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From the Editor

Dear Reader,

The recent passing of Alex Podolinsky reminded me just how critical the elders are to all practices that bring more light to this Earth. Strong, radiant, committed souls are required if humanity is to continue to evolve in a healthy manner. Alex Podolinsky was one such soul. His intelligence and dedication to soil health may sometimes have made him the target of thoughtless criticism but, like all original thinkers and pioneers, he did not shift his commitment to please those who confronted him. He knew his truth and followed it.

Yogi Bhanan, the Indian-born American yogi who introduced his brand of kundalini yoga to America in the 1970s, remarked that leaders have to be able to carry themselves and a thousand others. Of course the number he picked symbolized the impact such individuals can have, but it also underlined the sense of responsibility true leaders have to those who follow after them, providing them with accurate, truthful guidance. By the time such individuals become elders, they have solved problems, created new pathways to action, and, essentially, become more grounded and skilled in the practices to which they have given their lives. Though learning from others' experience may not mean to many what it

once meant, these precious elders have much to teach just by being who they are. They have a gleam about them, much like a stone that has been polished in the river and become smooth and shiny. The words they speak carry the conviction of experience, something far different than the early energy of someone walking the path for the first time. They are like grand old trees. We feel their beauty and power, and their sacrifice simply by being in their company.

This issue of *Applied Biodynamics* not only gives readers an opportunity to review the contributions of such biodynamic sages as Mac Mead, it also offers articles that show how those who are becoming elders in the field have dealt with the ups and downs of farming, made wise adjustments, and managed to lead lives in harmony with the healthy forces of Earth. This issue offers a summary of a very fine interview with Mac Mead, part of the Fellowship of Preparation Makers Interview Project available in full on the Biodynamic Association web site. Abigail Porter addresses the growing challenges of farming, as well as the need for new farmers to rise to that challenge and thus to become the elders of the future. Featured is information from Winter Green Farm in Oregon, Stony Ridge Farm in Maryland, and Perennial Roots Farm in Virginia. In addition, Pat Frazier shares the results of JPI's first permadynamics workshop, the second part of which will take place in October.

From the beginning of time, true elders have been our teachers. Sometimes these elders have been human, and sometimes they have been the wise invisible spirits of the land. In whatever form they take, they teach. And sometimes we only have to be in their presence to absorb their wisdom.

—Mary Maruca

Front cover: Wali Via and Oregon Biodynamic Group with BD500 horns.

Applied Biodynamics

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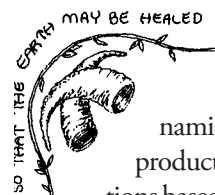
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Mission



The mission of the Josephine Porter Institute for Applied Biodynamics, Inc. is to heal the earth through production of quality biodynamic preparations based on the spiritual scientific discoveries of Rudolf Steiner and to advance education and research in biodynamic agriculture.

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How Do We Meet the Need for Healthy Food and More Farms?

Abigail Porter

There is a greater need now than ever before for regional, regenerative, organic, and especially biodynamic farms and gardens to provide: healing, nutrient-dense food, resilience in the face of climate change and increasing weather extremes, local food security, stimulation of local economies, and community building. With many states importing most of their food needs and the largest segment of the farming population being over 65 years old (the average age is over 58 according to 2012 U.S. Department of Agriculture (USDA) data), there is both a need and an opportunity for a younger generation of farmers.

Almost 100 years ago, Rudolf Steiner said that food no longer provided what was needed for spiritual development. With the advent of petro-chemical, mass-produced agricultural products, food quality has declined even further, with nutrient levels of some foods at only ten to fifty percent of what they once were. Evidence of this deficiency surrounds us in the form of environmental destruction, declining health, and cultural and political chaos. Vital, nutrient-dense foods are necessary to help humans think with discernment, feel with empathy and compassion, and possess the will force to set priorities and follow through. This is critical for the health of humanity, our Earth, and all living beings.

Yet farming is much more challenging than it was in the early 1900s when my grandfather was farming. Larger extended families worked the farm, and the children grew up with farming experience, and perhaps the genetic and intuitive memory of their ancestors before them. They stayed on the farm and continued the tradition. Adjoining farms helped out in a pinch if machinery broke or an abundant harvest required extra hands to help out. A ready direct-to-consumer market already existed for their surplus crops in nearby towns, and even if farmers sold wholesale, they received a larger percent of the retail price than they do today. It is a harder road for single families going into farming now.

Consumers also spend less on food than ever before. In 1929, Americans spent 23.4 percent of their income on food, compared to 6.4 percent (2012 USDA data), which is less than any of the 83 other countries for which the USDA tracks data. Germany, Italy, and France range from 11 to 14 percent, while less industrialized countries range from 20 to 45 percent of their income spent for food. Unfortunately, the consequences of lower priced food have such hidden costs as air, water and soil pollution; loss of top soil leading to more extreme flooding; decline of insects and biodiversity; inhumane treatment of animals; antibiotic

resistant super bugs; increased health costs for workers and consumers; and tax and insurance increases.

The good news is that as more people are becoming aware of the problems created by the food and agricultural system, demand for organic food has surged. Also, as USDA organic standards have become compromised by large producers getting into the organic market, educated consumers prefer to know their farmers, as well as how they grow their food. They tend to buy local produce at farmers markets or become members of CSAs, demonstrating their willingness to pay a higher price for food that is not grown with GMOs, chemical pesticides, and fertilizers. This also includes buying meat from animals that have been raised humanely. That said, the need for better education and awareness continues to grow, especially since we have almost two generations that no longer know how to cook from scratch.

Seasoned farmers work hard to meet consumer needs with high quality food. But changing weather and market prices challenge even them. Of course, these challenges multiply for new farmers lacking experience, who may be unprepared for the unexpected difficulties and long hours needed to plant a crop or harvest it before the rains come, or even while the food is at its prime.

Farming may require more skills and experience (from a knowledge of soils, to plants, to animal husbandry, to business, to marketing and people skills), more commitment, and more love for the work than any other single profession. Too frequently, people from regular 9-to-5 jobs idealistically jump into farming, not being prepared for the hard work and complexity. In the end, they may end up frustrated and burned out after a couple years.

Successful farmers today not only need experience, but also business and marketing skills. They need to grow a diversity of crops for niche markets and have multiple income streams. They also have to be driven by a sense of purpose, value, and love of what they are doing to be able to make it through the hard times.

Lacking farming experience, the owners of Stony Ridge Farm hired consultants to help them develop their approach, and they had a successful run with their CSA. Read more below. Also, Natalie McGill has shared why she keeps farming in spite of the many challenges and heartbreaks.

In order for new farmers to avoid the sharp learning curve, they could consider spending five to seven years on other farms gaining experience. Afterwards, joining with

other compatible farmers who possess different experiences and strengths could help them build a viable cooperative farm. Winter Green Farm is one model of cooperative farming, and Wali Via has shared some of the farm's history further in this issue.

Below, Wali offers advice for those considering farming as a profession.

- 1) Expose yourself to a variety of farms prior to trying your hand at it. This will allow you the opportunity to see different management styles and farming approaches that will help you get an idea of what appeals to you.
- 2) There's a good chance you will learn a lot about specific practices like harvesting and transplanting, but you may not be trained in critical larger picture areas like crop rotation, fertility cycling, labor management, financial analysis, marketing, and legal obligations. Make a point of asking questions whenever you can to expand your knowledge. This is important.
- 3) Don't underestimate how much money you will need. Often new farmers invest almost all of their money in land, equipment, and supplies and are cash strapped when it comes to annual operating costs, especially unexpected ones. There **will** be costly equipment breakdowns, under-producing crops, and less than desired prices paid for your crops.
- 4) Farming is a great lifestyle, but not an easy way to make a living. You can count on having to sacrifice a lot, especially in the early years.
- 5) Take care of your body even in your "indestructible

years." If you don't, you may feel 70 when you're only 45. And always be thinking about safety. Injuries are expensive in many ways.

- 6) Plan the scale of your farm carefully and match your equipment purchases to that scale. Once you set up a system at one scale, it can be very hard to transition to another.
- 7) If you choose to have employees, remember that it is a real service to provide them with a work experience that is not only safe and financially sustainable, but also meaningful and fulfilling.
- 8) Remember why you got into farming in the first place! The daily grind can wear one down and it is easy to lose perspective. Renew your inspiration in whatever way works for you on a regular basis.
- 9) It is a privilege to engage in farming work. Refrain from comparing your worth monetarily with other professions. Your real reward is in helping create a beautiful world and developing insights about life, and yourself, from your intimacy with nature's forces and your human relationships.

References

The US Spends Less on Food Than any Other Country in the World—<https://www.ibtimes.com/us-spends-less-food-any-other-country-world-maps-1546945>
Americans Eat the Cheapest Food in the World, But What is It Really Costing Us—<https://www.treehugger.com/health/americans-eat-the-cheapest-food-in-the-world-but-what-is-it-really-costing-us.html>

Stony Ridge Farm: Transitioning to a Market Garden

Abigail Porter

Ten years ago, in 2009, Lorrie Schoettler and Bob Shelley left Baltimore, Maryland, to get out of the city and grow their own food. They purchased a home with five acres and some outbuildings in the country outside of Harpers Ferry, in the Eastern Panhandle of West Virginia, and went to work creating Stony Ridge Farm.

The couple built raised beds and planted fruit trees, berries, and other perennials. They added a flock of chickens and a couple goats but chose not to have a cow or other large animals, knowing it would be more difficult to care for them during the off season when they wanted to travel. Lorrie became active in regional farming and local economy organizations, and took Transition Town Training.*

Within a couple years, their gardens were thriving and friends offered to buy their produce. The idea for starting a

CSA (Community Supported Agriculture) was born. Neither of them had any farm experience other than the years that Lorrie had a kitchen garden (Bob was a graphic designer, and Lorrie had marketing skills, having worked in community outreach for non-profit organizations). So they knew they needed help to get into production farming in order to grow consistent quality and quantity for market. In their second year, they hired a consultant with organic farm experience to get them up to speed. They received advice on crop rotation, amendments, pest management, and succession planting for four-season production.

Their CSA started out small and grew mostly through word-of-mouth. They took extra produce to three farmers markets in the region and to Baltimore where they also supplied restaurants with their produce. In year five, they contracted with Elliot Coleman's daughter, Clara, to re-

view their business plan and offer recommendations for improvement and potential resources for expansion.

Based on her advice, they built ten hoop houses and grew produce on one acre, with an orchard, pasture, woods, and perennial plantings making up the rest of the land. The hoop houses measured approximately 10 feet by 70 feet. They used the space to encourage early production of brassicas and to extend the season for cold hardy crops like mache, Swiss chard, and spinach. Root vegetables also responded well to the hoop house environment, with beets taking the prize for consistent, early, and robust production.

Lorrie looked for niches to fill and marketed the CSA to under-served commuters and urban professionals who didn't have time to routinely go to farmers markets, yet wanted fresh, organic produce. In addition to weekly pickups at their farm, they made several conveniently located deliveries to the Baltimore area.

Through social media, Lorrie kept members up to date with what was happening on the farm and what to expect in their weekly share. She also included recipes to try. They also hosted a shitake potluck party where participants learned how to drill and plug logs for growing mushrooms. As the CSA grew to a manageable 60 families, they dropped the farmers markets, which often were unreliable due to weather and attendance. Lorrie augmented their income with workshops on fermenting, canning, and making cordials, and Bob used his graphic design skills to create humorous farm animal posters and mugs that they sold along with their produce at farmers markets and online. Meanwhile, Lorrie developed a garden-planning calendar that she shared on their Facebook page and through email.

The gardens produced abundantly and everything went well until their high tunnels were destroyed two years in a row, first by heavy snow and then, the following year, by ice and high winds. "The weather did us in," Lorrie said.

Last year, they decided to take a year off to recuperate and evaluate what direction to take next. Since they were both ten years older and Bob was approaching retirement age, they decided to scale back and focus on less physically strenuous and challenging activities, including a move in the future to a smaller place requiring less upkeep and closer to a larger town. Bob is putting more time into his graphic design business, and Lorrie is building a website to market their posters, mugs, garden planning guide, and other products. She is also considering the possibility of offering online gardening and preserving workshops. This year, they both are focused on growing just enough food to meet their own needs.

I asked Lorrie to share the highs and lows, as well as her advice for those with no experience who want to farm.



Bob in the garden

Did either you or Bob have previous farming experience? Growing for market? Animal husbandry?

We came to the entire land management and growing for market enterprise with no real experience. It's amazing what we've done with a strategy that often felt like building the bike while we were riding it. Now that the pressure is off, I have the time to slowly tend to this land with nature as my partner.

What were the biggest challenges in growing for market?

The biggest challenges for managing the market garden were extreme weather events, pest management issues, and staffing. In the last two years of growing for market, storms were not the usual welcome events bringing much-needed rain to the gardens, but rather, extreme events with very high winds and excessive downpours. Warm winters seemed to create an abundance of certain pests, but I will also admit to having less than optimal pest management strategies for bugs like harlequin beetles and squash bugs. Finally, even though we paid well above minimum wage on the farm, finding good help was always a challenge.

What was the steepest learning curve?

I would say pest management is the hardest part of growing organic for me. With a one-acre market garden, it doesn't take much for a critter to come through and do some real damage very quickly.

What worked? What didn't?

What worked was the CSA. I almost offered it again this year, and it was easy to build up a viable list of customers. I am still considering it for next year. I loved the customers, and the customers loved the food. I managed the shares on spreadsheets and with bookkeeping software. If I do it again, I will use the program, Harvie, out of Pittsburgh, Pennsylvania.

What did not work were our hoop houses. They were forever being destroyed by winter storms. A four-foot blizzard came through in early 2016 that destroyed every tunnel. Rebuilding from that weather event was the beginning of the end for us.

If you could do it over again, what would you do differently?

Bob and I had a fundamental disagreement about soil management. I am a no-till grower and Bob loves the tiller. I believe rushing the soil with a tiller, and using fertilizers is what created the ripe environment for the bugs. As I rebuild and repurpose the land, it is with no-till methods. I love slowly building up good soil as much as I love growing good food.

What were your best sources for information and training?

My go-to resources that have proved reliable over the years

have been Eliot Coleman's books on season extension and organic growing, John Martin Fortier's work on growing for market, Mary Reynolds approach to land management through her book *Garden Awakening*, and the Pennsylvania Association of Sustainable Agriculture (PASA) workshops and conferences.

Advice for those starting out as farmers?

One of the best moves we made was working with consultants to get up and running. If you are as new to growing for market as we were, definitely get help and advice from more experienced growers. Working with a local grower to develop a crop rotation plan will save a new producer years of learning about their particular micro-climate.

*Transition Towns was founded in 2006 in the United Kingdom by permaculture designer Rob Hopkins as a grassroots movement to help communities become more resilient in meeting the challenges of peak oil, food security, climate change, environmental destruction and economic instability. The movement has grown globally to over 1000 communities in 44 countries. <https://transition-network.org/>

“Agriculture is the noblest of all alchemy; for it turns earth, and even manure, into gold, conferring upon its cultivator the additional reward of health.”

—Horace Smith, *The Tin Trumpet* (p. 28)

If Farming Isn't Always Good Vibes and Friendly Fairies, Is it Still Worth It?

Natalie McGill

I get so many people who tell me that they love my Instagram, and over the years we've had many interns come to us because of our social media presence, thinking that our idyllic life will fix all their problems. I have people tell me all the time how lucky I am and that they would do anything to be in my shoes. I always smile kindly, while laughing just a bit inside. You don't know the half it. As much as possible I prefer to show the beautiful side of my life: baby goats and lambs, beautiful vegetables and flowers blowing in the wind. All these moments happen to me daily and these are the moments that I savor and that keep me going.

Farming is hard and I also want to be real: my Instagram is not what real farming is actually like. It only shows a part of the whole. Farming is a lot of heartbreak and work and sweat and tears. Farming is coming out to a field with dozens of dead chickens that you raised for the past year and your neighbor's dog killed in minutes. Farming is having a different crop (or the same crop) fail year after year. Farming is being out in 100+ degree heat in the summer and negative temperatures in the winter. Farming is never truly getting a day off because the animals always have to be fed. Farming is finding a lamb frozen and dead after it was somehow sepa-

rated from its mom. Farming is being bitten and attacked by your favorite pig and then not being able to walk. Farming is brutal and senseless, forcing you to become very comfortable with death because you are close to it every single day.

So the next time you want to complain about the price of something at the farmers market, just think about what your farmers go through daily to grow and produce it and remember that they probably aren't paying themselves minimum wage for their work, let alone a living wage. You might ask: Why do we do it, then? For moments like this one pictured. For the satisfaction of cooking the most delicious meal we've ever had with food that we grew. For the fresh start that we get every spring as we put new seedlings in the ground. For the sight of that beautiful new born lamb. For that first tomato of the season. And for love, we do it for love.

Natalie McGill is co-owner with Stewart Lundy of Perennial Roots Farm located on the Eastern Shore of Virginia where they grow heirloom produce, fruit, eggs, and meats, and make value-added products for sale at farmers markets. They make biodynamic preparations on their 50-acre farm and orchard and incorporate permaculture agriculture with biodynamic practices. The farm is certified Naturally Grown and is also home to heritage breed pigs, sheep, geese, ducks, chickens, rabbits, and turkeys. More recently, they have been growing medicinal plants for tinctures. They are a mentor farm in the North American Biodynamic Apprenticeship Program. For more about their farm see: www.perennialroots.com/



Natalie holding some of their heritage breed piglets

Winter Green Farm: A Model for Future Farms

Abigail Porter

Mission Statement: *A productive farm in harmony with the earth, humanity, and ourselves*

Winter Green Farm is a successful, profitable cooperative farming arrangement with nearly a four-decade history that may serve as a model for viable farming into the future. Winter Green Farm evolved as three couples came together with diverse skills, experiences, and interests that complemented each other to create a farm organism with a triple bottom line that benefits not only the owners, but also the employees, the community, and the Earth. Together, they created something of much greater value than they could have created individually. Their success may be attributed to their knowledge base, their excellent business practices (which include tracking each of the farm's enterprises for profit or loss and adjusting accordingly), the variety of crops grown, multiple income streams, niche markets, flexibility and adaptation to changing markets, a sense of purpose, and a good working relationship with their employees and the community.

Located twenty miles west of Eugene, Oregon, in the foothills of the Coastal Range, Winter Green Farm overlooks Poodle Creek Valley. The beautiful, lush, 171-acre farm (including leased ground) has 23 acres in intensively grown market crops and 105 acres dedicated to cattle in permanent and rotational pastures and hay, with the balance in wetlands, riparian buffers, woodlands, roads, and buildings. On-farm fertility is provided by biodynamic compost, crop rotation, green manure crops, and pasture rotation. The farm has continually evolved over the years to reflect the interests of the owners, their ideals, and market opportunities that presented themselves. As a value-driven business, the owners have reaped both purpose and joy in caring for the land, their employees, and their community.

Some History

The farm's original 76 acres were purchased in 1980 by Mary Jo Wade and Jack Gray, who had a background in cattle ranching and raising draft horses. They started farming by raising draft horse stock and beef cattle sold direct-

ly to customers by the side or quarter. The draft horses were dropped early, but the cattle herd continues to this day. Berries and vegetables were added and sold into the wholesale market through Organically Grown Coop (now Organically Grown Company). Winter Green was farmed organically from the beginning and was one of the first farms to be certified by Oregon Tilth in 1984. Jack Gray went on to help draft the 1989 Oregon Organic Foods Law (along with Lynn Coody, Robert DeSpain, and others), which eventually formed the basis for the national organic standards.

Wali Via and his wife, Jabrila, started working on the farm in 1986, bringing the practice of biodynamics as well as their practical farming skills. They had lived on an intentional community for eight years and were in charge of the agriculture that raised the majority of their food needs. They went on to lease their own homestead for another five years while raising two young children.

As they began farming together, the two couples proved to be compatible. In 1998 the families formed an LLC as

a way for Wali and Jabrila to have an ownership position in the business and the land. With the arrival of the Vias, wholesale vegetable production increased and reached the wholesale market through Organically Grown Coop.

Wali had a strong interest in growing medicinal plants, and he and Jabrila had already grown yellow dock root for market. From 1987 through 2002 Winter Green Farm grew more than 30 varieties of medicinal and culinary herbs, dehydrated on a tonnage scale. Crop adjustments were made according to changing market conditions.

As market demand for burdock root started to grow exponentially, the farm increased production from $\frac{1}{4}$ acre to 28 acres at its peak. Prime fresh roots were sold into the fresh wholesale market and the rest dried for the medicinal market. For a while the farm grew up to 50,000 pounds of basil on five acres for a pesto company and did the initial processing. When that contract fell through, Winter Green started producing its own line of basil and pesto products.

In 1991, the CSA began with 35 members, mostly friends. It has become the longest running CSA in Oregon, with



Wintergreen Farm crew harvesting strawberries (All photos courtesy of Winter Green Farm)

membership growing to a peak of 600 households, mostly through word-of-mouth by happy members. As CSAs proliferated, membership dropped to its current number of 450 members. Newsy weekly blogs connect members with what's happening on the farm, introduce the farm team, and provide recipes to inspire ways to use the weekly box of produce.

Chris Overbaugh joined the farm crew in 1995, and a couple of years later Shannon Shipp did as well. They got married on the farm and are raising their two children there. The two of them developed the farmers' market enterprise for the farm, which currently numbers three markets in Portland and one in Eugene, plus a weekly farm stand in Eugene. In 2009, Chris and Shannon became co-owners and part of the LLC. The wholesale markets, both in vegetables and herbs, proved to be volatile, so the farm adjusted its crop growing and focused primarily on direct-to-consumer efforts, which now hover around 85 percent of sales, with the balance sold through Organically Grown Company, natural food stores, and restaurants.

Finances

Winter Green Farm is a value driven (as opposed to bottom line driven) farm. Wages reflect the value of a modest lifestyle. All owners receive free, on-farm housing and the same hourly wage regardless of farm responsibilities, which has never exceeded twenty-one dollars per hour. Any profits or losses from the farm are distributed to the owners, based on the percentage of farm ownership. All owners have an equal vote in the decision-making process. However in all their years together, a vote has never been needed since there is always consensus. During the course of the year, each owner has relative autonomy over his or her own area of management.

Valuing farming as a profession, the owners, pay all workers fair wages. The workers also receive incremental seniority raises. This leads to a more experienced work crew with longevity, sparing the time required for frequent trainings for new help. The entire crew meets every morning to get the overview of the day's activities and then smaller teams meet as needed. A limited number of new employees are hired each year, with preference given to those interested in farming and food. Many stay multiple years. The farm has seven year-round employees and approximately thirteen full-time seasonal employees, plus part-time farmer's market vendors. In Wali's words, "it is this collective human effort which makes farming possible and brings vitality to the farm individuality. Often farm owners are credited with a farm's success, but when I look at our farm, I know that hundreds of people have contributed to making this farm what is today."



Turning compost windrow

Succession and Retirement

An eye towards succession to keep the farm viable into the future has been a long-term goal for the farm. As the two older couples approached retirement, plans for succession were implemented since their children were not interested in taking over the farm. Just as a plant expands and contracts as it grows, so to has Winter Green. Two couples retiring meant that farming operations had to be simplified.

Winter Green discontinued the wholesale herb production aspect of the business and the value-added basil products. Three years ago, the produce production and distribution portion of the business including the CSA, farmers markets, and wholesale and retail accounts, were sold to Chris and Shannon under favorable conditions honoring their many years of dedicated work. They established a separate LLC and sold their ownership in the existing LLC back to the older couples. The old LLC still owns the cattle enterprise and serves as the legal landlord of the land-lease arrangement with Chris and Shannon's new LLC. A search



Passing the torch – assuring the farm will continue to thrive



A Waldorf school class visiting the farm

is ongoing for someone to take over the pastured cow/calf and beef business, managing the cattle in a way that retains it as part of the farm organism.

Community Service, Outreach, and Education

Giving back to the community and connecting people to the land where their food is grown is a priority for Winter Green. Following the belief that “wholesome food is a basic human right,” the farm makes weekly deliveries to the local food bank, donating thousands of pounds of food annually. Through donated labor and contributions from the community, including a portion of CSA membership fees, CSA shares are made available to low-income families either at a reduced rate or free, and through a program that assists women and children who have left abusive domestic relationships.

The Oregon Biodynamic Group meets twice a year at Winter Green to make biodynamic preparations, share experiences, and teach others about biodynamics with

hands-on learning, showing how to make the preparations.

The farm provides meaningful work with decent wages for the community and has trained dozens of farmers in regenerative and biodynamic practices. Through farmers markets, the CSA, open-houses, and farm tours, the farmers share their story and connect consumers with the source of their food. The farm hosts about twenty school trips annually, providing learning opportunities for children and inspiring them to deepen their relationship with the land that sustains them.

Driven by a deep reverence and respect for the Earth and all living beings, ultimately, perhaps, Winter Green Farm’s success and longevity may be attributed to its sense of purpose and the daily practice of core values:

- *To maintain a spiritual and ecological relationship with the earth*
- *To serve humanity and the earth*
- *To actualize our personal potential.*

Editor's Note:

This article relates the history of Winter Green Farm, making some of the information no longer current. Both the legal and management structure changed several years ago, outlined under the Succession section toward the article's end.

For more about Winter Green Farm, including employment opportunities, food justice, and educational farm activities, go to <http://wintergreenfarm.com/>

For their crop rotation schedule and fertility cycling as well as their philosophy and spiritual approach to farming, see Wali Via's keynote at the 2018 Biodynamic Conference, available along with other conference presentations from <https://www.biodynamics.com/conference/2018/recordings>

Farming Models for Action

- **Why We Need Small Farms.** Globally, “small-scale and family-run farms with 25 acres or less produce 70 percent of the world’s food. By growing heirloom and other non-commercial varieties, small farms bolster biodiversity and increase food security. With only 12 plants and five animal species making up 75 percent of what the world eats, food systems are vulnerable to natural disasters and disease outbreak...Contrary to perception, small farms that practice sustainable agriculture can be highly productive. Studies show that yields rise when there’s a wider diversity of crops being grown on a farm, and money is saved since the need for fertilizer and pesticides are reduced.” National Geographic, October 12, 2018, <https://www.nationalgeographic.com/environment/future-of-food/photos-farms-agriculture-national-farmers-day/>
- **The Co-op Farming Model Might Help Save America’s Small Farms.** “Across the U.S.—from New England to California—a small but growing movement of farmers is foregoing traditional farm ownership in favor of a cooperative model...Though these farms are run by people with diverse backgrounds, beliefs, and motivations, they all seek to rebuild what’s been lost over the past century: a connection with neighbors—whether personal, economic, or both—and a sense of the mutual support that keeps rural communities alive.” <https://civileats.com/2018/10/03/co-op-farming-models-might-help-save-americas-small-farms/>
- **Berry Farmers Break Free From Big Agriculture.** Tired of

poor working conditions, low wages and toxic chemical exposure, “these farmworkers created an organic co-op that guarantees fair wages and healthy working conditions while preserving indigenous heritage... Torres and three others—with the support of food sovereignty and worker solidarity nonprofit Community to Community—formed a cooperative in which members own and live on the land they farm... And to Torres, farming organic isn’t a way of growing that belongs to White, wealthy people—it’s traditional, and a practice passed down through generations... We’re all used to growing our food without the need of pesticides or chemicals,” he says of their ancestral heritage. “We want to follow that tradition to not use pesticides.” <https://www.yesmagazine.org/people-power/berry-farmers-break-free-from-big-agriculture>

- **Organic producers create permaculture paradise with purpose-built community.** Father-and-son winemakers, Richard and Sam Statham, have built a permaculture paradise to share the burdens of managing a property. The 140-hectare multiple-occupancy farm at Canowindra, New South Wales, is home to 22 people on a dozen plots united by an organic covenant and a commitment to developing their own agribusinesses. Each producer owns their piece of land and their own home, but they’ve all got company, expertise and any equipment they need nearby. <https://www.abc.net.au/news/rural/2019-06-18/organic-farmer-village-helps-shoulder-the-burden-together/11215732>



Building a compost pile (All photos courtesy of the Pfeiffer Center)

For the Earth as for Human Beings: Mac Mead on Making the Biodynamic Preparations

Karen Davis-Brown

Mac Mead has been the Program Director of the Pfeiffer Center in Spring Valley, New York, since 2007, and a leader and mentor for the North American biodynamic community for many years. He was interviewed as part of the Fellowship of Preparation Makers Interview Project by Brian Wickert of Viroqua, Wisconsin, Fall 2018. The following is abstracted from a summary of a recorded interview. The complete summary is available on the Fellowship of Preparation Makers webpage of the Biodynamic Association website (<https://www.biodynamics.com/fellowship-preparation-makers>). This summary and abstract are structured using the questions developed by the Fellowship of Preparation Makers Interview Project Committee for all interviewees.

How has your preparation making changed over the years? What insights have come to you as your preparation making has evolved?

I think you have to pair preparation making with using them. They have been inseparable for me. You are making them, and you are using them, and that is how you learn.

Personally, I think it is important to pursue some kind of knowledge, be it written or oral—conversations with other people—just to get different perspectives. And then to observe. Spray a field and then go back later and look at it. You notice things. You put preparations in a compost pile or on the field, and you notice something.

For me, what changed is more an inner knowledge. I find when you see the preparations and use them, all of a sudden something will click, you will have an “aha” experience. An example is that I mentally wrestled with why **yarrow** blossoms in a stag bladder. Then one day, standing there in a yarrow patch, is a full raked stag looking at me; For me, that was confirmation of yarrow and the bladder. It was like, someone granted me the privilege to have this strong experience. I just stood there for twenty minutes.

For me, the stag has the same stature as the yarrow does. Yarrow has stature; a stag has stature that is similar. Then you read about the preparation, how it seems to create this quality that can radiate through a pile as big as a house. You

can experience that power. Sometimes you can be studying or reading, and you have that special experience.

Chamomile is a similar preparation for me. It balances against the harmful effects of “fructification”—lettuce or spinach bolting, the harmful effects of going to seed so things get bitter and tough. The chamomile supposedly balances this. Going from foliage and leaf to seed, you are talking about going from cool, moist to warm, dry. In our climate, this occurs in the middle of May. Here chamomile flowers in mid-May, in this balance time between cool and warm, wet and dry, and so chamomile has this little signature as a plant. And, Steiner gives us the indication that you should bury it where the snow stays the longest and where the sun hits, right? That is your cool, wet and warm, dry. Picture a chamomile blossom, yellow center, a field of white petals. That is the sun on the snow.

The other thing I realized the more I worked with the preparations is that we are actually nourishing elemental beings in different ways with different preparations.

For instance, *valerian* is related to phosphorus and

warmth and helps create a sheath of warmth for the compost pile. In orcharding, valerian is used to help protect against frost during blossom times. At one point, we bought the neighbor’s farm with ten to twelve acres of apples. It was bloom time and we were expecting 27–28 degrees. I stirred valerian in the late afternoon and drove through the orchard with a spray gun attached to the safety roll bar of the tractor, just spraying straight up in the air in between the rows. Next morning, I found out it just went down to 32. My experience was, ah ha, I am working with warmth spirits with valerian, I am working with fire spirits.

A very important thing that has changed for me is that, when I first started making the preparations, we had no animals here at the Fellowship. I had this question of how true is it at the beginning of Lecture Two that it makes an enormous difference that the animals, for your fertility, are on your own farm? What is the difference between a local home sourced manure versus trucked in?

It was buying the neighbor’s farm in 1997 that gave us a



Students putting preparations in a completed compost pile

possibility to get some larger animals. We started with one heifer from Seven Stars Farm. We brought it to our farm in the middle of March and there was some green grass. And, what does it do? It does not look at the grass at all, it goes to the dirt around a fence post and starts eating the dirt. Then someone drives up with a tractor, and the calf starts licking the dirt on the tires. After about half an hour, it started nibbling some grass. It took me a day or two to realize that this animal wants our biology, wants our farm in her. Whatever it is in her gut, from now on she is going to be *our* soil improver.

After a few years, we stopped hauling in manures. We were getting compost out to the fields, but, we do not have the volume of manure to do every field every year. At one point I have a field that I had been farming with rotations of various vegetables three or four times over twenty-five years. The only difference is that the preceding fall we had put on this home-sourced compost. The vitality of those vegetables took an enormous leap. You could see it in their form, their color, their vigor, and it struck home to me that the heart of biodynamics is the self-contained farm organism, the farm individuality. That is what biodynamics is, and the preparations refine that. They educate the manure. They enhance the quality of your compost, manures or your field, but the main heart of biodynamics is the farm individuality, the contained organism.

The importance of the preparations has not declined for me. The nettle, the blossoms, the skull and the horns, they each have their nuance. If you look at the preparations, they are made from all these different aspects of a whole landscape. The crystal from the mountain, the oak bark from the forest, the yarrow from the meadow, chamomile from the garden, dandelion from all over the place, the equisetum from the swampy, wet. To have been in the same place for forty years and watch it gradually unfold from a three-acre garden to a 40-acre mixed farm with dairy, it is a thrill.

What unique techniques in making preparations have you adopted, that you feel may be useful to others?

When I started at the Pfeiffer Center ten years ago, I began working with a suggestion by Steiner that the sun is different in each zodiacal sign. In the second week in September, or so, the sun goes into the earth sign Virgo. I am talking about the actual constellation, not the astrological one. I think it is the longest sign in the sky, and lasts for the whole second half of September, all of October, and the first few days of November. It strikes me that horn manure (500) should experience as much of that time in the earth as possible, since it is a preparation for the earth. For three years we buried horns in mid-September and horns in mid-October, and for three years we got 100% trans-



Mac teaching students about Preparation 501

formation of the September horns -- a nice dark brown, neutral or woodsy smell. With the October horns it varied but we were getting maybe 70% or 65% transformation. Sometimes we put them back in for a while, but we got the same result basically for three years. So now we just bury all our horns in mid-September, and then we do a bunch for the festival on September 29. I also experimented with depth and with locations. We found some differences, but the real difference was time of burial and the sun.

Another variation we do is with the 501. We do the usual grinding of quartz crystals into a powder. The variation we do is one that Wali Via suggested to me. There is an indication that Steiner has in his footnotes about adding soil into the mix, soil from your fields. So, I like to do that. We often have samples from doing soil tests, and we take these soil samples, mix them together, mill them a bit to get them a little fine and we might screen them a little. We use Wali's recipe, which is one third field soil, one third sand from your farm, and one third powdered quartz. We screen it and we pack the horn with that mix. We spray both the regular 501 and this.

With **yarrow**, our variation relates to the question whether you use dry blossoms from the previous year and get the bladder up early in the summer, or wait until the blossoms are fresh, which here is early July. We have done some trials with bladders stuffed in early June with dry blossoms from the previous year moistened with yarrow leaf tea before putting them in the bladder. And we have stuffed the bladder with fresh blossoms in early July—a month later—and hung them. Both times they were hung

in the sun in the summer in the same place, and we buried them in the same pit but we put little dividers between the bladders so we can dig them up and tell whether they are from the dried blossoms or from the fresh. How do you measure the difference is an age-old question, how to measure quality in preparations. But, just looking at it and a kind of gut impression is that I like the ones from the fresh blossoms. The finished preparation seems to have a little more vitality to it.

For **dandelions**, we use the mesentery as opposed to the peritoneum. One experience I had was when we were able to work with a freshly slaughtered cow carcass. The mesentery, the layer between the two, was filled with warm yellow fat, so we peeled the mesentery layers apart and we scooped out this yellow fat. For me, when I see yellow dandelion blossoms in the spring—you go through a cold winter and the snow and all of a sudden you see these cheery yellow blossoms—I had this image of this yellow fat going into yellow blossoms.

We tend to sew it. Instead of just folding it over and then tying a string around it, we actually use needle and thread and sew it like a sock. You get a lot of blossoms in there and can pack it real tight.

The other thing is the **peppers**. I am into the peppers; I always have been. I feel they are very important, an underused thing that takes commitment and attention. I have seen them be very effective, but it is a long-range approach. Sometimes they work quickly, sometimes they do not work at all. You are not going to eliminate the weeds, but you are going to take the pressure off. It knocks the reproductive capacity out of them. They will not be as vibrant; they will not be as competitive. And then insects, I have seen great results. Some insects are more pernicious, so it is not as effective. For some, though, it is quite effective. I have kids who grew up farming with me who went on to farm or apprentice on other farms, and they will call me up and say, “What the hell are all these bugs? I have hardly even seen these bugs.” Some pests we cannot find any more, so we cannot pepper them.

Has your work with the preparations changed your perspective in life? If so, how?

When you meditate you experience pure joy, an inner light. Where does that come from? When I saw those vegetables I described to you after we finally got home-sourced cow manure treated with the preparations, when I saw the radiance and vibrance of those vegetables, I thought, “This is not what is sitting in the soil there, it is something that is shining through there. I wonder if that is the same thing that is shining through in meditation? Is there a center, a healing, light-filled center that we can access through meditation?

Does the earth have a similar light-filled, healing center that can shine through biodynamics?” That is from working with and using the preparations, and just seeing their effect. You spray 501 and you see the plants change. What is going on there?

The other thing, along the same line, is that if there is such a thing as karma and reincarnation—that we have been here before and we are going to have other lives, that we have played a role in choosing where we are, who we are with, what we are doing. For me what that means is I have to wake up to where I am, who I am with, what I am doing. I should learn from what I am doing. I should learn from who is around me. I should have gratitude, appreciation. I should be able to absorb what is around me but also give back to what is around me. We are growing together, we have some time of destiny together, we should help each other.

When you read the qualities of each preparation, what each compost preparation does—look at the **yarrow**, it brings a radiance; it brings an energy, a quickness and mobility into the soil, to your crops. **Chamomile** brings vitality; it brings balance, it brings harmony. **Nettle** brings intelligence; it brings a sensitivity to your compost, to your soil and to your plants. It makes the soil able to individualize itself according to what crops are there. For me, that may be how to speak of the soil and how you give what is needed. If you have intelligent soil it can change, it can give to the peas and the next year it can be the right thing for the potatoes. **Oak bark** creates a harmonious beautiful balance that can help with the diseases, but it is the **dandelion** Steiner says makes the plants more sensitive, more able to get what they need and draw from their environment, even from the meadow or forest nearby. The soil and plants get what they need from the environment. And the **valerian** goes onto the light and warmth, providing that for an environment.

For me, those qualities in plants and soils are what the human beings should have. I would call them “karmic qualities”—to be aware, awake, sensitive, take in what is around you and give what is needed. So, you are in a conversation where it is maybe appropriate to say nothing, or it may be appropriate to say this or that. It is a give and take. The whole thing is giving and taking; that is what being human is. That is what the preparations are all about: they are trying to teach the soil how to give and the plants how to take. This is a nutrition that is way beyond vitamins and omegas, this or that carbohydrate. You try to instill in plants what would make people more human and help them to grow and develop into human beings. The whole exercise of doing all of this through meticulous biodynamics—what you have got to go through to make preparations and use them. You have to work in community; you have to work

with other people, so it is on and on, the social value of biodynamics. That is the deep insight from which I work—that we are doing for the earth what we are trying to do for human beings. It's all part of growth and development.

What questions, comments, or concerns do you have for the preparation making community?

I love what you guys, what the Fellowship of Preparation Makers is doing. There is a whole being of the preparations that needs fostering.

And, gratitude to all those people on the other side of

the threshold that have helped bring biodynamics and preparation making as far as it has come. They are around, they are supporting, they are rooting for us. I will say with great gratitude that my primary mentors were coworkers with Ehrenfried Pfeiffer. My main teacher was Evelyn Gregg. Other mentors were Dr. Paul Scharff, Peter Escher, Howland Vibber, Erica Sabarth, Margaret Selke, Willi Ringwald, John Hoffman, my wife Ellen Mead, and, last but not least, Rudolf Steiner.

Did You Know?

- **According to a report by botany.one**, larger apples have lower natural defenses against pests. The site notes that crops have altered dramatically since their wild ancestors fed humans. To test whether the allocation of resources to produce yield altered a plant's investment in defense, scientists researched fruit chemical defense traits and herbivore resistance across 52 wild and 56 domesticated apples. They found that such trade-offs do exist but called for further research.
- **The United Nations affiliated group**, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released a report in May that cited a million species threatened by extinction. Compiled by 145 authors from 50 countries over three years. Sourced not only from government records, it also included contributions of knowledge from indigenous and local communities. The report notes the need for "transformative changes" across economic, social, political, and technological arenas. The report also notes the top drivers of this degradation as (1) changes in land and sea use; (2) direct exploitation of organisms; (3) climate change; (4) pollution and (5) invasive alien species.
- **In May, the *Smithsonian* covered Civil War** plant remedies that fought off infections. Researchers tested the antimicrobial properties of plants mentioned by surgeon and botanist Francis Porcher. Porcher mentioned white oak and tulip poplar, as well as devil's walking stick. Researchers took extracts from the plants and tested them on three types of bacteria commonly found in wound infections. The plants did not totally kill the bacteria but inhibited its growth, likely allowing the body's immune processes to continue the work of healing.
- **In July, a team of international scientists reported finding evidence of Earth's last polar reversal** in the tree rings of an ancient New Zealand kauri tree. Mea-

suring 2.5 meters in diameter it is one of the oldest tree fossils ever found, having been uncovered during excavations for a geothermal power plant expansion project. Carbon research dates the living tree to between 41,000 and 42,500 years ago. The tree shows evidence of magnetic north and south trading places (i.suff.com.nz).

- **A June report in *Scientific American* looked at San Francisco's vanished waterways**, noting that the drive to create cities and towns have altered clues to former natural landscapes. Nevertheless, signs of vanished waters continue to show up, creating seasonal "ghost creeks" running through basements. With cities funneling runoff into green infrastructure such as permeable pavements and ditches containing water loving plants, the San Francisco Estuary Institute proposes redesigning cities to prepare for larger rainstorms and longer droughts and heat waves. An ecologist with the institute notes "Otherwise our cities are brittle and actually multiply the intensity of environmental catastrophes."
- **A river in New Zealand**, the Whanganui, has been given the same legal rights given to people. The river joins other entities such as the Ganges that have received such legal protections, as reported in the May 2019 issue of *National Geographic*.
- **According to undergroundreporter.org, the Government of Bolivia** intends to be food independent by 2020. To accomplish this, it has invested \$40 million in small farm food production. The Bolivian government believes that enhancing local capacities is key to reaching its goal, and currently has 20 food security projects underway, ranging from livestock breeding to production of food crops like potatoes, vegetables, and coffee. Since 2014, Bolivia reports a food production increase of 25 percent.

In Memory of Alex Podolinsky: July 13, 1925–June 30, 2019

Mary Maruca

Last year in June, biodynamic farmers lost Peter Proctor, New Zealand's advocate for biodynamic agriculture in that nation as well as around the world (see *Applied Biodynamics* No. 94). This year the community has lost yet another elder, Australian Alex Podolinsky, grandson of Ukrainian scientist Sergei Podolinsky, who pioneered ecological economics (the principle of interdependence between human economies and natural systems). This concept of coevolution is at the root of Rudolf Steiner's work with biodynamics, and also a principle that Alex Podolinsky made his own, inspiring farmers in Australia to reject chemical agriculture and nurture life through direct observation of the land and application of biodynamic preparations. His research took Steiner's teachings to a more practical level of application. Podolinsky is considered by some to be the father of Australian biodynamic farming.

Podolinsky made it his life's work to meticulously test all new biodynamic developments in Australia, rigorously proving their effectiveness before advocating them for farm use. He tested stirring machines that allowed biodynamic farmers to stir larger quantities of water and cover extensive acreage. His Prepared 500 enabled 502–507 to be sprayed out over large areas, proving more effective than spraying only 500. To further test his work, Podolinsky hired an agronomist to determine how much carbon dioxide had been locked up in the soil on his farm over a six year period when using biodynamic practices. The result was 1614 tons per hectare during that time. Because Podolinsky focused on applying the preparations to large agricultural areas, his work resulted in more than one million hectares of land cultivated biodynamically in Australia alone.

One blog honoring Podolinsky's work (homelesschefs.com) noted the following:

In Australia, virtually every aspect of farming has had to be reinvented by the Bio-Dynamic growers, due to the fragile state of the denatured soils, the harshness of the climate and the absence of price supports. Bio-Dynamic farmers on larger farms have had to fashion the technological means to till, plant and spray out the preparations on thousands of acres in a narrow window of time. This ability has resulted in a new culture of farming that is able to create biologically active soils of highest quality out of the most hostile conditions imaginable. As Alex puts it, "Bio-Dynamics gives a chance for total redemption of soils."

If biodynamics had a testing ground, Australia likely was that place, giving Podolinsky plenty of problem-solving opportunities. As an advocate for the Earth and all life,



he observed in 2004: "There are laws against humans killing each other, societies to prevent cruelty to animals. Ecology targets plants. Mother Earth is treated like dirt." He dedicated his life to turning this around, at least in the arenas where his influence was most keenly felt. Ultimately, he succeeded in applying biodynamics to larger land masses so as to more firmly bind humans to the Earth and its wellbeing.

Founder of the Biodynamic Agricultural Association of Australia, Podolinsky consulted with farmers around the world. Said one of the Italian farmers whose practice he changed, "We farmers remember him like a father, with deep affection and gratitude."

Podolinsky's "Prepared 500"

Alex Podolinsky is known for the development of "Prepared 500" (500P). It is made by putting freshly transformed horn manure (500) in a glazed clay crock or other appropriate vessel and treating it with sets of biodynamic compost preparations (502–507) in several layers, depending on the volume being treated. After several months, 500P is added to water and stirred for an hour just as 500 is stirred. This allows the influence of all the compost preparations and 500 to be efficiently sprayed out together over the large acreage of Australian farms where compost is not available in the volume needed.

Permadynamics: Conceptual Marriage of Permaculture and Biodynamics in Farm Design Introduced at JPI

Patricia Frazier

Almost one hundred years ago, Rudolf Steiner delivered eight lectures that laid the foundation for the current practice of biodynamic agriculture. One of those lectures specifically and comprehensively addressed the design of the farm organism. Steiner laid out the proper proportions of woodlands to croplands, as well as animals, birds, and insect life needed to attain a healthy farm organism. Of course, his lectures also included the now familiar indications for managing soil fertility, farming within a geocentric view that includes all the cosmic influences in our earthly sphere, and indications for making and using the biodynamic preparations.

Since Steiner's seminal work, other disciplines with similar approaches to regenerative and enlivening agricultural techniques have been created. In each instance, the *Foundations for the Spiritual Renewal of Agriculture*, otherwise known as the Agriculture Course, underpinned the agricultural method. Portions of organic agriculture can be traced to the conversations and influence from Ehrenfried Pfeiffer to J. I. Rodale in the middle of the twentieth century here in the United States. The discipline of permaculture, originating in Australia with Bill Mollison and David Holgrem, also has specific resonance with lecture seven of the agriculture course. Both these disciplines are supportive and comprehensive in their own right. In principle, they are ecologically sound, but they lack the spiritual foundations found in biodynamic agriculture.

To consciously support earth evolution by harmonizing these disciplines and implementing their common good in practice, JPI conceived of a workshop bringing together permaculture and biodynamics, calling it permadynamics and referring to it as a marriage of these two practices for farm design. The workshop, held in June at the JPI farm, included fifteen students, two faculty, and JPI staff. The program took a hands-on approach to designing a biodynamic farm organism aligned with JPI's mission.

Using the onsite resource of the JPI farm, the group envisioned a farm organism designed with permaculture principles and managed with JPI's mission and vision of:

- Making and distributing high quality biodynamic preparations
- Providing education in making and using the preparations
- Providing farm based research within all the principles of biodynamic agriculture



Wind Clearwater of Clearwater Designs in Paonia, CO teaching on farm inputs and outputs.

A diverse international student cohort attended. They represented the related disciplines of architecture, Waldorf and traditional education, sustainability programs, agriculture, and biodynamic gardening and farming. Wind Clearwater and Patricia Frazier facilitated. Wind is an experienced permaculture designer and landscaper from western Colorado, very familiar with biodynamics. Patricia Frazier is a JPI board member, preparation maker, and biodynamic farmer, also from western Colorado. Wind and Patricia have taught many permaculture design certificate courses together through the past decade, bringing together biodynamics and permaculture principles.

Local guest lecturers Ed Skopal and Leaf Myczack added valuable related information about local plant materials for medicinal, edible, and landscaping use, with particular focus on settings that apply permaculture design principles and work with the extremely important management of water.

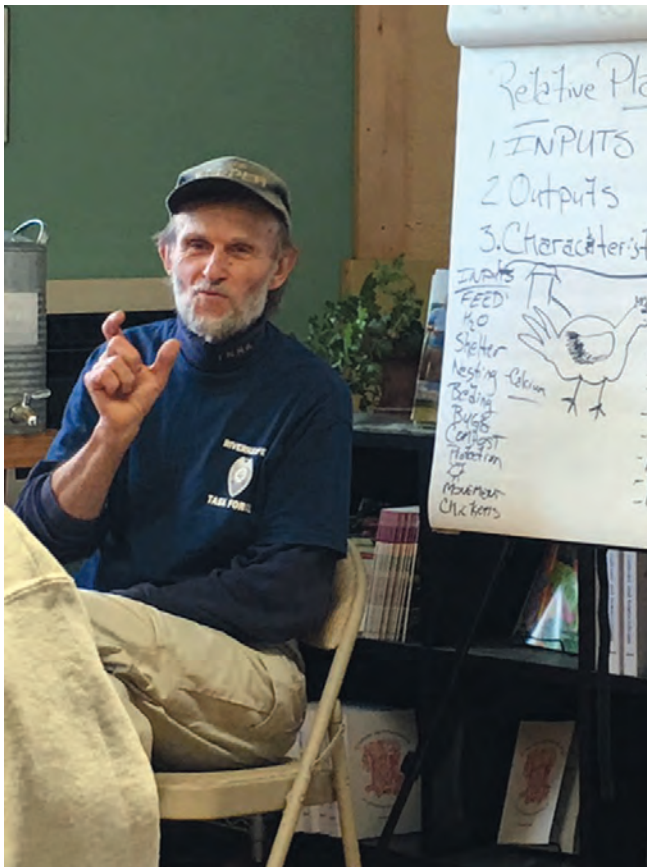
JPI staff members Adam Fisher and Larry Mabe led informative lectures on preparation making, relative to the season and current cultivation practices on the JPI



Patricia Frazier, JPI's board vice president, teaching about the permaculture zones.



Permadynamics group learn design principles.



Leaf Myzack from Broadened Horizons Organic Teaching farm in Floyd, VA, part of the teaching team.



Our Permadynamics study group discussing Nettle preparation use.

farm. They discussed choosing appropriate preparation pit locations, seasonal preparation making activities, preparation storage, and needed plant materials and animals. They offered valuable insight into the influence of preparation making and application to educational needs, future needs within the farm for animals, composting operations, student housing, and operational needs for preparation making and

distribution. All these factors influenced an intelligent and functional design for the future of a JPI farm organism that reflects form, function, and beauty.

The resulting student designs were intricate and beautiful, reflecting a superior grasp of the concepts inherent in both permaculture and biodynamics. Using familiar forms in nature such as spirals, circles, and lemniscates; nuances of the zodiac; and the different eco zones of woods, fields, river, and wild areas, the students drew and demonstrated many different pictorial representations of a farm organism, using all the necessary elements of the JPI farm organism in alignment with our mission.

JPI will continue the permadynamics education in its October 17–20 workshop, add an independent study in winter, and complete the design certificate in permadynamics consistent with a traditional permaculture design certificate next spring. For information on joining the current class, please contact the JPI office or website (jpibiodynamics.org).



Larry Mabe, JPI's own prep maker, packing nettle into clay pipe to make compost prep BD 504



PERMA-DYNAMICS II

Honoring the Intelligence in the Soil

October 17-20th, 2019

HONORING, UNDERSTANDING, STEWARDING
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Introducing Our Newest Board Member: Teresa O'Shaughnessy, Secretary



I was raised on a small ranch in the Texas hill country. My husband and I own a little less than two and a half acres in south Austin and, over the past 25 years, I have built up our organic/biodynamic gardens and a small orchard. I have

also been a beekeeper for the past nine years. Given my Irish heritage, I have a strong relationship with the elemental and spiritual beings that share this earth with us. Our home and gardens are the site of many festival gatherings for friends and family throughout each year.

Formerly a graphic designer and then a Waldorf kindergarten teacher for two years, I currently work in Special Education with children who are blind or visually impaired. This past Spring, we completed an accessible garden for students with multiple disabilities. My interest in biodynamics started when our two daughters attended the Austin Waldorf School. I have been a member of the Biodynamic Association and ordered all my biodynamic preps from JPI for many years. I continue to study and expand my BD education through workshops, conferences, and the advanced courses offered by BDA.

I feel biodynamics could be the most important springboard to reawakening our promise to honor and cherish this gift we call life. JPI has the opportunity, the courage and, more importantly, the heart to guide our work in healing the earth. I am honored to be a board member and look forward to working with all of you to help transform our future.

Enzo Nastati Transcripts and DVDs Available From Viva La Vida

How to Make Biodynamics Work Better

A comprehensive look at biodynamics practices as presented by Rudolf Steiner at Koberwitz and how it can be developed to meet the environmental and spiritual challenges of our modern times. Enzo elaborated on methods to make the preparations work better, the use of the farm as an organism to increase its vitality, and the spiritual aspects underlying it all.

Spiritual Agriculture Parts 1 and 2

Man is the Preparation, Part 1—Humans, with their conscious free action, are called to be the tool of support for the evolution of the Life of all kingdoms. This seminar provides seven steps necessary for humans to “become” life bearers in service to the evolutionary design.

Spiritual Agriculture, Part 2—the flow of life from the unmanifested to the manifested, offering practical ways to enhance the life capability of plants, humus building, the radiating force of trees through methods of pruning, the “why” of wild plants and various so-called pest species, and other topics.

Depollution

A phenomenon that affects us all, though often we only consider the physical aspects. What are its spiritual aspects? How can we defend ourselves practically? How can we help ourselves and Earth?

Spiritual Architecture

Buildings for humans or animals, sheds and workshops on farms, commercial structures, all have a capability to support the activities within them, or detract from them. This seminar covered four types of ecology, the three processes in the house and the three spiritual poles in the human, and much more.

Astrosophy

Discussion of the deeper aspects of the new science of the stars that Rudolf Steiner brought to the world.

Herbal Remedies

Focus on making and preserving herbal remedies and foods to “lift” the qualities from the physical plane to the higher planes.

Man’s Journey from Creature to Creator

Discussion of the circulation of Life and how to access “doors” to its impulses, as well as information about the imbalances and pathologies deriving from an incorrect circulation of Life.

Basic Trinium Agriculture Method: Parts 1 and 2

The basis and the evolution of agriculture from biodynamics to homeodynamics to the Trinium method, including the use of the appropriate sprays for spring and summer, an agricultural organism in harmony with the principles of the natural world and more.

Part 2—the significance of machines in our lives and how we can protect ourselves and the environment, plus some adaptations to machines that helped elevate their resonance.

Space and Time

Two forms that limit our divine being—how can we understand those limits and overcome them? The seminar addresses Space and Time, both interior and exterior, as a means of following a path of inner transformation.

Water

The foundation of biological life and the support of spiritual life—on how to know and vitalize water to help environmental, agricultural, and nutritional realms.

Drought

Its deeper causes and how we can address it—on how to understand the occult significance of drought and meet its challenges.

Prices vary depending on the length of the transcripts. For more information, contact vivalavida.paonia@gmail.com and visit the website at http://www.vivalavidafoundation.org/past_seminars-workshops.html.

Books Added to JPI Catalog

- *An Unlikely Vineyard*, Deirdre Heeken – \$25.00
- *Keeping a Family Cow*, Joann S. Grohman – \$24.95
- *Vegetable Gardening for Organic and Biodynamic Growers*, Joel Morrow – \$35.00
- *Earth User’s Guide to Teaching Permaculture*, Rosemary Morrow – \$29.95
- *Commentary on Rudolf Steiner’s Agriculture Course*, Paul W. Scharff – \$24.95

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October 17–19: Women in Sustainable Ag Conference
 St. Paul, MN; mosesorganic.org/events.

October 17–19: Effective Farming with Dennis Kloczek Series
 Fair Oaks, CA; steinercollege.edu

October 17–20: Perma-Dynamics: Part 2 – Honoring the Intelligence in the Soil

Floyd, VA; jpibiodynamics.org

October 17–20: Foundation Stone Meditations and the New Mysteries

Pewaukee, WI; koliskoinstitute.org

October 25–26: Sun Hive Workshop

Floyd, VA; spikenardfarm.org

October 29–November 3, Hugh Courtney: Biodynamic Fall 2019 Practicum

Woolwine, VA; earthlegacyagriculture.com

November 13–17: What Is The Earth Asking of Us—The Human Soul and the Earth in Crisis

Rudolf Steiner House, Ann Arbor, MI; naturalsciencesection.org

November 14–16: International Biodynamic Banana Conference

Santa Cruz de Mao, Dominican Republic; demeter.net

November 20–24: North American Biodynamic Conference

Lake George, NY, (<https://www.biodynamics.com/calendar>)

For additional listings, see the Biodynamic Association calendar at www.biodynamics.com/calendar.

ONGOING

Biodynamic Association Webinar Series

For a small fee, the Biodynamic Association offers ongoing webinars on pertinent topics. <https://www.biodynamics.com/webinars>

Chesapeake Biodynamic Network (CBDN), College Park, MD

Contact Michael Judge at mjudge2000@gmail.com.

The Pfeiffer Center, Chestnut Ridge, New York

Workshops and trainings. <http://www.pfeiffercenter.org>

Spikenard Farm Honeybee Sanctuary, Floyd, VA

Classes in sustainable beekeeping and biodynamics. Apprenticeship/internship opportunities. Please visit www.spikenardfarm.org

White Rose Farm: Taneytown, MD

For details, visit www.whiterosefarm.com.

ONLINE RESOURCES

- Rudolf Steiner Archive-Lectures and books online. Donation requested. www.rsarchive.org/
- Rudolf Steiner Audio-Audio version of lectures and books. Donation requested. www.rudolfsteineraudio.com
- *Bio-Dynamics Journal* (1941–2007)-Soil and Health Library. With articles by scientist E.E. Pfeiffer. Also articles by Sir Albert Howard and Albrecht papers and others. One time donation of 10 Euros. www.soilandhealth.org
- Download of twenty years of research on seed regeneration by Georg Schmidt is for free at <https://earthhaven-learning.ca/seed-regeneration.php>.

Biodynamic Preparations Legend

BD 500—Horn Manure

BD 501—Horn Silica

COMPOST PREPARATIONS

BD 502—Yarrow (*Achillea millefolium*)

BD 503—German Chamomile (*Matricaria chamomilla*)

BD 504—Stinging Nettle (*Urtica dioica*)

BD 505—Oak Bark (*Quercus alba*)

BD 506—Dandelion (*Taraxacum officinale*)

BD 507—Valerian (*Valeriana officinalis*)

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“This is a problem of nutrition. Nutrition as it is to-day does not supply the strength necessary for manifesting the spirit in physical life. A bridge can no longer be built from thinking to will to action. Food plants no longer contain the forces people need for this.”

E.E. Pfeiffer quoting Rudolf Steiner in preface to *Agriculture Course*, (Adams trans.), p.7



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