

Biodynamic Farming and the Legacy of Rudolf Steiner

Analysis by [Dr. Joseph Mercola](#)

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STORY AT-A-GLANCE

- › Biodynamic farming is a spiritual-ethical-ecological approach to agriculture initially developed by Austrian scholar Rudolf Steiner, Ph.D., (1861-1925)
- › Not only does biodynamic farming provide superior crops both in volume and increased density of nutrients, but biodynamic farms are also completely self-sustaining
- › What sets biodynamic farming apart from organic farming are the principles involving cosmological forces, such as taking moon phases and planetary cycles into account when planting and harvesting

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Biodynamic farming is a spiritual-ethical-ecological approach to agriculture initially developed by Austrian scholar Rudolf Steiner,¹ Ph.D., (1861-1925). It's an approach that can provide far superior harvests compared to conventional chemical-based agriculture, while simultaneously healing the Earth.

Not only does biodynamic farming provide superior crops both in volume and increased density of nutrients, but biodynamic farms are also completely self-sustaining. As noted in the featured film, "The Challenge of Rudolf Steiner," sustainability, and the personal independence and freedom that sustainability provides, was incredibly important to Steiner.

It's a very long film – over three hours – but if you have an interest in biodynamic farming or Steiner's worldview in general, it's well worth watching. He taught there is an invisible force that aids and sustains humanity, and biodynamic farming makes use of a wide variety of influences, including planetary influences and moon phases.

Regenerative agriculture has been one of my passions for the past few years, and I've read many books and interviewed many experts in this area. Over these past few years, I've tested a number of different strategies to improve plant growth, such as vortexed compost tea, rock dust powders, magnetic structured water, ionic ocean minerals, biochar, many types of foliar sprays and mulch like wood chips.

Steiner's Legacy Lives On

Steiner has had a profound influence, making an indelible mark on the world. Profoundly prolific, his complete works fill more than 330 books, much of which are now available online in German and English.²

Steiner was a trained scientist and respected philosopher, a true eclectic and visionary far ahead of his times. His voluminous works span a wide range of topics, from "The Mysteries of Antiquity" and writings on Nietzsche and Goethe, to "The Philosophy of Freedom" and "Spirit and Matter" to the "Birth of the Biodynamic Method."

He wrote about economics, politics, art, architecture, drama, therapeutic speech, epistemology, religion, science, medicine, education and more. You could spend your entire life studying his life's work, many aspects of which are detailed in this two-part film.

Education – The Steiner Way

Aside from agriculture, Steiner had a deep interest in early education, and his principles are alive and well to this day. In the U.K. alone, there are more than three dozen Steiner academies of learning, and the natural world, including farming skills, is an integral part of the curriculum.

Steiner kindergarten academies "provide 'unhurried and creative' environments for learning," The Guardian wrote in 2012.³ Trevor Mepham, principal of Steiner Academy Hereford, told the paper, "It's about keeping that vitality and that freshness and that twinkling eye. I think that's common sense, though. It's just that we arguably try to do that as a matter of course."

"There's something undeniably wholesome about the Steiner approach," The Guardian notes. "In an age when toddlers are adept at using iPhones, the idea of children building shelters in the woods is profoundly attractive to parents. Access to television is restricted – under the homeschool agreement with parents, children are not meant to watch TV before the age of 8.

There is no uniform; the children wear hoodies, sturdy trousers and plimsolls, and the canteen serves mainly vegetarian food. A homely vegetable curry spiced with mustard seeds is dish of the day when I visit ...

'As human beings we have a close and important relationship with the natural world. To pretend that we just need gadgetry and technology, that misses out a very vital part of the piece,' Mepham says. 'Especially when children are young, we need to try to foster in them an interest and sense of inquiry and hopefulness about the natural world.'

Biodynamic Farming and Reverence for Nature

Biodynamic farming is perhaps the area where his legacy lives on the strongest. In 1924, due to popular demand, Steiner offered an agriculture course in Koberwitz, a small village in what is now Poland.

The course consisted of eight lectures and five discussions, now available in the book "Agriculture: Spiritual Foundations for the Renewal of Agriculture," which to this day serves as the basis of biodynamic farming everywhere. His course is also available for free online.⁴ As noted by Biodynamic Association:⁵

"Steiner was one of the first public figures to warn that the widespread use of chemical fertilizers would lead to the decline of soil, plant and animal health and the subsequent devitalization of food. He was also the first to bring the perspective of the farm as a single, self-sustaining organism that thrives through biodiversity, the integration of crops and livestock and the creation of a closed-loop system of fertility."

In 1923, he also predicted that, in 80 to 100 years, honeybee populations would collapse⁶ – a prediction fulfilled with the sudden emergence of colony collapse disorder, which can be traced back to the use of toxic pesticides and herbicides.

As just one of many examples of Steiner's comprehensive approach to farming, biodynamic farmers will not cut off the horns on their cows, as the animal's horns are a primary sensory organ, and a complex interrelated relationship exists between the horns and the animal's digestive system.

Why Agricultural U-Turn Is Necessary

We live in an increasingly toxic world, and according to a wide variety of scientists, we are looking at no more than 50 to 60 years' worth of business as usual before we reach a point at which nature will no longer sustain us on any front, be it water, air or soil quality. Indeed, food security is no longer a given, even if you have plenty of available land, and here's why:

- **Water scarcity is getting worse as aquifers are drained faster than they can be refilled** – One-third of the largest groundwater aquifers are already nearing depletion,⁷ with three of the most stressed aquifers being located in areas where political tensions are already running high.⁸ To give you an idea of how quickly groundwater is being depleted, consider what's happening in the High Plains Aquifer (also known as the Ogallala) in the American Midwest.

Here, the water level has been dropping by an average of 6 feet per year, while the natural recharge rate is 1 inch or less.⁹ Once this aquifer is depleted – and many

wells have already run dry in the area – 20% of the U.S. corn, wheat and cattle output will be lost due to lack of irrigation and water for the animals.

- **Soil erosion and degradation is rapidly worsening** – In a 2012 Time magazine¹⁰ interview, University of Sydney professor John Crawford noted that about 40% of agricultural soils around the globe is currently classified as degraded or seriously degraded. "Seriously degraded" means that 70% of the topsoil (the layer of soil in which plants grow) has already disappeared.

The reason for the erosion and degradation is farming methods that remove carbon from the soil and destroy the microbial balance in the soil responsible for plant nutrition and growth. At present, topsoil is being lost 10 to 40 times faster than nature can regenerate and replenish it naturally.

- **Water pollution is worsening** – Precious water sources are also threatened by pollution from large-scale monocrop farms and concentrated animal feeding operations.¹¹ According to a report¹² by Environment America, corporate agribusiness is "one of the biggest threats to America's waterways." Tyson Foods Inc. was deemed among the worst, releasing 104.4 million pounds of toxic pollutants into waterways between 2010 and 2014.

Researchers have warned that many lakes around the world are at grave risk from fertilizer runoff that feeds harmful blue-green algae (cyanobacteria),¹³ and once established, it's far more difficult to get rid of than previously thought. The answer, according to the authors of this study, is better land-use management that addresses fertilizer runoff. Dramatic reductions in fertilizer use are also recommended.

- **Air pollution is worsening** – Scientists have declared farming and fertilizers as the No. 1 cause of particulate matter air pollution in much of the U.S., China, Russia and Europe today, specifically the nitrogen component of fertilizers.^{14,15} Industrial food and farming also release dangerous amounts of greenhouse gases, carbon dioxide, methane and nitrous oxide.

Meanwhile, the World Health Organization warns 28% of all deaths worldwide are attributable to environmental pollution, with air pollution being among the most significant.¹⁶

- **Desertification is speeding up** — Land is turning into desert at a rapid clip and, with it, we're losing biodiversity of both plant and animal life.

Biodynamic Farming Is Part of the Answer

Biodynamic farming addresses all of these problems and more. The good news is biodynamic farming is on the rise, gaining popularity among younger farmers — even people who don't have a family background in farming. John Chester, for example, was a filmmaker before he left Hollywood for a 213-acre farm in Moorpark, California. The Guardian writes:¹⁷

"... Chester runs [Apricot Lane Farms] with his wife, Molly. The couple nurtures 100 different types of vegetables, 75 varieties of stone fruit, and countless animal residents: Scottish highland cattle, pigs, chickens, sheep, ducks, hens, horses and livestock dogs.

Last year, Apricot Lane Farms was recognized by the National Wildlife Federation and the North American Butterfly Association for supporting so much wildlife — not a recognition typically given to farms."

Last year, biodynamic farming in the U.S. increased by 16%, adding nearly 21,800 acres to its fold.¹⁸ To evaluate the impact of biodynamic methods on soil quality, Demeter USA, a nonprofit certifier of biodynamic goods, has started collecting topsoil samples from participating farms. Eventually, this will tell us just how quickly soil quality can be improved.

Demeter co-director Elizabeth Candelario told The Guardian, "This will provide a tool for farmers who continue to focus on building healthy soil, and give voice to power about biodynamic agriculture's role in mitigating the impacts of climate change."

Cosmic Influences

What sets biodynamic farming¹⁹ apart from organic farming are the principles involving cosmological forces, such as taking moon phases and planetary cycles into account when planting and harvesting. Each of the 12 zodiac signs are associated with a particular quality.

As explained by Tony Carlton in the film, the four primary qualities or energies farmers work with are earth, light, water and warmth. Zodiac signs also fall into four different elements, namely earth signs, air signs, water signs and fire signs.

- During the influence of an earth sign, you would plant root vegetables, as the astrological earth element corresponds with plant roots. Earth signs are: Taurus (April 20 to May 20), Virgo (August 23 to September 22) and Capricorn (December 22 to January 19)
- During water signs, you would plant leafy greens (water element). Water signs are: Cancer (June 21 to July 22), Scorpio (October 23 to November 21) and Pisces (February 19 to March 20)
- Air signs call for planting of flowering plants (light element). Air signs are: Gemini (May 21 to June 20), Libra (September 23 to October 22) and Aquarius (January 20 to February 18)
- Fire signs call for planting of fruits (the element of warmth). Fire signs are: Aries (March 21 to April 19), Leo (July 23 to August 22) and Sagittarius (November 22 to December 21)

To recap, the four elements of earth, water, air and fire correspond to the plant kingdom of root, leaf, flower and fruit. As an example, lettuce grows well under the influence of Pisces, but the bean does not. Beans prefer the influence of Aries. If you plant beans during the month of Pisces, the plant will hardly grow at all – until Aries comes around, at which time it will actually start to grow.

This further translates into moon phases as well. For example, when the moon is in Aries, a fire sign, you'll want to plant fruiting plants, such as cherries. When the moon is

in Taurus, an earth sign, plant carrots and other root veggies. Since the moon moves quickly through each sign, it will change signs every two days or so. For a planting guide based on moon phases, see [The Gardeners Calendar](#).²⁰

Biodynamic Is Organic and Regenerative, and Then Some

Biodynamic farming also differs a bit in the way farmers are certified. While an organic farmer can section off as little as 10% of the farm for the growing of certified organic goods, in order to be certified as a biodynamic farmer, your entire farm must be biodynamic.

In addition to that, biodynamic certification also requires 10% of the land be dedicated to increasing biodiversity, such as forest, wetland or insectary. As noted by Lauren Mazzo, writing for [Shape Magazine](#):²¹

"In the end, they're both about eliminating the scary stuff from our food. An organic certification means there are no synthetic fertilizers, sewage sludge, irradiation or genetic engineering used in the food, and farm animals must be fed organic feed, etc.

Biodynamic includes those guidelines, as well as making the farm even more self-reliant. For example, instead of simply requiring organic feed for animals, most of the feed must originate from other processes and resources on the farm."

Biodynamic farming also has most or all of the features associated with regenerative agriculture, such as crop rotation, cover crops and so on. And, while neither use synthetic fertilizers or pesticides or herbicides, Steiner created a number of very specific preparations made from herbs, minerals and manure, which are then added to compost or sprayed on the fields.

One such preparation involves packing manure into a cow horn and burying it underground over the winter. In spring, the contents of the horn are scraped out, mixed

with water and applied as a soil treatment to stimulate root growth. Another involves packing silica into a cow horn and burying it over the summer.²²

You Are What You Eat

According to Steiner, man is a microcosm of the macrocosm. Certainly, it's true that the biosphere that is the Earth is intricately connected, from the tiniest bacteria in the soil all the way up to the human body, which just so happens to contain 10 times more bacteria and other microorganisms than human cells. What separates us from the microbiome in the soil, you could say, is merely scale and perception.

With that in mind, we cannot afford to ignore soil, plant and insect health, as our health depends on theirs. While few are called to become full-time farmers, most people can grow some of their own food, even if it's just some herbs or sprouts, which require little space and maintenance.

Even if you do none of those things, you can still help steer the agricultural industry toward safer, more sustainable systems by supporting your local farmers and choosing fresh, locally-grown organic and grass fed foods. If you live in the U.S., the following organizations can help you locate farm-fresh foods:

[American Grassfed Association](#) — The goal of the American Grassfed Association is to promote the grass fed industry through government relations, research, concept marketing and public education.

Their website also allows you to search for AGA approved producers certified according to strict standards that include being raised on a diet of 100% forage; raised on pasture and never confined to a feedlot; never treated with antibiotics or hormones; born and raised on American family farms.

[EatWild.com](#) — EatWild.com provides lists of farmers known to produce raw dairy products as well as grass fed beef and other farm-fresh produce (although not all are

certified organic). Here you can also find information about local farmers markets, as well as local stores and restaurants that sell grass fed products.

Weston A. Price Foundation — Weston A. Price has local chapters in most states, and many of them are connected with buying clubs in which you can easily purchase organic foods, including grass fed raw dairy products like milk and butter.

Grassfed Exchange — The Grassfed Exchange has a listing of producers selling organic and grass fed meats across the U.S.

Local Harvest — This website will help you find farmers markets, family farms and other sources of sustainably grown food in your area where you can buy produce, grass fed meats and many other goodies.

Farmers Markets — A national listing of farmers markets.

Eat Well Guide: Wholesome Food from Healthy Animals — The Eat Well Guide is a free online directory of sustainably raised meat, poultry, dairy and eggs from farms, stores, restaurants, inns, hotels and online outlets in the United States and Canada.

Community Involved in Sustaining Agriculture (CISA) — CISA is dedicated to sustaining agriculture and promoting the products of small farms.

The Cornucopia Institute — The Cornucopia Institute maintains web-based tools rating all certified organic brands of eggs, dairy products and other commodities, based on their ethical sourcing and authentic farming practices separating CAFO "organic" production from authentic organic practices.

RealMilk.com — If you're still unsure of where to find raw milk, check out Raw-Milk-Facts.com and RealMilk.com. They can tell you what the status is for legality in your state, and provide a listing of raw dairy farms in your area. The Farm to Consumer Legal Defense Fund²³ also provides a state-by-state review of raw milk laws.²⁴ California residents can also find raw milk retailers using the store locator available at www.OrganicPastures.com.

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