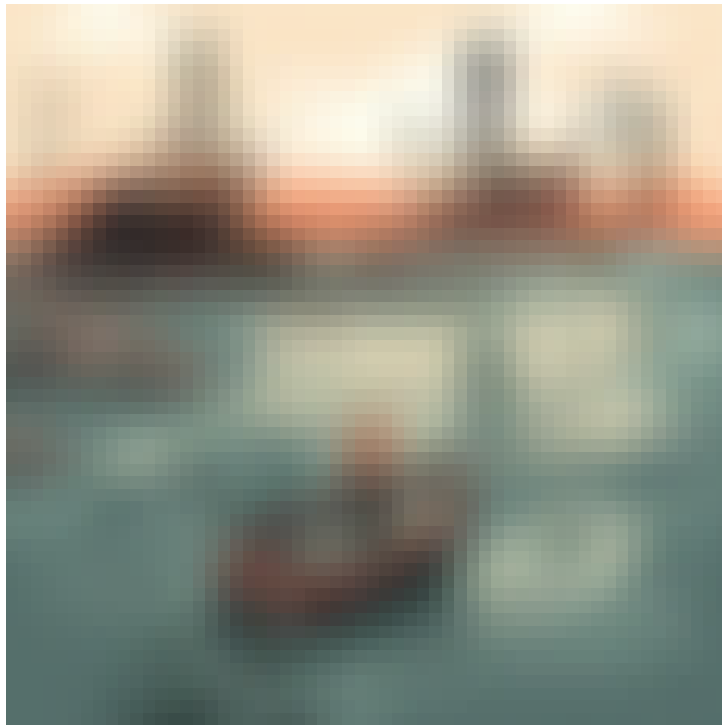
## Considering where your produce has come from

Although some studies suggest that organic food may be healthier due to nutritional differences, there are still some conflicting results on the subject. Therefore, it cannot be definitively concluded that organic food offers greater nutritional value for certain. Consequently, some consumers may believe that the nutritional content of organic and non-organic produce are indifferent, and decide they are equally beneficial to health based on nutritional content alone.

However, assessing the healthfulness of food requires considering more than just its nutritional value. Nutritional studies often overlook the effects of chemical fertilizers, pesticides, growth hormones, and antibiotics on human health.

To illustrate, imagine catching and eating two fish with identical weight and nutritional values. However, one fish was caught in the clean open ocean, while the other was caught near a sewage outlet and within the radius of an oil spill. Although both fish may possess the same nutritional value, when accounting for the environment in which they were caught it is clear that one would be significantly healthier. The same principle applies to produce, meat, and dairy products. While organic and non-organic foods may be similar in nutritional content, the absence of artificial pesticides, chemical fertilizers, growth hormones, and antibiotics makes organic options a healthier choice.





This is not just an analogy, there is evidence to support this:

Research has shown that organic farming leads to approximately 50% lower cadmium levels. Cadmium is a toxic metal that can be absorbed by plants from the soil. Organically grown grains exhibit significantly lower cadmium levels compared to non-organic counterparts. Additionally, pesticide and fertilizer residue can have adverse effects on health, which we will explore in more detail in a future blog.

While scientific studies present differing perspectives on the nutritional benefits, there is evidence that suggests that organic food can indeed be deemed healthier and more flavorful compared to its non-organic counterparts. The environment in which the produce is raised plays a crucial role and should be a significant consideration when selecting your food.

We hope this blog has provided you with the knowledge to make informed decisions about which produce you'd prefer and how the origin of your foods can affect it. If you would like to pursue a switch to organic, we have the perfect place for you to start! Visit our website to find an incredible array of the freshest organic certified produce, all available delivered fresh to your door. All our produce is free from any non-natural pesticides and fertilizers and can bring all the benefits discussed in this newsletter directly to you with just the click of a button.

Thanks for reading this week's post and we hope to see you next week!



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# Exploring organic farming's effect on the environment

Welcome back to another organic blog post! Today we dive into how organic benefits the environment both locally and on a global scale. While non-organic farming often involves harmful chemicals and farming techniques, organic actually works best with a healthy ecosystem surrounding it, so strives to produce the best environment it can. Read on to find out more information on the benefits organic can have on the world around you.

Protecting the environment is of utmost importance because it is what forms the world we live in. Ensuring the environment is managed sustainably and healthily is crucial for future generations, who deserve a planet with clean air, drinkable water, and lush green spaces instead of a gray, lifeless, and depleted world. Taking care of the environment not only contributes to wider environmental health but can also impact your own well-being.

Organic farming practices not only protect environmental health, but can actually improve it. The benefits of organic farming on the environment are long term, occurring gradually over time by aiming to produce food while also maintaining ecological balance. It achieves this by replacing synthetic fertilizers and pesticides with techniques like composting, cover crops, and crop rotation, leading to greater sustainability.

So, what is organic farming doing for the environment?





## Organic soil: the foundation of environmental health

One of the most significant benefits of organic farming is its positive impact on soil. Unlike artificial fertilizers that deplete soil nutrients and contribute to environmental degradation, organic practices improve soil quality. Organic farming enhances soil stability and nutrient cycling through the use of natural fertilizers such as composting and manure, meaning the soil won't lose nutrients as crops grow in it. This ensures that the soil retains its nutrients over time, enabling it to support healthy crops for much longer than non-organic soil. Furthermore, organic farming helps prevent soil erosion as the soil is less exposed to eroding conditions like harsh winds and heavy rains.

Crop rotation is another way organic farming benefits the soil. By changing the crops grown on a field, soil fertility is improved and nutrient depletion is prevented. When the same crop is continuously grown in the same field, it depletes specific nutrients in the soil required for its growth. Rotating crops ensures that different crops with varying nutrient requirements are planted, meaning the nutrients uptaken from the soil change, which prevents the soil from becoming deficient in any particular nutrient.

Moreover, organic soil has the ability to store and hold more water, which results in better crop yields during drought years. This is especially significant considering the growing concern over global warming and climate change, which may lead to more frequent and severe drought conditions. It's reassuring to know that organic crops will be able to withstand these uncertain future conditions without the need for artificial interventions.

## Run off

In organic farming, another significant environmental benefit is the reduction of pesticide runoff. Runoff occurs when chemicals and pesticides are washed out of the soil and into waterways through rainfall. By choosing organic produce, you can help prevent water supplies from being contaminated with harmful pesticides and fertilizers. Fertilizer runoff poses a particular problem as it can lead to eutrophication, which is an extreme growth of algae in nearby bodies of water such as lakes and rivers. As the algae grows and multiplies, they absorb oxygen from the water through photosynthesis, depleting oxygen levels and harming any organisms living in the water like fish and frogs. If you have ever seen a pond or a lake covered in a scummy green layer across the surface, this is caused by the excessive algae growth as a result of fertiliser run off.

In non-organic farming, groundwater pollution is a major issue, as fertilizers and pesticides have a negative effect on water systems when they seep into them. This contamination renders the water unsuitable for drinking by humans, livestock, and wildlife. Organic farming greatly reduces this issue by using natural fertilizers such as compost and through improving biodiversity, which enhances soil

structure and reduces the amount of fertilizers washed away. Countries like France and Germany have actively encouraged farmers to adopt organic practices in areas where groundwater pollution is a significant concern.



## Carbon footprint: a reduced impact on climate change

Organic farming stands out for its reduced carbon footprint. Unlike non-organic farming, which relies on petroleum-based fertilizers, organic farming allows crops to absorb more carbon dioxide from the atmosphere. This contributes to a lower carbon footprint and aids in combating climate change. Non-organic farming's use of petroleum-based fertilizers adds carbon to the soil to help crops grow, resulting in crops absorbing less carbon from the atmosphere as they have ample in the soil. Consequently, more carbon is left in the atmosphere, which can then contribute to global warming. Thankfully, organic farms do not use these petroleum based fertilizers, resulting in a lower overall carbon footprint for the crops.

Organic farming's benefits on the environment extend beyond just carbon reduction, and include improvements to both global and local conditions. For instance, cover crops, which are planted in areas which would not be used for harvest that year, increase carbon absorption by introducing more plants to the land, help increase soil stability and boost biodiversity. Multiple studies have shown that organic soil contains a higher carbon content, and the more carbon retained in the soil, the more organic farming contributes to mitigating climate change.

## Non-organic farmings contribution to global warming

Non-organic farming practices, on the other hand, contribute to global warming. Many of the chemical pesticides and fertilizers used in non-organic farming are contributors to the greenhouse effect. The production of these fertilizers requires significant energy, which is often derived from fossil fuels. The resulting emissions are released into the atmosphere, further contribute to the greenhouse effect. Additionally, pesticides used on crops such as strawberries, have been found to greatly increase nitrous oxide emissions, one of the most potent greenhouse gasses. So, those juicy red strawberries enjoyed during the summer may inadvertently be harming the environment.

Greenhouse gas emissions from agriculture pose a serious threat to the global climate, and this is largely due to non-organic farming practices. A study highlighted that eliminating nitrogen fertilizers, which are not used in organic farming, could reduce global agricultural greenhouse gas emissions by approximately 20%. Additionally, organic farms use up to 45% less energy than non-organic farms while maintaining equivalent yields, which further contributes to organic farmings reduced environmental impact.



## Organic farmings effect on local habitats.

Organic practices also play a role in preserving natural habitats and promoting biodiversity. By eliminating the use of harmful pesticides, organic farming encourages the presence of beneficial organisms such as pollinators and pest-predators in and around farmlands. This aids in the protection of local wildlife and plants, and can also encourage native and recolonising species into an area. A study by the journal of applied ecology found an average organic farm supported 34% more plant, insect and

animal species, and had a 50% higher pollinator diversity, which shows the extent at which organic can benefit local biodiversity.

Pesticides are known to be harmful to soil invertebrates and organisms such as earthworms. These soil invertebrates are vital for carbon absorption as they help build up organic soil carbon, which if maintained properly can absorb vast amounts of carbon. While non-organic farming practices harm these invertebrates, organic farming actually encourages their presence in order to enrich the soil with nutrients and increase crop yields, all while enhancing biodiversity.

Organic farming's benefits on the environment are the result of numerous contributing factors. Although each factor may seem minor on its own, their combined impact in organic farming makes a significant difference. With current global concerns for the future of the environment, it is important that organic farming offers a solution to providing sufficient food without harming the environment.

If you would like to improve your own health and the health of the environment around you, then we offer the perfect place for you to start your organic journey. Simply follow the link to our website where you can find sustainably sourced and pesticide free organic produce, fresh from the farm. With the click of a button you can have this amazing produce delivered straight to your door!

Thanks for reading and we hope to see you again in the next post!



# Genetically modified crops: Understanding the Science and Impacts.

Welcome back to another installment of the organic blog! In today's post we explore the world of genetically modified crops, breaking the topic down into a simple explanation and discussing the implications. GMO (genetically modified organisms) are currently classified as non-organic, and pose an interesting topic for the future of agriculture.

As agriculture adapts to meet the needs of the growing population, the crops grown to help feed the masses are also adapting. Technology has stepped in to help improve farming methods and genetically modified crops are one of the ways science is advancing agriculture to help increase harvests. But what are genetically modified crops, and are they safe?

## What are genetically modified crops?

Genetically modified crops may seem complex, and while the underlying science behind them certainly is complex, the fundamental idea is relatively simple. Genetically modified organisms (or GMOs for short), are plants that have genes from another species inserted into their genetic make up, giving them specific characteristics associated with the introduced gene. For instance, let's say you wanted an orange cauliflower. By taking a gene from a carrot that containing 'orange' DNA and inserting it into the cauliflower, you can achieve a vibrant orange-coloured cauliflower.



To summaries the process:

- Scientists transfer new DNA genes into plant cells.

- These cells are then grown into plant's that produce seeds containing the added DNA genes.
- These seeds are then planted, resulting in plants that show the desired genetic trait, for example greater disease or pests resistance.

While the actual methods involved are much more intricate than this explanation, it provides a basic understanding of what a GMO crop is.

Although GMO crops produced using this technique are a relatively modern technological advancement, genetic selection is not a new concept. For thousands of years humans have selectively bred plants and livestock based on certain desired genetic traits, such as improved resilience or higher milk yield. Previously selective breeding occurred over generations by choosing individuals which displayed the desired characteristics, but today GMOs utilize scientific techniques to accelerate this. Despite genetic selection and selective breeding being age-old practices, GMO crops and the technology behind them are fairly new. As a result, there is limited research data available, and scientists cannot be certain of the potential long-term effects GMOs may have.

## What are the effects of GMO crops?

Currently, genetically modified crops are not permitted in organic farming. Many scientists argue that GMO crops are an attempt to control nature, whereas the core principles of organic farming revolve around working with nature. While organic farming often looks for natural solutions, GMO crops are trying to alter and 'fix' nature, meaning organic and GMO values do not align well.



Although GMO technology does provide some benefits, it does still have its drawbacks:

Allergy risk:

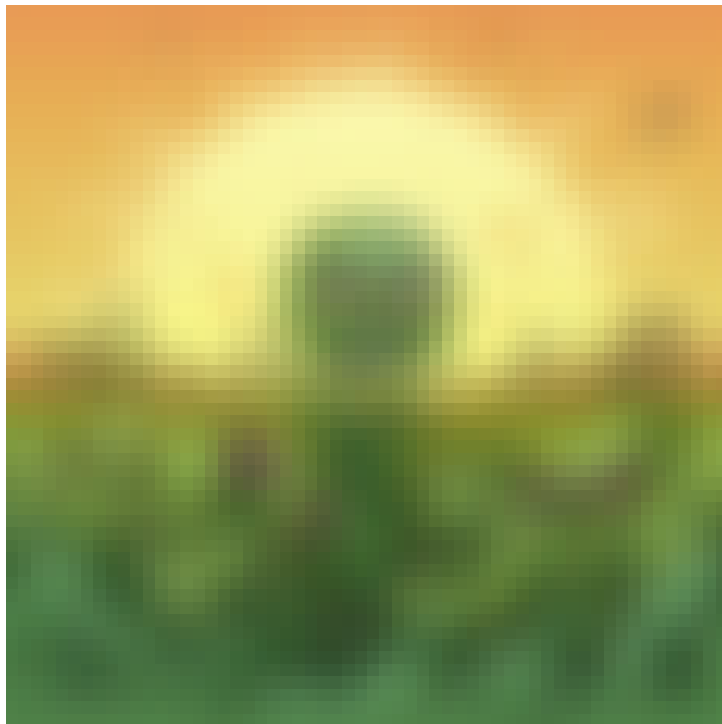


There is a risk that individuals may experience allergic reactions if the inserted genes come from a product to which they are allergic. For example, if a GMO potato contained genes from a peanut, consumers who may have peanut allergies can eat the potato unknowingly and have an allergic reaction triggered by the inserted gene. This poses a problem as individuals may not know the origin of the genetics used in GMO produce, so may be unaware they are consuming genetics of products they are allergic to .

## Superweeds: the supervillain attacking your local habitats.

GMO crops are often engineered with increased herbicide or pesticide tolerance. This allows farmers to use greater quantities of herbicides and pesticides to control pests and weeds, leading to greater crop yields. However, excessive use of these chemicals will also increase the negative effects of herbicides and pesticides on the environment. Increased pesticide use equates to increased damage to the environment

What's more, The increased use of these chemicals has now lead to the emergence of “super-weeds” and “super-pests”. These pests and weeds have become resistant to herbicides and pesticides from over-exposure to these chemicals and have developed an immunity to them. Moreover, the widespread application of pesticides and herbicides enabled by GMO's greatly reduces local biodiversity, as more plants struggle to survive the chemical treatments.



### Environmental contamination:

Another issue with GMO crops is the potential for environmental contamination, The process of GMO plants spreading and integrating into the wild. Just like non-GMO plants, GMO plants disperse seeds and pollen in the same way. Consequently, when GMO plants release their seeds and pollen, the plants can easily spread into the wild and beyond the borders of the farm. The problem with this is that GMO plants,

with their improved resistance and altered genetic makeup, can often outcompete native plant species for resources. The GMO plants can then thrive due to increased chances of survival, displacing the naturally occurring plants.

Overall, research on GMO crops remains inconclusive regarding any potential health concerns. However, there is mounting evidence that suggests GMO crops can have a negative effect on the environment.

In conclusion, genetically modified organisms are a complex topic which spark an interesting debate regarding science's interference with nature. GMO's provide benefits and drawbacks, but could prove to be a useful asset in the future of mass-produced crops if solutions are provided for the potential issues. Organic farming regulations currently excludes GMO's due to misalignment in between the technology used and the principles of working with nature, not against it. As the debate surrounding GMOs continues, further research may lead to more light being shed on the long-term impacts of GMOs and what the future implications may be.

If you would like to start your organic food journey, we provide the perfect starting point. Our virtual farmers market offers the freshest and most nutritious organic certified produce delivered straight to your door. To view our store or for more information on organic produce, please visit our website at:

[www.examplewebsiteaddress.com](http://www.examplewebsiteaddress.com)

Thank you for reading and stay tuned for more informative content from our blog section in the future!