

Applied BIODYNAMICS®



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Issue No. 54

Growing Biodynamically at Blueberry Gardens

Robert True as told to Kara LeBeau

Just outside of Ashton, Maryland, you'll find Blueberry Gardens right by the road. First thing you see is a blueberry patch on your left as you follow the long driveway to Robert True's straw-bale house. I first met Robert late January 2003 when I interviewed him for my thesis on organic farming. He invited me to Blueberry Gardens to help stir Biodynamic Preparation #500. Stirring the prep with Robert was a profound experience, as the preparation seemed to change colors and its weight changed as well—becoming heavy at times and then light. The whole stirring process inspired us to become prayerful and meditative. We used red cedar branches he had plucked from his yard to apply the prep. When we finished, it began to snow large flakes as the sun continued beaming.

Robert has been a conventional farmer most of his life. But for the last nineteen years, he's worked full time as head of facilities at nearby Sandy Spring Friends School. He uses the preps on the school's flower gardens and sporadically on the ball fields. "It hasn't been a very systematic approach," he says, "but at least it's provided a base where there's a feeding ground for some of the nature spirits."

Robert discovered biodynamics while researching methods to make effective compost. "Biodynamics to a Western-trained mind, doesn't make a lot of sense," he said, "But it's a great way to nurture and build healthy soil."

I returned to Blueberry Gardens July 1 to interview Robert for this issue. I was surprised at the growth of Blueberry Gardens—growth in the blueberry bushes themselves and the addition of a new eight-sided building right next to his house.

The eight-sided building, with adjoining treatment rooms, serves as a type of healing center where people come to learn yoga, get a massage, or receive acupuncture. They also come to pick blueberries. Robert now shares with us his experience of growing blueberries biodynamically.



Robert True

The first year I was married, which was thirty-three years ago, my wife and I went to pick blueberries outside of a place in Macon, Georgia. I was probably twenty-four years old. It was a small U-Pick operation, and in that moment I was enchanted by the spirit and power of the place.

Ever since that one experience picking blueberries, I've always wanted to grow them. Actually, I had a couple of unsuccessful endeavors attempting that until this one. With my neighbor and business partner Howard Zuses, we have fifteen acres, three of which are in blueberries; the rest is in woods or unused land.

One of the other reasons I chose blueberries is that they are native to the eastern U.S. and they're relatively disease free. Even conventional blueberry farmers in this area don't have many problems with blueberries.

I find it fascinating that blueberries get a lot of great publicity because of their antioxidant properties. Another

continued on page 4

Notes

Publication Future for *Applied Biodynamics*

This issue and its immediate predecessor, represent our trial effort here at JPI to transition from Patricia Smith's capable editorship to what initially seemed like a very uncertain future. These last two issues have had guest editor Hunter Francis for Issue #53 and now, Kara LeBeau for this issue. You can read a brief introductory biography from Kara below.

We will have one more issue to complete for 2006, and that issue is an assignment that I have given myself. At this point in time, just prior to our Fall Preparations Making Seminar, I have not clearly determined what might be covered, but I do sincerely hope that a completed newsletter will be in your hands by the end of the year 2006.

During the period following our Fall Preparation Making Seminar, I will also be conferring at length with both Kara

and Hunter to plan our publication schedule for 2007. The prospect of having two people share the editing workload from an east coast and a west coast perspective has substantial appeal. Besides the positive geographic advantage, both Hunter and Kara bring a strong science background to the editorship role. Both have indicated a willingness to continue to share the editing job for *Applied Biodynamics*. We will also still be able to call upon Patricia Smith to mentor our efforts. Patricia has managed to provide us with a comprehensive "How to Guide" for the *Applied Biodynamics* newsletter which will make our transition much easier as we continue our publishing venture.

—Hugh J. Courtney

Introducing the East Coast Editor for *Applied Biodynamics* – Kara LeBeau

I was five years old the first time I planted a garden. We were living near Camp Lejeune, North Carolina in military housing that didn't have much of a yard. My mother, born and raised on a farm in Stockholm, Wisconsin, rented a plot in a field a few miles away so we could plant vegetables. Seeing corn and string beans growing out of the ground astonished me – an incredible miracle. We always had a garden of some

sort from that point on, and the wonder of growing plants stayed with me.

After we moved to Minnesota, I enjoyed spending time on my uncles' farms in Stockholm during the summers as I grew up. Something about being on a farm always stirred my soul.

Having a disability as a child compelled me at an early age to begin searching for spiritual meaning in life. I studied Buddhism, Hinduism, and Taoism in my teens and was

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The Editor, *Applied Biodynamics*

P.O. Box 133

Woolwine, VA 24185, U.S.A.

Phone: (276)930-2463; Fax: (276)930-2475

<info@jpibiodynamics.com>

<www.jpibiodynamics.org>

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Mission



The Josephine Porter Institute for Applied Bio-Dynamics Inc. (JPI), was founded to produce quality biodynamic agricultural preparations based on the spiritual-scientific research of Rudolf Steiner.

It serves as a living memorial to Josephine Porter, a pioneer for this work in America.

The mission of JPI also includes education and research in biodynamic agriculture. JPI undertakes these tasks so that the earth may be healed.

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drawn to Chinese landscape paintings whose powerful presence moved me to a deep sense of peace and awe for the spirit of nature. My interests led me to earn degrees in Chinese language and religious studies.

As part of my personal search many years ago, I also learned about nature spirits – elementals, and realized the profound burden imposed upon them especially in these modern times and the urgent need to work with them if we are going to have a viable future. So I began praying for them daily. Years later when I encountered belief in elementals at Waldorf schools, I felt right at home.

While much of my writing work had focused on Asian studies, I happened to land a staff writer position at the Geological Society of America in Boulder, Colorado, and was quickly enchanted by geosciences. (I had always felt intimidated by science before that.) From there, attending a science-writing program at Johns Hopkins University in Baltimore, Maryland, I was inspired by the 2002 article in *Science* (1) of the long-term Swiss study comparing organic and biodynamic agriculture with conventional systems. That inspiration led to writing my thesis on organic farming. This was a wonderful opportunity for me to explore Rudolf Steiner’s work and to get in touch with people like Hugh Courtney, Herbert Koepf, and others involved in biodynamics.

In a future issue, I hope to share with you excerpts from my thesis, “Natural Farming: A Dire Improvement Mandate and Planetary Solution [That Is] Conscientious in Integrated Principles,” and give you updates on the Swiss study.

I find it satisfying to discover that scientists are searching for proofs of things we’ve known all along were right. For example, the biodynamic concept that the earth is a living being, is finding expression amongst some geoscientists as the “Gaia hypothesis,” first espoused by Dr. James Lovelock who had worked for NASA. The Gaia hypothesis, explained by two

scientists in a Geological Society of America publication (2), is “that the atmosphere, hydrosphere, surface sediments, and life of Earth behave dynamically as a single integrated physiological system.” Now they have to figure out the spiritual part!

Science drives policy making, so I strongly feel that the more science can prove organic and biodynamic agricultural systems are superior, the quicker will policies change to support these systems worldwide. Of course, my preference is biodynamic, the most important means to help us heal and spiritualize this planet.

I was delighted when Hugh Courtney invited me to be a guest editor for *Applied Biodynamics*. I hope you enjoy this issue.

Notes

- 1) Mäder, Paul, et al. "Soil Fertility and Biodiversity in Organic Farming." *Science* 296 (2002): 1694–1697.
- 2) Lynn Margulis and Oona West, "Gaia and the Colonization of Mars," *GSA Today*, 3(11):277 (1993).

Our Thanks to Those Supporting Our Efforts With Preparation Plants

We wish to express our heartfelt gratitude to those who have been so supportive of our work here at JPI by harvesting, carefully drying and then shipping to us so many lovely dandelion blossoms for us to use in making BD #506:

- Violet Kindergarten of the Viroqua BD Group in Viroqua, WI
- Kendra Cummings in Hillsborough, NC and the open road (in her recently acquired motor home)
- Philip Lyvers in Loretto, KY
- Marvin Calvin also in Loretto, KY
- Nancy Keiser in Marne, MI
- Ingeborg Rathke in Homer, AK
- Ruth Zinniker in Elkhorn, WI

We also want to thank Mary Lee Plumb-Mentjes in Anchorage for her harvest of the distinctive yarrow blossoms she finds in Alaska. I am sure that they make a powerful addition to the BD #502 we make here. Mary Lee also deserves our thanks for the very fragrant horsetail herb (*Equisetum arvense*) which she also sent to us for our use.

Please forgive us if we have omitted your name from the list, and let us know promptly so that we may correct our records, and extend our thanks.

Biodynamic Preparations Legend

BD #500 – Horn Manure

BD #501 – Horn Silica

BD #502 – Yarrow

BD #503 – Chamomile

BD #504 – Stinging Nettle

BD #505 – Oak Bark

BD #506 – Dandelion

BD #507 – Valerian

}

Compost Preparations

BD #508 – Horsetail (*Equisetum arvense*)

continued from page 1

aspect of blueberries that excites me is that the plants stay healthy and they're there for a relatively long period of time compared to most crops. You can have a life span of forty to fifty years for a plant that's well cared for – it's longer term than a one-season annual crop.

Life as a Farmer

I have been farming essentially all my life. I grew up on a poultry and dairy farm in central Maine. I remember baling hay when I was eleven or twelve, and I gathered way too many eggs. So I was around poultry, dairy, the family garden, and field crops as a child and as a young adult.

Then I farmed in southwest Georgia for five years as part of a Christian community. I was a full-time manager for three of the five years I was there, working on a 1,400-acre farm where probably 500–600 acres were actively used in pasture for beef cattle and probably 400 acres used in cropland – soy beans, corn, peanuts, pecans, grapes, all farmed conventionally. I had awareness of organic, but I didn't know how to do it. When you have a viable functioning farm and you don't know how to do organic, you do what's been done before and you don't stop using herbicides because you're concerned about losing the whole crop.

I went from there to Pennsylvania where I worked on a row-crop farm – corn and soybeans, for about two-and-a-half years. Then I went from there to Germantown, Maryland where I was the grounds manager for a retreat facility. After a few years, we got a truck farming operation up and running and I earned my living from growing small fruits and vegetables. The whole experience there was ten years and the farming operation was very active for six. Though I was conscious of organic methods, because my own small garden at home was organic, I did not have the experience or knowledge to know how to do it that way for the whole farm. So we did very good conventional farming – lots of cover crops, and we used herbicides and chemical fertilizer. We used manure one time and I used biodynamic preps one time back then – around 1976 or 1977, and I just wasn't ready. I made compost that failed, and I just plain didn't get it.

BD Preps: The Right Thing to Do

I was reintroduced to biodynamics maybe nine years ago. I went to a biodynamic gardening conference at Claymont Court in West Virginia, and JPI people were there. But the initiating event for me starting to use the preps was that I ate some biodynamically grown carrots and some other biodynamically grown food. The food tasted so good that I knew that it was the right thing to do. I'm an experimenter and I've experimented with supplements and all kinds of

dietary things. Basically, I don't like supplements, I like good quality food. So when I ate biodynamic food, I said, "This is it. I'm going to do this." And that gave me the motivation to learn how to use the preps.

By the time I started to use the preps, it wasn't very hard. The concept of interfacing and working with nature, well, I was already doing that. I had read most of Machaëlle Wright's works from Perelandra [Center for Nature Research in Warrenton, Virginia](1) and the addition of biodynamic preps just seemed like a very natural, easy evolution.

Using the Preparations

I use all of them; and this year in particular I'm using more than I have in the past because our plant growth has not been satisfactory. Preps are a part of the solution, though plants just take a certain amount of time before they settle in and take off. But the increased use of the Pfeiffer Field Spray and Horn Silica (BD #501) and all the rest of the preps is helping. I used to use red cedar branches to distribute the preps and I enjoyed that, but now I either spray or inject the preps through the irrigation system. I had problems spraying them until Hugh Courtney suggested I use a screen that would keep my nozzles from clogging up.

Last year, we had a flavor problem on our midseason varieties and when I talked with Hugh, he said silica [BD #501] helps with flavor. You can sample some berries from bushes where they didn't taste good last year, and they taste great this year. I've used 501 three times this season, and I'm going to apply it again tomorrow.

When we first started, our soils had a high amount of sand with some clay so they're well suited for blueberries. We did a lot to increase the soil's organic matter. We didn't plant blueberries the first year, we just planted cover crops and incorporated them and then the second year we applied composted leaves we purchased from the county in a two-to three-inch layer. Our original organic matter content probably went from a range of 1.5 to 2 percent, to 3.5 to 4 percent over the last ten years.

We mulch the blueberry plants in each row rather heavily with woodchips obtained locally to keep the weeds down and to maintain soil acidity. The woodchips usually go down in March or April, and right after that we apply Barrel Compost (aka Biodynamic Compound Preparation), which helps them to break down. I usually apply about eight to ten inches of woodchips, depending on how they come out of the machine; it comes to about 400 cubic yards per acre. The degree the woodchips break down by the next season varies from year to year, but ranges from 40 to 60 percent.

I will be spreading compost this year. I haven't applied compost in three years. During the interim years, I just used

the preps because the organic matter was so high. The nutrition seemed to be there because the woodchips provided a lot of organic matter. They're breaking down well and I injected them with all of the compost preps so they have the energy of the preps without the compost. But my current sentiment is that it is better to add a small amount of compost each year.

The soil's been changing over the years since we've been doing the preps: the structure is softer, looser, and more fertile. You can easily dig into the soil and it's a pleasure to work with now.

Blueberries take eight to ten years to get established, and we've had some problems with that, but our overall farm seems to be increasing in energetic and physical health. It seems very accurate when you view the farm energetically; we probably had more of those problems than physical problems.

I've used the Three Kings Preparation(2) for at least four seasons. The protective energy field that is discussed with Three Kings seems very real and perceivable to me. I believe it's part of the process of this farm unit becoming healthier and stronger – as illustrated in the vibrancy you see in the plants.

The experience of using the preps over the years has grown on me. The initial first year or two when I was stirring the preps, it seemed a bit tedious. But now every time I do preparations, I absolutely look forward to it and I enjoy the process of putting my energy and my attention into the preps as I'm stirring them. Half the time, I have a friend join me. It's a wonderful meditation.

Challenges to Blueberry Farming

The Right Stock

Something I'd like to say to all growers: I would highly recommend using bare root stock young plants if you're starting to grow your plantation. Do not use potted plants or larger plants. Our experience was that we paid six or seven dollars per plant for larger plants and a buck-fifty to two dollars each for smaller stock. The smaller stock within two years was where the taller stock was, so it cost a lot more.

I think the younger plant has a better chance of adapting to the new environment than the container-grown stock. Retrospectively, that's probably the biggest change I would make for future planting. I wouldn't call it necessarily a mistake, but my learning from that experience would have me use bare root stock plants that are maybe two years old.

In terms of variety selection, we had some recommendations I wish we hadn't followed. We had some plants that were in limbo – barely lived, but didn't die. They were in there for four years and didn't grow. Three years ago, I pulled

them out. We had two varieties, one was 'Blue Ridge' and the other was 'Cape Fear.' The fairest thing I could say is that 'Cape Fear' and 'Blue Ridge' are not good variety selections for this particular farm. They may be fine varieties for other settings, but they simply didn't work for us.

Now we have six or seven varieties of blueberries. Our primary one, the variety that's in production right now, is 'O'Neil.' It's a north-south highbush cross and it comes in about June 10. It's been an excellent selection for us because it comes in early and has large flavorful fruit that's easy to pick.

Weeds

Weed control in organic or biodynamic farming requires a lot of time and it requires good technology. Our weed control problems have been reduced while our years of keeping berries have increased. We began by mulching heavily with woodchips three to four years ago, and then started tilling at the edge of the mulch row with a tiller keeping a clean till strip between the mowed strip that separates the rows of blueberry plants and the blueberry-growing zone. That particular technique of using a tiller beside the rows has dramatically reduced our weed problems.

Japanese Beetles

Three or four years ago in late July, we had a severe defoliation experience in the front patch – about one-half acre, and I used compost teas along with Barrel Compost and BD #500 on the patch. I also followed Hugh's suggestion to use a specific combination of biodynamic preparations which stimulates leaf growth in plants and applied BD #504 (Stinging Nettle) and BD #505 (Oak Bark) until the end of August. That helped the plants recover.

Deer

We didn't know we had a deer problem until we enclosed a two-and-a-half-acre patch with deer fencing. That year, our sales jumped from \$700 to \$7,000. But the plants didn't change that much. What was happening, unknown to us, was that the deer were eating the blossoms off and we were losing the fruit set and didn't even know it.

So now we have enclosed all of our blueberry plants with electric fence, which is working very effectively at keeping the deer out.

Irrigation System

The first thing you want to do is work with a reliable drip irrigation supplier who can help you with layout and design so you deliver the right amount of water to each zone. And then the drip irrigation supplier will help you size your main line, whether you use buried main line or above-ground

main line. The sizing is very important for the crops you're going to be growing. The supplier will help you calculate the water requirements per zone so each zone needs to be set up so that the water supply is sufficient for what you want to water. It's very critical to have the right equipment for watering.

I once talked to a Maryland organic blueberry grower who said they installed an irrigation system but were still not getting enough water to the plants and they ended up having to pull off the green fruits so the plants wouldn't die. So it's very important that you have a reliable water source. And it's also very important to have your pump and your drip lines gauged properly so that you get good distribution.

With small plants it's best to put the plants in and use an irrigation system that allows you to put the emitter (3) at the plant itself, rather than trying to align the plant up with prepunched holes because it doesn't work. Theoretically it works, but in practice it doesn't.

One initial learning experience was that we bought drip irrigation hose with emitters spaced every three feet. Then we placed our plants three feet apart so we could line the drip hose up. Very logical, it would seem that you could do that. It simply didn't work because our rows were laid out in a curve. It didn't work and we lost plants because they didn't get water soon enough. When plants are small, the water really needs to be at the plant.

So we switched from hose that had the emitters built in to hose where you put the emitters in. You could plant your plants, put the hose out, and then put the emitter at the plant, and that's a very critical thing to do.

How the U-Pick Works

We're primarily self-serve. Last year we took in \$10,000 and we probably didn't spend ten hours collecting it. People leave

their money in the jar and we pick the money up as we can. It's an honor system and a delightful way to do business. Some of the people we talk to are so excited that that much trust still exists.

Depending on the day – on a rainy day, we've been selling a \$100 worth of berries. Our best day was last Saturday before the rain, and we sold a \$1,000 worth of berries. A weekday averages probably \$300 or \$400. That's not bad. It's just fine. The only advertising we do is signs on the road and we're on some people's list-serves. We didn't do anything to get there; we're just there.

Blueberry Gardens Healing Center

I would like to say that with the development of the healing center here, it seems to very much be in line with the few things I've read about the true biodynamic farm in that it becomes a community center.

I'm also a massage therapist who does energy work. I blend the energy work with the massage therapy techniques, and for me, the blueberries are an essential part of the healing center here. The treatment rooms are enhanced by the blueberry fields and the blueberry fields are enhanced by the treatment rooms.

My wife teaches yoga and we rent out the space for people doing a variety of healing work. A few of the people who pick blueberries also come for a massage. And a few of them come for yoga classes and there's a real synergy between the blueberry aspect of the farm and the treatment aspect of the farm.

For me, blueberries are the essential grounding force. Sixteen years ago, I had an interesting dream and recorded the following in my journal:

Blueberries in particular are needed to preserve certain qualities of life and love in the universe. . . . Blueberries facilitate the growth of the unconscious knowledge of your past lives into the consciousness of your present life.

In the ten years of growing blueberries – this on top of raising a family, being a part-time massage therapist, and working a full-time job, there's probably not an hour that I haven't enjoyed being out there. And I probably spend ten hours a week out there. The experience enables me to be in touch with nature, helps me to let go of whatever poor thinking may be going on in my brain, and then within my body a harmony returns that sometimes goes away with the pressures of interfacing with people and things that occur at work.

And there's also on occasion good contact with the nature spirits, it's not an every-time experience out there, but it's an occasional one that's very rich and nurturing.

Notes

1) Machaelle Wright, author, flower essence researcher and



developer, co-founded the Perelandra Center for Nature Research in Warrenton, Virginia. To learn more about Perelandra, visit <<http://www.perelandra-ltd.com/index.cfm>>.

- 2) For more information on the Three Kings Preparation, see *Applied Biodynamics*, Winter 2001–2001, Issue No. 35 and Winter 2002–2003, Issue No. 39.

- 3) An emitter, or dripper, is a device that drips water at a specified rate to the plant.

Robert True and Howard Zuses will present “Ten Years of Blueberry Gardens: A Progress Report” at the Pennsylvania Association of Sustainable Agriculture’s (PASA) conference February 1–3, 2007. (See <<http://www.pasa-farming.org>> for information.) To learn more about Blueberry Gardens, contact Robert True at (301)570-5468 or <robert.true@ssfs.org>.

Important Announcements:

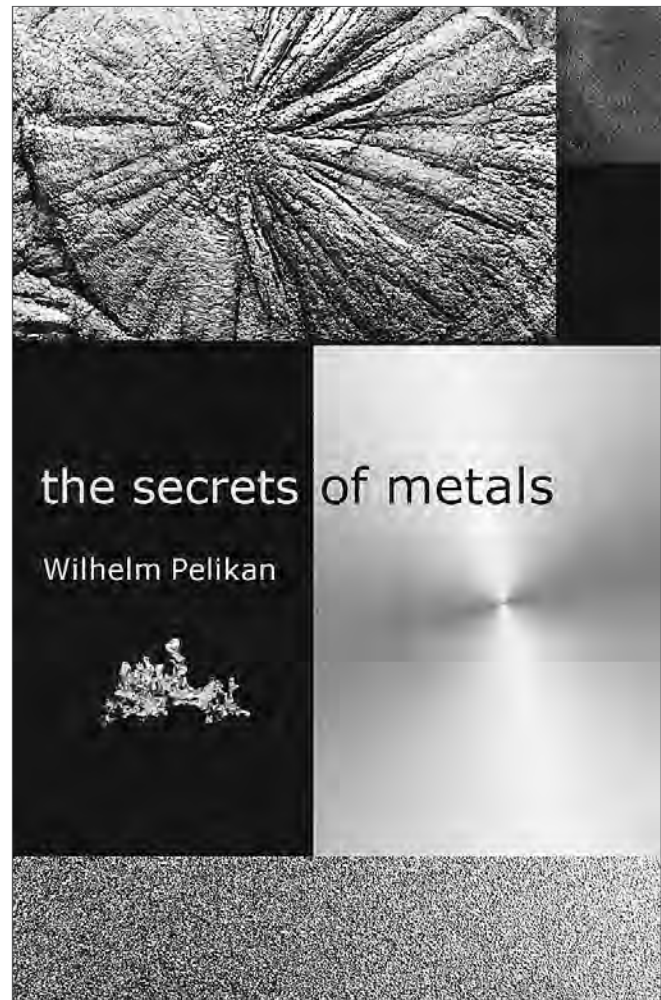
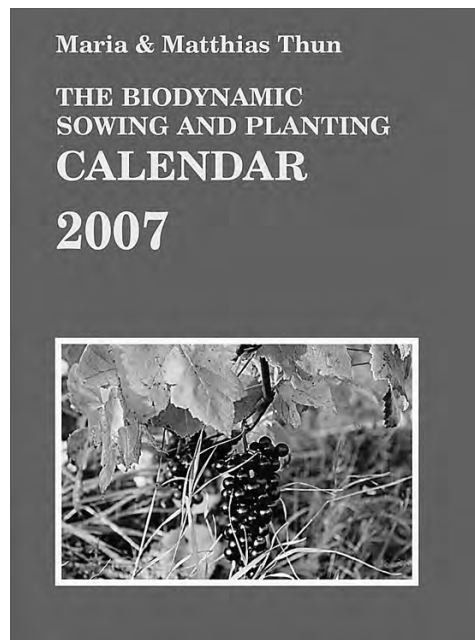
The Secrets of Metals by Wilhelm Pelikan Is Back in Print!

One of the classics of spiritual scientific research has, at long last, been republished. Wilhelm Pelikan examines the classic seven metals of lead, tin, iron, copper, silver, mercury, and gold both in relationship to their importance in human history as well as to the particular cosmic aspects which can be associated with these metals. Besides the classic metals, Pelikan examines the role played by zinc, aluminum, nickel, cobalt, and antimony. The book closes with a look at the special role played by the element sulfur in relationship to the world of metals.

Pelikan’s book is a fascinating study and well worth reading by any biodynamic practitioner, or by students of geology or anthroposophy. Available from JPI for \$25.00 plus \$5.50 postage and handling.

Biodynamic Sowing and Planting Calendar 2007 Now Available

The new edition of Maria and Matthias Thun’s calendar is now available for \$12.95 plus \$5.50 for shipping and handling.

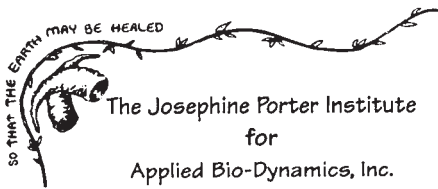


“In Nature – and, indeed, throughout the Universal being – all things are in mutual interaction; the one is always working on the other. . . .

“We must take these finer interactions into account. Otherwise we shall make no progress in certain domains of our farm-work.”

Rudolf Steiner – *Agriculture*, Lecture 7, p. 125

SO THAT THE EARTH MAY BE HEALED



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