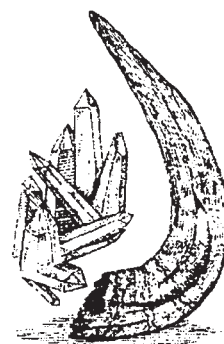


Applied BIODYNAMICS®



Autumn, 2010

Newsletter of the Josephine Porter Institute • Woolwine, Virginia

Issue No. 70

Looking to the Future for JPI

Hugh J. Courtney

Josephine Porter Institute for Applied Bio-Dynamics, Inc. was founded in 1985 as an organization for research and education in biodynamic agriculture with a special emphasis on the biodynamic preparations. One of the basic concepts involved my sincere belief that neither research nor education could take place unless one started with quality biodynamic preparations. Because of that view, a primary function of the organization involved producing and distributing the best quality preparations that could possibly be made. Much of the early focus for JPI was on products, which were then sold to those wishing to learn and to conduct their own research on the effectiveness of biodynamic agriculture. As a result of this focus on products which served as the major income support for the organization, other research and educational efforts were essentially put

on hold. The desired fundraising or research grant proposals that are the ordinary income stream for most educational and research non-profits have been deferred. At this point in the history of Josephine Porter Institute, it is highly desired that a greater emphasis is placed on our fundraising efforts. An increase in our donation income may also provide funds that will allow us to successfully prepare and apply for research grants.

The several research projects detailed elsewhere in this issue of *Applied Biodynamics* should have been undertaken years ago. We can only hope that it is not too late to begin the effort now, and that we will receive the support that is so desperately needed to accomplish our task of education and research to fulfill our mission "so that the earth may be healed."

Social and Environmental Importance of Biodynamic Preparations-Based Research

Cindi Courter

More than thirty years after the passage of the 1972 Clean Water Act, which promised us that the country's waters would be, once again, safe for fishing and swimming by 1982, and that there would be zero polluting emissions into those waters by 1985, much of our nation's waters and land are as polluted as ever. Marine life continues to die. Agricultural land cannot produce nutritious food because of many years of overuse of agri-chemicals. In 2004, the most recent government Toxic Release Inventory (TRI) reported forty percent of our waterways are too polluted for fishing or swimming, and thirty percent of our industries are in noncompliance. From 1994–2004, there have been 30,000 closures of bays and waterways and over 250 million pounds

a year of reported toxins going into our waterways through either chemical factory outputs or agri-chemicals used by farms, gardens, or the huge chemical lawn business.

The Josephine Porter Institute for Applied Biodynamics produces soil preparations that are nonpolluting to either soil or water in the environment. By bringing the land into harmony and balance, these products help build soils that can produce nutritious crops and food. As the world's people become increasingly health conscious, rejecting policies over the past sixty years that have not worked and have made our population sicker, the time for alternative methods of growing and supporting life on our planet is now. The interrelatedness of all life rings true – we are not

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Editor's Note

Welcome to the fall issue. This edition of *Applied Biodynamics* is important because it shares the economic biography of JPI. Essential to the existence of any institution/organization is the funding that supports the value generated by that organization, and the livelihood of the human beings who carry out the labor required by the given initiative. Seen in light of Rudolf Steiner's three-fold social organism – comprised of an economic sector, a legal/rights sector and a spiritual/cultural social sector – money is an energy exchange. The educational and research work of JPI belongs in the cultural sphere, the sphere of human capacity, as described by Stephen Usher in his paper "Rudolf Steiner and Economics: The Threefold Social Organism: An Introduction" (www.rudolfsteinerweb.com). Education, agriculture and the arts also live in this same sector of the threefold society. This means it is rightfully so that excess capital, or spiritual money, as Rudolf Steiner described it, in the form of gift monies – grants and donations – can be brought to new life when donated to an organization or initiative such as JPI – a true karmic gesture. JPI is unique in that it also sells products (biodynamic preparations, books, etc.) which exist mostly in the economic sphere. The price of the books and preparations do reflect the true

cost of production, and the money from those products supports the processes and labor required for production and distribution. Of course, the spiritual (cultural sphere) dimension of the biodynamic preparations also has an inherent worth for which economic value cannot be assigned. So, while we hold to lofty ideals such as "so the earth may be healed," we must also make sure that the processes which are more concrete, and set in stone – those of the balance sheet – can function in a way that still attempts to lead toward the ideal – albeit hindered by our society's distorted relationship with money (we will pay thousands for an SUV, yet complain about the cost of lettuce). Thus you will see the gesture of transparency on behalf of JPI, as the organization's needs for research funding are detailed throughout this issue.

We welcome Cindi Courter, our new East Coast Editor. You can learn more about her on page eight. Look forward to an interesting and inspiring array of subjects that she will cover in future issues of *Applied Biodynamics*.

Happy Autumn,
Christy Korrow

Applied Biodynamics

Applied Biodynamics is a quarterly publication of the Josephine Porter Institute for Applied Bio-Dynamics Inc. (JPI). The subscription price of \$30.00 per year helps support JPI research and development. Back issues are \$7.50 each.

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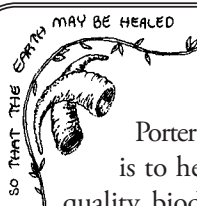
Co-Editors – Hunter Francis and Cindi Courter

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Calendars Available

We now have on hand planting calendars for 2011, including *Stella Natura* 2011 at \$14.95, and *The North American Biodynamic Sowing and Planting Calendar* 2011 by Maria and Matthias Thun at \$13.95. All calendar/book orders should include \$7.00 postage and handling (per order, not per title). Please visit our website at <www.jpibiodynamics.com> for a complete listing of our print resources.



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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Social and Environmental Importance of Biodynamic Preparations-Based Research

solitary, but rather interdependent beings. All who eat are dependent on the farmer/gardener!

JPI is a nonprofit corporation 501(c)(3) dedicated to providing the Rudolf Steiner biodynamic preparations, Pfeiffer BD Compost Starter and the Pfeiffer BD Field and Garden Spray, as well as other preparations for healthier soil, plants, atmosphere and trees. JPI's limited research and development efforts have found that these preparations yield positive results when used for animal waste treatment, commercial disposal operations and toxic cleanups. However, much more research needs to be done to gain actual numbers and documentation. Land grant universities have been funded by the large agrochemical companies with little or no funding for alternative methods of farming and gardening. In general, if any research in this area is done, it is led by a graduate student striving for a master's or doctoral thesis. Meanwhile, topsoil, the life source for plants, continues to be depleted of life-giving nutrients, and the chemicals used in modern agricultural practices continue to poison the food chain.

Funds are needed for meaningful biodynamic research, with venues not only at the Josephine Porter Institute, but in other areas throughout the country and world. There is a significant need to establish consistent and dependable tests to determine the quality of the preparations, including chromatography and capillary dynamolysis.

Many of JPI's proposed research projects will in fact involve the farmer. Thus this type of research model offers direct support to as many individual farmers as possible. Since environmental degradation and pollution to the land and water is caused by improper handling of animal waste

JPI has many areas of operation in need of additional funding sources in order to better fulfill its mission and vision. These projects include:

- Biodynamic presence at an increased number of ecological and agricultural conferences;
- Instituting a fully-functioning internship program to provide a full educational experience in six- and twelve-month increments to focus on quality preparation making as well as in-depth usage of the preparations;
- Scholarship funds to provide educational workshops to those with restricted financial resources;
- Farmer-to-Farmer Advisory Service;
- Stirring machines to provide to farmers and growers who need to spread the biodynamic preparations over large areas of land in an efficient and timely manner;
- Publication of educational materials in order to republish certain out-of-print biodynamic classics, as well as new, revised and updated materials;
- Capital expenditures including a commercial kitchen exhaust hood, and counter and storage spaces in order to enable adequate hosting of preparation seminars and other educational events at JPI;
- Fashioning cultural bridges to create a dialogue between Western science and the wisdom of older cultures including Native American, Asian and Indian.

Space is limited in this article, and allows us to go into depth on only the included eight projects. A future article may address the items noted above at greater length. You may contact JPI if you would like more information prior to publication of that article.

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*)

(i.e.: hogs, cattle and poultry), there are several projects designed to treat these issues and the problems they create. Since the majority of agricultural land is farmed using chemical fertilizers, as well as weed and pest controls, JPI looks to fund projects that convert chemically-farmed soil to biodynamically-alive soil.

Sequential spraying for drought relief, the development of seed soaks to aid germination, as well as the quality and quantity of the harvest, will give farmers and gardeners the ability to produce nutritious crops and food. In addition, the "Pest Pepper Project" is designed to tackle the twenty-five worst weed problems, the ten worst animal pest problems and the twenty-five worst insect problems. The efficacy of potentizing

certain preparations, such as BD #501 (horn silica), and how it affects plant organisms needs to be studied, as well.

Further research is necessary in the use of planting calendars and plant growth. Maria Thun's research results are based on the use of all nine biodynamic preparations. Different results occur when less than nine are used. Funding for this project could serve to clarify the various interpretations and results that have occurred in the past when people have failed to follow Thun's procedures.

JPI's Eight Key Research Projects

Over many years we have done preliminary research in a variety of areas regarding the use of the biodynamic preparations and their effectiveness. We are developing strategic plans that include the following research projects over the next five years. You will notice that we have included the estimated cost of each research project below. This is important information as we are actively seeking funding partners for each area of research. We would appreciate if you would share this information with anyone whom you think might be interested in supporting this work. One of the major goals of the following projects is to involve the farmer. Thus, this type of research model offers direct support to as many individual farmers as possible. We adamantly believe that research is vital to the future of biodynamic agriculture in this country in the following areas:

1) CAN BD #500 (HORN MANURE) & BC (BIODYNAMIC COMPOUND PREPARATION) BE STIRRED AND SPRAYED TOGETHER WITH AS GOOD AN EFFECT AS WHEN APPLIED SEPARATELY, AND WITHOUT NEGATIVE RESULTS?

Plot studies would be conducted comparing an untreated control plot, a plot treated with BD #500 and BC stirred in the orthodox fashion and applied separately and finally the third plot would involve the BD #500 and the BC stirred together, with the BC added to the BD #500 stirring container for the final twenty minutes of the hour stirring time. If the answer to this question proves to be a positive one, the net effect for the grower would be a considerable savings in time with less traffic over the land, as well, thereby reducing possible compaction. Upwards of ten different sites would be involved with four different crops at each site. Calculation of crop yields along with appropriate chemical analysis of soil quality and plant tissue tests, including chromatograms or capillary dynamolysis method under the direction of a researcher would be completed. The goal of this project is to improve the application process of the biodynamic preparations in order to make biodynamic agricultural methods more streamlined for

the practitioner, thus making this methodology more widely used throughout the world as a sustainable agricultural practice.

Additional questions under this project could be posed and answered through this research:

Is the #(X)500 (pre-potentized BD #500), as effective as regular BD #500 even though it is stirred for only twenty minutes rather than the one-hour used for BD #500? Does the #(X)500 retain its effectiveness for a longer time than the four-hours viability which is thought to apply to the regular BD #500?

Cost of each of the additional projects indicated would approximate the cost estimate for the primary project listed.

Project cost for one year: \$22,500

2) PROPER HANDLING OF ANIMAL WASTE USING THE BIODYNAMIC PREPARATIONS & PFEIFFER PRODUCTS

Animal waste created by poultry, hogs and cattle feed lots poses serious environmental threats to the land and bodies of water (rivers, streams and estuaries), for example, the Chesapeake Bay and Pamlico Sound in the eastern United States as well as other watershed areas. This has a severe impact on the environment, killing hundreds of plant species, marine animals, birds and fish. By creating proper handling methods and treating the manure biodynamically, which would chelate phosphorus and other elements into compounds held in colloidal form as humus, as well as alleviating high ammonia levels from animal waste, we can work towards protecting our watersheds. Additionally, with proper handling of the waste, little or no new pollution would occur. These projects include multiple evaluative environmental readings (including carbon sequestration) and other data monitoring. Conventional versus biodynamic agricultural methods would be researched through these projects with the goal of creating more sustainable agricultural methods.

A) POULTRY YARDS – There are very high ammonia levels associated with this industry. This also leads to chicken mortality. Study would be devised to compare three sets of data – Poultry A (using no preparations) versus Poultry B (using biodynamic preparations) versus Poultry C (using Pfeiffer products). Ammonia levels would be monitored as well as the percentage of chicken mortality. Other factors would also be researched such as egg producing versus meat birds. This study can be accomplished by applying the biodynamic compost preparations or the Pfeiffer BD Compost Starter on the floor of the poultry houses or to the manure immediately after

it is removed from the poultry houses. Measurement of leachate from each different compost pile would also be accomplished.

B) HOG LAGOONS – Hog waste is a huge problem in areas where thousands of animals are produced commercially.

C) CATTLE MANURE TREATMENT – Cattle manure, whether in dairy or cattle feed lot is also a significant contributor to environmental pollution of watersheds and groundwater.

These studies would involve numerous soil and water quality tests – two to three times per year. Comparative research would be performed on these sites with biodynamic versus non-biodynamic treatments.

Project cost per year for each project: \$110,000

3) **CONVERSION OF CHEMICALLY-FARMED SOIL TO BIODYNAMICALLY-ALIVE SOIL**

The earth is a “living organism” and the farm is “an individuality.” For many years, because of less stringent EPA laws, farmers from Central and South American countries, as well as Asian countries, will use up to seven hundred times the recommended rate of chemical fertilizers, herbicides and pesticides. It is not unusual to see farmers spraying herbicides in the morning and then sending the same sprayed produce to market in the afternoon. This has led to many deaths of farm workers and severe birth defects of offspring. Here in the United States, while much greater care is taken in the application of chemical fertilizers, herbicides and pesticides, their residue in soils and bodies of water presents an enormous pollution problem.

It would be of utmost importance to develop a model establishing a biodynamic protocol for conversion of various types of farming enterprises of scale from chemical dependence to biodynamic self-sustainability. In a mutually cooperative and supportive effort, JPI and East Carolina University’s Ruth Kempf, PhD are in a unique position to establish such models for conversion. In any project chosen for funding, comparisons of the same crops grown under conventional approaches versus the biodynamic protocols are to be established jointly by JPI and Dr. Kempf. Crops will be tracked from early spring to pre-harvest with measurements for nutrient levels and microorganism levels in the soil, and in the corresponding plants. Special emphasis will be placed on essential nitrogen levels. Comparative crop yields under each treatment will also be measured. Each project will employ the Pfeiffer chromatography method for evaluating inputs, soils before planting and after harvest, and crop quality. Each project will be specifically tailored

to the individual farm situation and will involve either use of the actual biodynamic preparations or the Pfeiffer BD Field and Garden Spray in combination with certain other second generation preparations derived by JPI from the basic biodynamic preparations. Intensive application rates will initially be involved.

On-site guidance will be provided by JPI staff or one of JPI’s well-qualified Farmer to Farmer Advisors. The collection of soil and plant tissue samples for each site will be accomplished by graduate students under the direction of Dr. Kempf. Throughout the growing season, photography and video will be used in the monitoring of each project site, as well as the measurement of different crop yields under the various soil and crop treatments.

The goal of this project is to create a comparison and economic analysis of input costs among various treatments and to establish baseline protocol for conversion of chemical treatment to a biodynamic one.

Project cost for each project area: \$41,000

4) **SEQUENTIAL SPRAYING – DOES THE USE OF THE SEQUENTIAL SPRAY TECHNIQUE ACTUALLY PROVIDE DROUGHT RELIEF OR ENCOURAGE PRECIPITATION?**

Research test questions and protocols would be created. Growers under the direction of the Research Director would submit their model to JPI for review and approval. For completeness of data collection, JPI would seek participants within a fifty-mile radius of one another:

BD #508 (*EQUISETUM ARVENSE*) – FOR DROUGHT RELIEF
This could be studied in this project, as well.

Project cost for one year: \$7,200

5) **EFFICACY OF SEED BATHS**

Additional research on the entire question of “seed soaks” using the biodynamic preparations needs to be accomplished. For instance, there are a significant number of crops for which an effective biodynamic preparation seed soak has not been determined. One experiment previously conducted involved a seed bath of a combination of BD #501 and BD #506 (dandelion) (two preparations never suggested for such use) on a sweet corn planting. The same results occurred as was the case some years ago when a similar seed soak treatment was performed. A very high percentage of plants set two fully developed ears and, more remarkably, showed an extremely low percentage of ears damaged by the corn ear worm. A comprehensive seed bath involving both the biodynamic preparations and the appropriate potency of a “pepper” of the corn ear worm

would be of enormous benefit to gardeners and farmers on a very large scale. This project studies the speed of germination, as well as the quality and quantity of the harvest.

Project cost: \$24,500

6) PEST PEPPER PROJECT

This project is designed to be at least four years of research. The twenty-five worst weed problems, ten worst animal pest problems and twenty-five worst insect problems would be identified. Additional equipment does need to be purchased, as well as lactose to conduct the experiments and produce the pest peppers.

This project would commence with the acquisition of a Schatz Inversion Mixer for the preparation of potencies of “peppers” up to D8 and beyond, if necessary. A considerable library of “pest peppers” is being developed, but requires much time and investment in dilution materials to establish usable levels of any given “pepper” so that the practicing farmer can undertake trials. Serious questions need to be addressed with respect to whether site specific “peppers” must be developed, or whether a species of weed, for instance, can be harvested, ashed, and potentized in one part of the country and can yet be effective against that same weed in a totally different geographic location. Significant funding is required for this project, if mainstream farming is to be impacted.

Project cost over four years: \$180,000

7) PLANTING CALENDARS & PLANT GROWTH – RESULTS IN THE USE OF ALL NINE BIODYNAMIC PREPARATIONS VERSUS USING FEWER THAN NINE

Preliminary observation would seem to suggest that the rhythms observed by Maria Thun only come into play when all nine of the biodynamic preparations are being used. Research claiming to arrive at different results than Maria Thun achieved did not involve the comprehensive use (in some form) of all nine of the preparations. A carefully-timed series of plantings over an extended period of time, as well as the exact use of seven, eight or nine preparations, could serve to clarify these various interpretations.

Project cost: \$29,000

8) VARIETIES OF BD# 501 AND THEIR EFFICACY WITH RESPECT TO PLANT ORGANISMS

Does a rhythmic potentization and dilution process for BD #501 result in an effective and more readily usable (i.e. with shorter stirring time) BD #501 preparation product, as in the #501 (5x) (fifth decimal dilution)?

Project cost: \$21,200

Why This Research Now?

As the world's population continues to grow, the demand for agricultural commodities is rapidly increasing. Agriculture, the world's largest “industry,” is inextricably connected to the planet's natural resources, both by the effects of farming and grazing practices and by its vast scale. Land used for pasture and crops occupies more than *fifty percent of habitable land* and agriculture uses *sixty-nine percent of all freshwater* used by people on the planet. With its deep impact on people, biodiversity, resources and our environment, agricultural methodology is one of the most important frontiers for conservation and the creation of programs and products that will protect and sustain our planet and resources in a non-polluting way. Preventative measures must be taken in order to induce a risk-neutral society with flexibility for the future. The continued use of environmentally-harmful substances will create uncertainty in our global society that may be irreversible.

Stronger prevention measures must be taken. JPI can assist in the implementation of more sustainable agriculture practices that in turn can preserve and restore critical habitats, help protect river basins and improve soil health and water quality, in addition to helping provide a more nutritious food supply, free of chemical contaminants, for the world's population.

Positioned for Research: JPI's Accomplishments During The Past Twenty-five Years

1985 – First full year of biodynamic preparation-making and distribution. Less than 600 units of BD #500 and over 200 full sets of compost preparations were distributed. Barrel Compost was introduced to North American biodynamic practitioners by Hugh Courtney. The mission of the Josephine Porter Institute has always been to aid the individual practitioner to graduate to the making of his/her own preparations when ready to do so. Thus, nearly 200 new cow horns were distributed to individuals for the making of their own preparations. This year marked the one-year anniversary of Josephine Porter's death in May 1984 and the assumption of the preparations work by Hugh Courtney. At this time, 165 practitioners are supported. Root cellar for proper storage of the preparations is completed.

OCTOBER 22, 1985 – JPI, an educational and research institution, is chartered by the Commonwealth of Virginia.

1989 – JPI is granted not-for-profit status as a 501(c)(3) organization by the Internal Revenue Service.

1990 – Number of biodynamic practitioners being supported for the year reaches 813.

1994 – JPI establishes the *Associative Contract* as a vehicle for gardeners and farmers to obtain preparations by identifying annual needs and receiving a substantial discount for prepayment. In effect, a kind of CSA for the biodynamic preparations is created.

1995 – The Pfeiffer Foundation, Spring Valley, New York, is faced with an imminent closing. JPI is granted production rights with the agreement that a successful batch of both the Pfeiffer BD Compost Starter and the Pfeiffer BD Field Spray can be produced within five years at JPI. Construction is started on a building to house the production of the Pfeiffer products, as well as the JPI office spaces.

1996 – JPI is serving well over 1,500 biodynamic practitioners in North America, as well as overseas.

- Nearly 4,000 units of preparations and Pfeiffer BD Field Spray are provided by JPI to treat more than 3,900 acres of land.
- Over 1,700 full sets of Biodynamic Compost Preparations are distributed along with nearly 1,100 units of Pfeiffer BD Compost Starter to easily compost 17,000–25,000 tons of compost.
- 1,100 units are used by individuals who are making some of their own compost preparations, but rely on JPI to supply the preparations they do not make.
- JPI furnishes over 1,000 cow horns to practitioners nationwide.

1999 – JPI introduces Hugo Erbe's Three Kings Preparation to a limited number of biodynamic practitioners. Subsequently, more and more people are employing this preparation to start off the coming year in a positive way. JPI successfully meets the milestone for producing Pfeiffer products.

2000 – Over 1,900 practitioners are being served.

2001 – JPI building receives Certificate of Occupancy.

- Distribution of spray preparations totalling over 7,000 units.
- Compost units, including preparations and Pfeiffer BD Compost Starter, total 5,552.
- Nearly 1,500 cow horns are distributed.
- JPI provides the means for the biodynamic practitioner to treat over 10,000 acres of land and make over 29,000–40,000 tons of biodynamic compost in order to heal the earth's soils.

2008 – Distribution of preparation units, including Pfeiffer BD Field Spray total more than 16,000.

- Compost preparation units total over 8,400.
- More than 5,500 cow horns are distributed.
- JPI's 2,500 plus practitioners had the biodynamic tools available for the treatment of more than 30,000

acres of land and the production of 35,000–52,000 tons of compost.

Through research and development, JPI has been able to add a number of additional "tools for the biodynamic tool shed" in the form of BC; Three Kings Preparation (Hugo Erbe #8); Cow Stomach Preparation (Hugo Erbe #5); BD #501(F) (feldspar-based BD #501); #(X)500 (pre-potentized BD #500); and "Prepared" 500 (the formula of Alex Podolsky used widely in Australia). In recent additions, Tree Harmonizer Kits and Harmonizing Preparation (Hugo Erbe #9) are being provided to the biodynamic practitioner.

2009 – Pfeiffer BD Field Spray is renamed Pfeiffer BD Field and Garden Spray due to the numerous reports of excellent results obtained in garden scale applications.

2010 – JPI embarks on compelling new research projects, focusing on the fifth kingdom of nature – Trees.



Dedicated to educating the public on truly sustainable agricultural practices, the Institute conducts a major preparation making conference each year, as well as monthly workshops.

Three Kings Preparation

Kits available for purchase – place your order in time for it to be shipped on or before December 16.

Prepared and potentized at the stroke of midnight on New Year's Eve and stirred and sprayed on January 6, Three Kings Day, this blend of *Aurum metallicum* D2 (homeopathic gold), Frankincense and Myrrh is only recommended for land where the nine biodynamic preparations have been previously applied. "When using the Three Kings Preparation, you are in essence sending a message to the elemental kingdom that here within a 'magic circle' they will be provided a safe haven as well as the profound spiritual nourishment of the biodynamic preparations." (From the JPI literature.)

Each kit covers ninety contiguous acres of boundary – \$30.00 plus shipping.

Bringing Biodynamic Research to My Own Backyard

Cindi Courter

The message of this issue of *Applied Biodynamics* is timely. We are all responsible caretakers for our part of the earth, no matter how large or small and we can all make a difference. Research and education are paramount for the biodynamic community. Without these two items, an increased number of biodynamic practitioners applying preparations to an increased number of acres globally will not be possible. Therefore, the number of acres of “healed soil” producing healthy, nutritious plants free from chemical pollutants will be severely diminished.

Being a biodynamic practitioner for the past four years and seeing the huge difference in our own land, only twelve minutes from JPI, we were recently faced with a severe intrusion and contamination of our three hundred-acre development. For fourteen years, our development had an agreement with the utilities company that the association would take care of the power line easements. Unfortunately, that agreement was broken when a subcontractor of a subcontractor for the power company came onto the land and cut into trees and sprayed them with agrochemicals.

In consulting with Hugh Courtney, it was determined that I should either use the Pfeiffer BD Field and Garden Spray or a combination of BD #500 and BC (Biodynamic Compound Preparation a.k.a. barrel compost). I mixed up the Pfeiffer BD Field and Garden Spray into a paste using

a small amount of potting soil, as well as several ounces of BD #508 (*Equisetum arvense*). This gave the mixture the consistency necessary to actually be placed into the slits that had been made on the tree and to be molded around the tree trunks, thus protecting the tree from any further “bleeding out,” as well as giving the damaged tree the proper nutrients to fight the poison. After applying the paste, I stirred additional Pfeiffer BD Field and Garden Spray into several gallons of water and liberally applied it to the ground around the nine different trees.

For good measure, the following afternoon, I stirred for twenty minutes the BC adapted from the recipe of Maria Thun. Following the stirring, the BC was applied through whisking and small pours around the drip line of each tree for further dissolution of the contaminants and for the tree to uptake the preparations. Thus, I have my own research project in action. Since we have been using the preparations for four years in addition to the Three Kings Preparation every January 6, I feel confident that we can make a difference for these trees through the use of biodynamic methodology. I will give you an update in a future issue of *Applied Biodynamics*.

We hope you will be inspired by Cindi’s action to work on healing the earth where you live.

Cindi Courter, New East Coast Editor for *Applied Biodynamics*

We welcome a new addition to the staff of *Applied Biodynamics*. Cindi Courter holds a master’s degree from Duke University with graduate certificates in Latin American studies, women’s studies and non-profit management. She also holds a Bachelor of Fine Arts degree in photography from Maryland Institute College of Art, Baltimore and a degree from Union College, New Jersey. She has studied at the Instituto Allende in San Miguel de Allende, Mexico where she also taught English as a second language. Cindi brings with her over thirty years of senior-management experience in education and training, development, sponsorship/membership, sales, marketing and fundraising – including grant writing, proposal writing, newspaper and magazine articles, as well as organizational publications. She was an editor for the book, 2012: *The Transformation from the Love of Power to the Power of Love* (One Love Press, 2008), by Robert Roskind with Tata Pedro (Mayan elder from Guatemala.) Since August 2006, she has been a con-

sultant to JPI working with strategic planning, board development, fundraising and various other projects. Cindi lives twelve minutes from JPI at Courter Moon Lodge and Eco-Cabin with her husband Steve. She is an avid biodynamic gardener with interests and activities in writing, non-profit management, photography/art, hiking, bicycling, camping, travel and scuba diving.

JPI is Committed to Providing Quality Biodynamic Preparations to Farmers and Gardeners

We have a full array of biodynamic preparations available, including:

COMPOSTING

- Biodynamic Compost Preparations* (BD #502-507)
- Pfeiffer BD Compost Starter

SPRAY TREATMENTS

Soil Spray Applications

- BD #500* (Horn Manure)
- "Prepared" 500+ (per Podolinsky method)
- # (X) 500+ (X=pre-potentized)
- BC* (Biodynamic Compound Preparation)
- BD #508+ (*Equisetum arvense*/Horsetail herb)
- Pfeiffer BD Field and Garden Spray

Plant Spray Applications

- BD #501* (Horn Silica)
- BD #501(F)* (Feldspar-based BD #501)
- #501(5x)+ (Fifth decimal dilution)
- BD #508* (*Equisetum arvense*/Horsetail herb)

*Biodynamic Preparations (BD Preps): These preparations are based on the original indications given by Rudolf Steiner.

+Josephine Porter Institute Preparations: These products are formulated at the Josephine Porter Institute. Users have reported favorably on these products in their biodynamic practice. For more information visit <www.jpibiodynamics.org>

To place an order please call us at (276)930-2463. Discounts are available through an Associative Contract (A/C).

Urgent Update on "Prepared" #500

The current protocol for using the "Prepared" #500 recipe developed in Australia by Alex Podolinsky was given by him to me at a conference in Kimberton, Pennsylvania in 1989. At that time, his recommended practice was to use only the regular BD #500 during the first two years of the conversion of a farm to biodynamic agriculture. In a recent telephone call from Alex, I was advised that further experience using the "Prepared" #500 had led to applying it in most cases from the very first year, except on the absolutely worst poisoned soils.

—Hugh J. Courtney

Thank You for the Dandelion Blossoms

Thanks to the numerous individuals and groups who collected and contributed their dried dandelion blossoms to JPI. Would you like to harvest dandelion or other preparation plant materials for JPI? If so, contact JPI for details on how to harvest.

Tommy Spain – Hickory, NC

Jullo Lopez – Kokomo, IN

Donna Mills – Whitesville, KY

Sharon Hurt – College Grove, TN

Greg Hurt – College Grove, TN

Glenn Thomson – Owensboro, KY

Jonathan Place – Proctor, VT

Florence Rewinski – Crestwood, KY

Ruth Zinniker – Elkhorn, WI

Dylan Ford – North Babylon, NY

Frances Williams – Frederick, MD

William Oshima – Las Vegas, NM

Neil Brown – Lisbon, OH

Donna Mills – Whitesville, KY

Michael and Carol Boer – Dale, TX

Stephine Cole – Danielsville, PA

Susan Peterson – Flint Hill, VA

Frieda Lankford – Collinsville, VA

Michaela Ryan – Shelburne, VT

Star Lite Gardens – Greene, ME

Your support of our educational efforts and research projects will assist The Josephine Porter Institute in its mission of "healing the earth." If you would like to make a gift to JPI or discuss giving opportunities to the organization, please contact:

Hugh J. Courtney, Executive Director Josephine Porter Institute for Applied Biodynamics, Inc

P. O. Box 133

Woolwine, VA 24185

Phone: (276)930-2463 (office); (276)229-9536 (cell)

Email: hughjcourtney@gmail.com

Anecdotes and Antidotes – Biodynamics at Work

Hugh Courtney, director of JPI, answers reader's questions

Q: *Do you have any recommendations for the Pfeiffer BD Compost Starter? I refer to the amount of water needed to mix the starter, the frequency of turning compost piles, carbon/nitrogen ratio and adequate time to obtain a good compost.*

A: The amount of water used to mix with the starter is on the order of three to ten gallons per ton of material. Use one unit of starter for each one to one and a half tons of material. The quantity of water used is not as relevant other than needing to take into account weather and climate conditions that might affect the moisture in the pile as it is working, and the particular substances being composted. A significant amount of paper or sawdust in the pile would require more moisture, whereas a large quantity of wet manure or fresh green vegetable matter would need less water. Experience in composting is the best aid to judging. Although most compost “experts” speak of a carbon/nitrogen ratio of 15:1 up to 25:1, Pfeiffer, in *The Compost Manufacturer's Manual*, indicates that his exhaustive laboratory tests in using the Compost Starter resulted in a preferred ratio of 11:1 to 20:1. Turning a pile frequently results in oxidizing many of the elements in the substances of the pile, that is – carbon dioxide or ammonia gases, etc., rather than allowing for the desired colloidal humus to be built up. Thus, turning should only be employed if the pile is either

too wet or too dry (maintain fifty-sixty percent moisture). If the pile does need to be turned, another smaller dose (say, one unit per ten tons of material) of the Compost Starter would be helpful. Depending on the material in the pile, finished compost has been achieved in as little as three weeks, but even the most difficult materials should yield finished compost in three months or less with careful monitoring of the pile.



Ruth Kempf, PhD, Professional Researcher and Biodynamic Practitioner, Joins JPI Board of Directors

Hugh Courtney

Ruth Kempf, PhD is a professor in the Department of Physics at East Carolina University, where she has been for seven years. She practices biodynamic agricultural methods on her own thirty-eight-acre farm, as well as teaching and applying the preparations to many properties in the region. Dr. Kempf holds bachelor's degrees in chemistry and German, a master's in radioanalytical chemistry, and a PhD in physical chemistry from Rensselaer Polytechnic Institute. At Brookhaven National Laboratories (BNL), where she worked for twenty years, she focused on nuclear waste management and research, International Atomic Energy Agency safeguards, and arms control negotiations, stationed in Geneva, Switzerland. In 1993, she began working to secure Russian nuclear weapons and bulk plutonium and enriched uranium after the fall of the Berlin Wall. Her last assignment at BNL was to lead a team of nuclear safe-

guards experts charged with technical oversight of a multi-billion dollar U.S. Government Program in collaboration with the Russian Government, to put nuclear security and accounting measures in place in Russia, Ukraine, Kazakhstan and Belarus. With her extensive background, Dr. Kempf will be serving as JPI's Research Director.

In a recent phone conversation Ruth articulated why she joined the JPI Board:

“In 2004, I attended the annual biodynamic conference held that year in Durham, North Carolina, because I was especially anxious to hear what Philip Lyvers, a pork producer in Kentucky might have to say about treating hog manure lagoons. This is a particularly serious problem of ground water and surface water pollution in North Carolina, most especially affecting Pamlico Sound. At the conference, I also met Hugh Courtney at the JPI booth, dis-



covered that we shared an interesting connection, in that his former brother-in-law happened to be someone I had worked with very closely in the effort to safeguard nuclear materials in the former Soviet Union. I then began to look further into biodynamic agriculture as well as embarking upon actually using the preparations on my own land.

"I guess I'm probably the newest person (among board members) involved with JPI, and that all comes from having met Hugh and having started learning about the preps, wanting to apply them, and finding that only JPI could give me educational help, as well as actually providing materials. I do a lot of treatments in my community. I'm willing to serve on this board because I want to see this (using biodynamic preparations) happen. We need it so badly. The earth needs the preparations. We have to make sure the preps exist and that people know about them. I come to this with a very strange background. I've been in national security, in international arms control. I've traveled all over trying to make sure that nuclear materials aren't loose. Then I came to ECU, where I've gotten involved in all kinds of research, much more heavily into the biology (rather than the chemistry). I actually am a physical chemist by training. I'm in the physics department. I am teaching physics, and doing all kinds of other projects there. My real concern and my heart's belief is that we are *way* past time for these treatments (Steiner's biodynamic preparations) to be applied as far and as wide as they can be. It's

all broken. Everybody is arranging deck chairs on the Titanic. If we don't get out there and get these things on the ground, we're all doomed. So, I'm interested in supporting this organization for that reason and I hope to do it as long as I am useful."

So That the Earth May Be Healed – Four Crucial Components

The practice of biodynamic agriculture and use of the biodynamic preparations result in the following:

Sustainability – Conservation of all agricultural resources by the protection, restoration, and building of soils rather than destroying and creating erosion of soils in the production of the food itself, as it is in conventional agricultural practices.

Enrichment – Enriching the life and fertility of the soil.

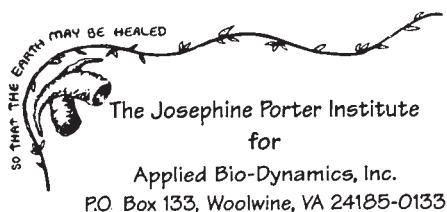
Prevention – Of pollution of the water supply.

Creation – Of a viable future for agriculture dependent on the ability to create a satisfying and fulfilling livelihood for the farmer and gardener.

The Josephine Porter Institute in its mission and vision upholds Rudolf Steiner's belief and profound hope:

“The most important thing is to make the benefits of our agricultural preparations available to the largest possible areas over the entire earth, so that the earth may be healed and the nutritive quality of its produce improved in every respect...”

Rudolf Steiner – as quoted by E. Pfeiffer in the preface to *Agriculture* (Adams translation), p. 7



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