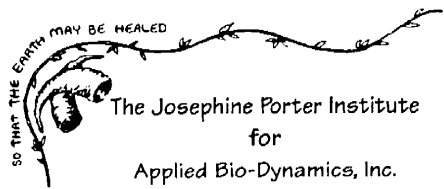


If we farm like this, the result can be nothing other than what is best for human beings and also for animals. In spiritual science, human beings are our standard and our starting point. All our practical suggestions serve the purpose of sustaining the whole human being in the best way possible. That is what distinguishes this kind of study and research from what is customary today.

Rudolf Steiner – Spiritual Foundations for the Renewal of Agriculture, Lecture 4, p. 75

SO THAT THE EARTH MAY BE HEALED

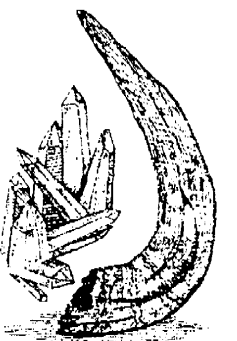


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Applied BIODYNAMICS®



Fall, 2004

Newsletter of the Josephine Porter Institute • Woolwine, Virginia

Issue No. 46

A description of possible future hardships does not induce people to change their way of life. And the change to a self-supporting agricultural life must be preceded by corresponding training and education, for no one can become a farmer or gardener merely by picking up a spade or putting on heavy boots. Another incentive will therefore be needed in order to carry through a permanent agricultural colonization program, thus creating a balance between urban and rural life. What may that incentive be?

The born farmer, with his innate love for the soil and his especial psychical forces connected therewith and also with his professional and traditional background, is able to follow his calling in a way that townsmen returning to the country, or partly self-maintenance seeking suburban dwellers, can mostly experience only after very long practice. The first essential thing is to awaken in them a feeling for the forces of growth, for the eternally creative forces of Nature. The next step is to awaken in them a sense of responsibility towards these forces of growth, towards the health of the soil, of plants, of animals and of men, and also an inner sense of satisfaction in progressing towards this goal.

—E.E. Pfeiffer

Notes

Out of the archives comes one of the best written introductions to biodynamics that has ever been published. I hope you agree that the article in this issue, “Bio-Dynamics: A Short, Practical Introduction” by Dr. Ehrenfried Pfeiffer would be a most important document to make its way back into circulation, not only for the biodynamic community, but the public at large. Whether published nearly fifty years ago or now, Pfeiffer's work is timeless in understanding the importance of the workings of biodynamic farming and dispelling the fertilizer myth of the N-P-K theory. To supplement this article, we have included Justis von Liebig's statement of apology concerning his own theory of N-P-K.

Many requests come through JPI every year seeking advice for the biodynamic method of tree and shrub care. This discussion almost always leads to giving the recipe for making BD tree paste and root dip. So, for your fall and winter tasks of planting and maintenance of trees and shrubs, included in this issue you can now reference these valuable recipes by Dr. Pfeiffer and Hugh Courtney.

Coming soon is the 2004 Biodynamic Farming and Gardening Association's Annual Conference in Durham, North Carolina, to be held November 12–14 at the Durham Armory. See you there.

May the best of autumn days be with you now.

Patricia Smith, Editor

2005 Calendars Available

The Stella Natura 2005 Biodynamic Agricultural Planting Guide and Calendar is now available at JPI for \$14.95 plus postage and handling. The theme of the calendar is “What does Biodynamics have to offer the earth today?”

Three Kings Preparation

Remember to place your order for the Three Kings Preparation. The preparation is \$20.00 plus shipping and handling. Orders must be received by Monday, December 20, 2004.

Front cover: Quotation from Ehrenfried Pfeiffer's *Soil Fertility, Renewal & Preservation*, Lanthorn Press, Sussex, England, 1983, page 29. Cover art is a reversed image from detail of the wood engraving, *Le Semeur*, by Lucien Pissarro after a drawing by Camille Pissarro.

Some recipes add BD#501, powdered stinging nettle, liquid seaweed, whey, diatomaceous earth, lime, as well as numerous other possible helpful ingredients. The perfect tree paste recipe does not yet exist, since everybody who makes it will often add their own interpretation as to what might be the best formula for their particular tree(s) and their particular climatic and environmental conditions. For further reading on tree care and how to apply the tree paste see *The Biodynamic Treatment of Fruit Trees, Berries, and Shrubs** by Ehrenfried Pfeiffer.

Preparing water

Any water obtained from underground should ideally be exposed to sun and starlight for at least twenty-four hours prior to use. If the source is chlorinated, fluoridated city water, forty-eight hours exposure is encouraged. Pond water is acceptable if not stagnant. Freshly collected rainwater is most preferred. The ideal container for exposing water to the sun should be a stainless steel or ceramic crock. A plastic bucket can be used as a last resort, but never use a vessel of aluminum.

For further reading concerning water quality and water as a carrier of light, see Chapter 4 of *Biodynamic Agriculture Introductory Lectures, Volume I** by Alex Podolinsky. For the properties of rainwater, see *From Mammoths to Mediums** by Rudolf Steiner, pp. 216–218.

Fermented recipe - BD #508, *Equisetum arvense*

(Allow 10 to 14 days for the fermentation process.)

Take one unit of shredded horsetail herb. (One unit is about 1½ ounces by weight or about 8 to 10 ounces by volume depending on how finely shredded.) Bring the unit to a boil in one gallon of water and simmer for one full hour. Use a stainless steel or porcelain pot, not an aluminum one. Allow tea to cool and then transfer both the liquid and the shredded herb to a crock or other storage container with a loose fitting lid. Store this in a cool place, e.g. basement, and allow to ferment ten to fourteen days, until the “characteristic smell” develops. Thereafter, strain the remaining herb particles out, transfer the tea into a glass jug, and store it in a cool dark place until ready to use. The fermented tea can be stored six or more months without losing effectiveness. If desired, the strained herbal material can be used to stimulate the next batch to a faster fermentation. For further reading on BD #508, see *Applied Biodynamics*, Summer 1994, Issue No. 8*.

Supplies

The Jiffy Mixer PS-1 is available from JPI for \$48.00 plus shipping. To locate a dealer in your area, contact Jiffy Mixer

Co. Inc. at 1-800-560-2903 or <www.jiffymixer.com>. Bentonite can be obtained through a local ceramics supplier. The other supplies – wire brush with scraper, whitewash brush and the Gamma Seal lid (to close a five-gallon bucket to store the unused portion of tree paste) – can be purchased at hardware stores.

*All publications cited are available from JPI.

Root Dip for Transplanting

Since the fall is one of the best times to transplant, the recipe for Root Dip is also included here for the transplanting of trees and shrubs. While the ingredients are similar to the tree paste, the consistency is what Dr. Pfeiffer states, “a rather fluid paste . . . so that the root is just covered.”¹ His recipe calls for eighty percent clay, twenty percent cow manure, and adding BD #500 to assist with root growth.

A variation to Dr. Pfeiffer's Root Dip is adding enough water or molasses to Hugh Courtney's version of the Tree Paste (see previous page) to give a slurry-like consistency.

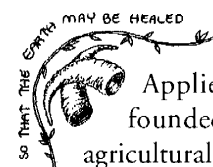
Notes

- 1) Ehrenfried Pfeiffer, *The Biodynamic Treatment of Fruit Trees, Berries, and Shrubs* (Kimberton, PA: Bio-Dynamic Farming and Gardening Association, 1992), 7

Prep Making Seminars No Longer Offered at JPI

The twice-yearly biodynamic preparation making seminars which have been held at JPI for many years now will no longer be offered. Though the seminars have been well received by participants, the commitment of time and funding required to host these prep-making workshops has exceeded the limits of JPI for most of the years that they have been offered. Of course, preparation making will continue at JPI and those seeking alternative learning opportunities here should know that they are still available. Contact JPI to make arrangements and plan to stay for several days or ideally a week in a relaxed-pace environment to broaden your experience with preparation making. A tuition fee will be involved and work scholarships will be available for those with financial hardship. Individuals would be responsible for their own meals and accommodations. Also, as biodynamic regional groups become more involved with this new educational aspect of prep making in North America, specialized training may be needed, whether for groups or individuals. Please contact JPI to work with those learning objectives suitable to your needs.

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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Applied Biodynamics

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A Healing and Protective Treatment – The Biodynamic Tree Paste

Now is an ideal time to prepare for winter application of tree paste as a yearly maintenance treatment for healthy trees and shrubs. This is the version that Dr. Ehrenfried Pfeiffer developed, the tree paste has also helped ailing trees under stress from insects and disease.

From pages 11–12 of *The Biodynamic Treatment of Fruit Trees, Berries and Shrubs* by Dr. Pfeiffer:

The original recipe for the tree paste was: 1/3 sticky clay, 1/3

cow manure, 1/3 fine sand. This mixture is approximate, for the sticking quality varies and the proportions have to be somewhat altered accordingly. As much water is added as is needed so that the paste can be easily applied and still will stick to the tree. To the solution can be added the Preparation 500, the equisetum tea (if needed), an extract of nasturtium plants against aphids, or other ingredients that one wants to apply.

Hugh J. Courtney

Biodynamic Tree Paste - A Simplified Recipe for Beginners

While almost every biodynamic practitioner caring for trees has a favorite tree paste recipe that is uniquely their own, what is presented here is a much simplified version with exact proportions calculated for a few trees.

Equipment and materials:

- 5 or 6 gallon bucket with Gamma Seal lid
- 5 pounds Bentonite clay
- 2 to 2.5 gallons de-chlorinated water (see “Preparing water” on next page)
- 1/2 gallon fermented Equisetum tea (See BD#508 recipe)
- 2 units Pfeiffer BD Field Spray
- Jiffy Mixer Model PS-1
- Power drill with 1/2 inch chuck

Place two gallons of de-chlorinated water in a five or six gallon plastic bucket. Slowly add the Bentonite clay while stirring contents using the Jiffy Mixer attached to the power drill. The Jiffy Mixer will thoroughly mix the water and the clay within twenty minutes while creating minimum splashing. Hand mixing may require several hours.

When approximately half of the Bentonite clay has been added, you may begin to slowly add the Pfeiffer BD Field Spray and the fermented *Equisetum* tea while continuing to stir.

Add remainder of the Bentonite clay until the mixture is quite thick and paste-like. Let the mixture sit for a few hours if possible. Stir again slightly to see if additional water needs to be added. If it is desired to apply the material in a spray form, dilute to desired consistency for your spray equipment. (Possibly twice as much water as originally used or more will be required to apply as a spray.) Three units each of Biodynamic Compound (BC) Preparation and BD #500 may be substituted for the two units of Pfeiffer BD

Field Spray, but will cause clogging problems if application as a spray is intended. Prior to applying tree paste, remove as much loose bark as possible using a wire brush, putty knife or other scraping tool. Use a whitewash brush or heavy-duty rubber gloves to apply to the tree trunk and larger lower limbs. A highly diluted solution of tree paste may be sprayed on entire tree if desired.

Other ingredients sometimes used:

- Castor oil – 1/4 cup or less – as a binding and healing agent
- Linseed oil – 1/4 cup or less – as a binding agent

Ehrenfried E. Pfeiffer

BIO-DYNAMICS: A Short, Practical Introduction

Written by the researcher who brought biodynamics to America, Dr. Ehrenfried Pfeiffer brings clarity and a distinct factual approach to introducing biodynamics to the general public in only a few pages. Though this article was first published nearly fifty years ago, it still encapsulates a refreshing, spirited explanation of why biodynamics works.

What Biodynamic Farming and Gardening stands for

The Biodynamic Farming and Gardening Method has grown and developed, since 1922, on a foundation of advice and instruction given by the late Rudolf Steiner, a philosopher known for his world-view called Anthroposophy (wisdom of man).

The name “Biodynamic” refers to a “working with the energies which create and maintain life.” This is what was meant in the name given it by the first group of farmers inspired by Rudolf Steiner to put the new method to field use as well as practical tests. They decided to call it “Biodynamic.” The term derives from two Greek words “bios” (life) and “dynamic” (energy). The use of the word “method” indicates that one is not dealing merely with the production of another fertilizer, organic though it is, but rather that certain principles are involved which in their practical application secure a healthy soil and healthy plants – which in turn produce healthful food for man and healthy feed for animals.

What are the Biodynamic principles?

- 1) To restore to the soil the organic matter which it needs so badly in order to hold its fertility in the form of the very best humus.
- 2) To restore to the soil a balanced system of functions. This requires our looking at the soil not only as a mixture or aggregation of chemicals, mineral or organic, but as a living system. We speak therefore of a living soil, including here both its microlife and the conditions under which this microlife can be fully established, maintained and increased.
- 3) While the Biodynamic Method does not deny the role, and importance, of the mineral constituents of the soil, especially the so-called fertilizer elements and compounds that include nitrogen, phosphate, potash, lime, magnesium, and the trace minerals, it sponsors the most skillful use of organic matter as the basic factor for soil life. (It is of interest that the importance of the finer elements, the trace minerals, for health and normal growth was actually pointed out by Rudolf Steiner as early as 1924.)

However, the Biodynamic Method is more than just another organic method. It stands for a truly scientific way of producing humus. Not merely the application of “nothing but” organic matter in a more or less decomposed form is intended, but the use of the completely digested form of crude organic matter known as *stabilized, stable or lasting humus*. In this aim the method differs from what is commonly called “organic” farming. In the latter, any collection of any organic matter is apt to be called compost. In the B.D. Method the organic material to be used as a basis for compost is transformed either by means of the so-called Biodynamic Preparations or by means of the Pfeiffer B.D. Compost Starter which is derived from those preparations.

It should not be forgotten that at the time of the creation of the method, during the years 1922–24, and afterwards during the years of experimental and empirical trials (from 1924 to about 1930), agriculture was dominated by the agricultural chemical concept based on Justus von Liebig’s research with regard to the major mineral fertilizer elements. A one-sided situation had developed. Nitrogen, phosphate, potash and lime were considered the only important fertilizers and the trace minerals were ignored. Barnyard manure was looked down upon as an unimportant factor, frequently as a nuisance which had to be disposed of one way or another.

A fundamental change, at least in certain organic circles, in the estimation of the value of manure and compost has taken place since 1930, increasingly since 1940, and of the trace elements since 1950. When properly made BD compost is involved, then both manure and compost are thereby restored to an all-important position in modern agriculture.

4) Since in the Biodynamic Method we speak not only of fertilizer but of the skillful application of all the factors contributing to soil life and health, it is necessary to understand that life is more than just chemicals (inorganic and organic). Life and health depend on the interaction of matter and energies. A plant grows under the influence of light and warmth, that is, energies, and transforms these energies into chemically active energies by way of photosynthesis. A plant consists not only of mineral elements, i.e. inorganic matter – these elements make up only two to five percent (in a few wild plants and weeds up to ten percent) of its substance – but also of organic matter such as protein, carbohydrates, cellulose, starch, all of which derive from the air (carbon dioxide, nitrogen, oxygen) and make up the major

part of the plant mass aside from water, namely 15 to 20 percent. The greater part of the plant mass, some 70 percent or more, consists of water.

5) The interaction of the substantial components and energy factors forms a balanced system. Only when a soil is balanced can a healthy, i.e. well balanced, plant grow and transmit both substance and energy as food. We live not only from substance (matter), we also need energies (life-giving and life maintaining). It is the aim of the Biodynamic Method, or Concept, to establish a system that brings into balance *all* factors which maintain life.

6) Were we to concentrate only on nitrogen, phosphate and potash, we would neglect the important role of biocatalysts (for instance, the trace minerals), of enzymes, growth hormones and other transmitters of energy reactions. As noted previously, already in 1924 Rudolf Steiner had called our attention to the important role of the finer elements, (now called trace elements), in connection with health and proper physiological functioning. Today this is common knowledge. Enzymes and growth substances are likewise important. In the Biodynamic way of treating manure and composts the knowledge of enzymatic, hormone and other factors is included.

7) In order to restore and maintain the balance in a soil a proper crop rotation is necessary. Soil-exhausting crops with heavy demands on fertilizing elements should alternate with neutral or even fertility-restoring crops – on the farm as well as in the garden, and even in the forest.

A soil which has been put to maximum effort, producing corn, potatoes, tomatoes, peppers and cabbage, for instance, (all of them greedy crops), should have a rest period with restorative soil building crops such as all the legumes. Temporary cover with grass and clover pastures helps to improve the humus and nitrogen situation. Exhausting crops and arable cultivation consume humus. The soil must be given time to build it up again. The Pfeiffer BD Field Spray has proven to be an excellent humus builder when applied to cover crops or green manure crops just before they are plowed down.

The Biodynamic Method therefore has emphasized the importance of crop rotation from its very beginnings. Cover crops and green manuring also play an important role in it.

8) The entire environment of a farm or garden is of importance too. It is obvious that polluted air loaded with the breakdown products of industrial and city combustion, gasoline and oil fumes, sulfuric acid, can be detrimental to plant growth. It is less obvious that many other environmental factors also affect the functioning of a biological system. Deforested hillsides are exposed to erosion. The water balance may be destroyed in such cases. The ground water

level has dropped. The results of man-made deserts are only too well-known. To restore the most beneficial environmental conditions (forests, wind protection, water regulation), has been an important aim of the Biodynamic Method from its earliest years. Had the method been accepted before 1930, it can be truly said that no soil conservation agendas would have been needed later on, in 1935 and the following years.

9) The soil is not only a chemical, mineral-organic system, but it also has a physical structure. The maintenance of a crumbly, friable, deep, well-aerated structure is an absolute must if one wants to have a fertile soil. All factors which lead to structural disintegration of the soil (for instance, plowing of a too wet soil, and especially the deep plowing of wet clay soils) and what causes the formation of separating layers (hardpan), are things that have to be known. The Biodynamic Method is very specific about the proper cultivation of the soil in order to avoid structural damage. Many a farmer, even among organic farmers, has defeated his aim by ruining the soil structure through unskillful cultivation.

The practical application of the Biodynamic Method (Is it something for only a privileged few, or can it be used by everyone?)

It has been said by persons outside B.D. circles that the Biodynamic Method represents the cream of organic farming principles. This does not, however, mean that the method is restricted to a small group. It can be applied easily by anyone who cares to improve his handling of manure, composts, soil cultivation and crop rotation.

The steps to be taken:

A) Build, and properly treat, manure and compost piles. Do not waste any organic offal. Do not burn leaves and trash, but compost them. Collect everything. Do not apply crude, undecomposed organic matter to the fields or garden, but make use of the beneficial effects of microlife by first composting manure and all other organic material. Apply – immediately prior to planting or seeding – only predigested material which will not tie down nitrogen, phosphate and other fertilizer elements but will increase their availability. The use of the Biodynamic Compost Preparations or B.D. Starter will greatly help in reaching the goal: good humus.

B) Introduce soil-protecting crop rotations and cover crops.

C) Introduce green manuring, but take care that the green manure crop is properly plowed or disked under without tying down the soil life and nitrogen. In a garden, or wherever feasible, introduce mulching.

D) Improve your soil cultivation practices.

Father of N-P-K Theory Sees the Light

Considered the father of N-P-K chemical agriculture, Justis von Liebig realized later that his theory was not the definitive answer to the fertilizer requirements of the new agriculture of the 1800s. Unfortunately, conventional agriculture has never looked back and still considers the N-P-K fertilizer theory the basis of a “balanced agriculture”. Fortunately Liebig's eloquent apology was recorded:

“I had sinned against the wisdom of our creator, and received just punishment for it. I wanted to improve his handiwork, and in my blindness, I believed that in this wonderful chain of laws, which ties life to the surface of the earth and always keeps it rejuvenated, there might be a link missing that had to be replaced by me – this weak powerless nothing.

“The law, to which my research on the topsoil led me, states, ‘On the outer crust of the earth, under the influence of the sun, organic life shall develop.’ And so, the great master and builder gave the fragments of the earth the ability to attract and hold all these elements necessary to feed plants and further serve animals, like a magnet attracts and holds iron particles, so as no piece be lost. Our master enclosed a second law unto this one, through which the plant-bearing earth becomes an enormous cleansing apparatus for the water. Through this particular ability, the earth removes from the water all substances harmful to humans and animals – all products of decay and putrefaction, of perished plant and animal generations.

“What might justify my actions is the circumstance, that a man is the product of his time, and he is only able to escape the commonly accepted views if a violent pressure urges him to muster all of his strength to struggle free of these chains of error. The opinion, that plants draw

their food from a solution that is formed in the soil through rainwater, was everyone's belief. It was engraved into my mind. This opinion was wrong and the source of my foolish behavior.

“When a chemist makes mistakes in rating agricultural fertilizers, don't be too critical of his errors, because he has had to base his conclusions upon facts which he can't know from his own experience, but rather, has to take from agricultural texts as true and reliable. After I learned the reason why my fertilizers weren't effective in the proper way, I was like a person that received a new life. For along with that, all processes of tillage were now explained as to their natural laws. Now that this principle is known and clear to all eyes, the only thing that remains is the astonishment of why it hadn't been discovered a long time ago. The human spirit, however, is a strange thing; ‘Whatever doesn't fit into the given circle of thinking, doesn't exist.’”

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Reprinted with kind permission by Dr. William Jackson from his book, *Humic, Fulvic and Microbial Balance: Organic Soil Conditioning*, Evergreen, CO: Jackson Research Center, 1993, (pp. ix-x).

E) Establish proper environmental control, wind protection, good drainage, control of the watershed.

Is it a costly procedure to introduce the Biodynamic Method?

It is true that the building of compost piles requires some extra labor. However this can be timed so that it does not interfere with the rush work on the farm. If one considers that by proper handling of manure and compost there will be no losses of soluble nutrients, the labor is well spent. If one considers further that the application rate of treated, well-rotted humus-compost is less than that of fresh manure or crude compost, it is obvious that time otherwise spent in spreading and traveling over the fields is saved at the moment when time counts most.

In the long run the extra labor and expense for composting is well spent and will be returned in savings of nutrients and of time at other phases of the farm and garden work, including even the need of less cultivation since one gets a more friable humus soil.

The fertilizer value of manure and compost can be considerably increased by the Biodynamic Method. Humus-building techniques also will help the fertilizer effects to last longer.

Is it possible to make a farm entirely self-sufficient with regard to fertilizer elements?

(Or does one still need to buy supplements from the outside?)

These questions can be answered only in each specific instance. If there are deficiencies, they must be taken care of. However, the application of the Biodynamic Method enables the farmer to reduce deficiencies to the minimum. Humus deficiency is the most important one, because without humus one is not able to hold and build up a soil. This needs to be taken care of first of all. A soil below 1.5 percent organic matter lives only on a maintenance level. A soil above 2 percent organic matter begins to build up reserves. Only when the level of continuing existence is reached can one tell how much else is needed.

Many times we find hidden reserves, which need only to be made available. In mineralized soils there are no more reserves.

The answer to the above question depends also on the crop rotation. Corn-wheat, corn-wheat, over a long period of years can only exhaust a soil, no matter how much organic matter is applied. Soil conserving or protecting years, between exhausting years, are an absolute necessity. On many biodynamic farms the problem of self-sufficiency has been solved in practice.

Does the application of the Biodynamic Method require special studies or effort?

If somebody is a good practical farmer or gardener he might just as well become a biodynamic farmer or gardener, with the slight added effort indicated above. If he is not up to standard he will have to improve his farming methods. This he must do anyhow if he expects to continue with any degree of success, and he should not think that by using the Biodynamic Method, or for that matter any organic method, he can escape the necessity of improving his general practices.

Expert advice is available through the Bio-Dynamic Farming and Gardening Association, Inc., to show any farmer or gardener how to start improving his practices from the biodynamic point of view. The first step is always to make a survey and to take inventory of your particular situation in order to plan intelligently.

Why, then, is Biodynamic Farming still so little known and practiced?

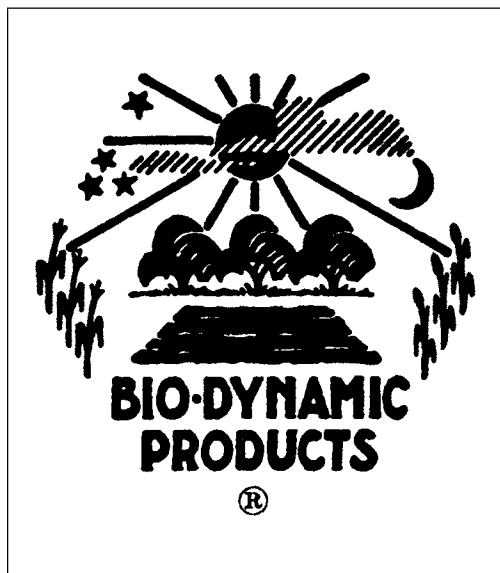
Biodynamic Methods were well known to these who fought them – in the Liebig fertilizer camp. To them they must have appeared a real danger. This was twenty to thirty years ago. Now the understanding for biological balance and organic principles is common knowledge and generally accepted. There is, however, a reason why the Biodynamic Method did not spread. It is based on human nature and is not an agricultural problem. It is about the most difficult thing imaginable for human beings to change old habits, old customs, and (in the problem we are concerned with here) to begin to think in terms of biological balance, soil life and health, rather than of NPK only [See Justis von Liebig's statement on page 7].

The Biodynamic Method has no single recipe to offer, but requires some coordination of farm planning on a long-range program.

Then there is the fact that many farmers think only in terms of quantity yield, not quality. Only such methods are put to use which promise bigger yields.

The yield depends on many factors beyond the control of applied Biodynamics: Water supply, too much rain or drought, seed quality, and above all the farmer himself. What we can do is show that soil improvements have been obtained, that biodynamic farmers have very little trouble with livestock and plant diseases (especially having no breeding or sterility trouble), are not bothered with lodging in wet years, produce crops with maximum protein and vitamin contents. This we know: we get the top quality which can be produced. Also, the quantity yield of a good biodynamic farmer has always stood above the average level.

The introduction of the Biodynamic Method therefore goes hand in hand with a striving for better quality. When there is interest in a better quality of food and feedstuffs, the Biodynamic Method is in its proper place. Health conscious people everywhere have always been asking for, and been appreciative of, biodynamic products.



Does Biodynamic Farming avoid or make unnecessary the use of poisoning sprays against insect pests?

We do not claim that the Biodynamic Method completely counteracts insect pests. This would create a false impression. The important question is not: "Are insect pests present?", but rather, "Do they spread out, and do they produce measurable damage?" A few insects may be present, this is always possible. They may be wind-borne, or move in from infected areas. That is bound to happen occasionally. But we have found, in our thirty years of Biodynamic Farming experience, that they definitely did not spread or do great economic damage.

The question of insect pests is one of biological balance and control. Ultimately, the biodynamic view of pests is that they appear when plants or soil are unhealthy. Poisoning sprays have not solved, nor can they solve, the problem. If the biological balance is restored through humus building, the situation will be entirely different.

Where can one read more about the Biodynamic Method?

There is *Soil Fertility, Renewal and Preservation* (presently out of print) by E. E. Pfeiffer. Also there are the earlier issues of the quarterly, *BIODYNAMICS*, (most of which are

still available), and the current numbers which present recent developments. Please direct inquiries for implementing the use of biodynamic preparations on the Pfeiffer BD products to:

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For membership information to join with others in supporting biodynamic agriculture, contact:

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Further reading

Recommended reading includes the following titles:

Gardening for Life – The Biodynamic Way by Maria Thun, \$26.00

Culture and Horticulture: A Philosophy of Gardening by Wolf D. Storl, \$17.95

Grasp the Nettle by Peter Proctor and Gillian Cole, \$24.95
Specific practical booklets for using biodynamic preparations:

Handbook on Composting and the Biodynamic Preparations
by George Corrin, \$6.00

Using the BD Compost Preparations and Sprays by Ehrenfried Pfeiffer, \$7.50

Grow a Garden and Be Self-Sufficient by Ehrenfried Pfeiffer and Erika Riese, \$10.95

All publications cited are available from JPI.

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