

“It is important to comprehend that manuring and similar practices must consist in providing the soil with a certain degree of vitality.... The nitrogen must be able to spread out in the soil in such a way that life is guided towards certain lines of force...”

Rudolf Steiner – *Spiritual Foundations for the Renewal of Agriculture*, p. 67

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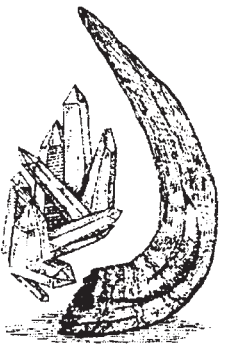
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In stirring, you activate your will.

In the first stage, before you start stirring, your thinking, acting, and willing are one. The more you expose your will to the outside world forming the vortex, paradoxically, your thinking concentrates within itself. With your feeling, you are in between willing (outward) and thinking (inward). A tension is created and polarity manifests. Your feeling is within the polarity. In feeling, you reach at moments to a higher stage of consciousness, of presence of mind. You may get intuitions, sudden insights, and you may begin to feel an identity with the farm. This ‘in between’ helps you understand. So, in stirring the preparations, we are also building up polarities and creating rhythm.

—Manfred Klett quoted in “Working in the Midst of Polarity: Manfred Klett’s Further Reflections on Biodynamics,” by Hunter Francis, page three.



Editor's Note

Nature tells us it is time once again to plant seeds, begin gardens and wake up to new beginnings. By the time you read this newsletter, chances are you will have sprayed your first batch of BD #500 of the season. Hunter Francis' article in this issue, based on his interview with Manfred Klett during his 2008 visit to the U.S., is sure to inspire you, add to your enthusiasm for the preparations work, and bring new insights into what working with these enlivened substances means for the Earth and for our inner growth. I have always learned much from reading Manfred Klett's lectures. He has a way of articulating esoteric aspects of biodynamics, and explaining the preparations in new ways that make much sense and expand understanding. I had many "ah ha" moments as I was reading Hunter's article in this issue, and I think you will too. Please write to us and share any insights and ideas gained from this article (<christy@accessky.net>).

As part of JPI's commitment to advancing regional preparation work, we bring you another update from a regional preparation making group, this time from the folks in Viroqua, Wisconsin. In recent issues, we have published reports from the groups in Kentucky and Idaho, and in a future issue we will have a report on preparation making work in Japan. One of the people shepherding this initia-

tive traveled all the way to JPI last year to attend the Fall Preparation Making Workshop (which is scheduled this year for October 21-25). Through these workshops, JPI teaches people to make their own preparations, and many of the participants have gone on to establish or participate in strong regional preparation making initiatives.

Patricia Smith updated the *Applied Biodynamics* index of back issues, and a copy is inserted into this issue. One of the perks of being an editor for *Applied Biodynamics* is that I received the entire collection of back issues. (Although I have been a subscriber since 1999!) The collection of articles published on the preparations work is of great value and importance to those researching and studying biodynamics and preparations work. Thank you, Patricia, for this useful research tool. (The entire library of sixty-four issues is available for purchase from JPI for \$260.00 plus shipping.) Sixty-four issues later, we have a long list of topics and article ideas yet to pursue – this is a testament to the expansive and inspirational nature of working with the land and the biodynamic preparations.

—Christy Korrow

Blossom Collectors

JPI welcomes your contributions of dandelions, chamomile, yarrow and valerian. The biodynamic preparations could not be made without your efforts in collecting these blossoms. If interested, please call JPI for collecting and drying information.

Applied Biodynamics

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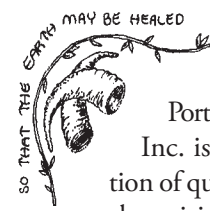
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Mission

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

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bonds within the North Central Region. In the last few years, this networking reached out to the whole country. For several years, Parker organized a summer regional gathering at Angelic Organics in northern Illinois. Brian used his skills to establish relationships with slaughterhouses to obtain horns for preparation making.

The interconnections in our region bear fruit when we can collaborate with the Zinniker Farm, Angelic Organics, Michael Fields Agricultural Institute, and individuals. Together we sponsored speakers, sharing the expense and the benefits of presentations occurring in different places within our region. We all benefit from coming together as family farmers and those from intentional communities like Camphill Village Minnesota, Philadelphia Community Farm, and Community Homestead. We experience the strength that comes from the connections between inter-

ested city dwellers and the various individuals and groups working with biodynamics in our region.

*To read an interview with Ruth Zinniker, please see *Applied Biodynamics* Issue No. 32.

Marcia Halligan grew up on a farm in southern Minnesota on the prairie. Steven Adams grew up in Menasha, Wisconsin near the shores of Lake Winnebago. They both worked in co-ops in Minneapolis before purchasing their farm in southwestern Wisconsin in 1985. Over the years, they've grown numerous kinds of crops. Marcia managed the Viroqua Farmers Market for a number of years and the couple sold produce there. Most years, students from Waldorf Schools come to their farm to participate in farming activities. Marcia and Steven grow medicinal herbs for True Botanica and seed crops for Turtle Tree Seeds. They live in an interesting house constructed with whole trees for supports and dimensional lumber, mostly from their own land.

Schubert, Brahms and... Biodynamics, A New CD *Schubert and Brahms [performed by] Brigitte Armenier, piano* With text "Between Music and Biodynamic Agriculture"

Reviewed by Christy Korrow

A portion of the proceeds from the sale of a new CD by French pianist Brigitte Armenier are donated to "Institutions for Biodynamic Agriculture." With this gesture, the artist makes a statement which reflects her relationship to both music and agriculture. A graduate of the Music Conservatory of Avignon, and the wife of Philippe Armenier, a name known in the U.S. biodynamic viticulture community as a well-respected vineyard consultant, the couple converted the Armenier family vineyard in France to biodynamics nearly twenty years ago.

Enclosed in the CD is a thirty-page booklet where Ms. Armenier articulates the connection between music and biodynamics via an interview by Charles Sepos, Doctor of Musical Arts, award-winning composer and esteemed music educator. Both music and agriculture live in the realm of culture and art, both have been subjected to, and diminished by, the mechanistic outlook that dominates our way of thinking. Ms. Armenier begins her analysis by asking us to understand that the essence of music exists in a living time sequence, one which is not mechanical, but lives in a qualitative transitional sphere. From there she deepens her theory in a truly wonderful and compelling way, weaving together music theory, agricultural science, Greek mythology, and a Goethean outlook. She specifically re-

lates the ideas to the musical selections she performs on the CD, composed by Brahms (1833-1897) and Schubert (1797-1828).

Toward the end of the interview, she focuses specifically on biodynamic farming and the nine biodynamic preparations, showing relationships between these, and sacred geometry, the mystical significance of the number nine, and the structure of music. Some of the concepts she presents will be new to those not familiar with music theory, but nevertheless, if you have an interest in biodynamics, there is enough food for thought in the interview to carry one through the unfamiliar material.

As Ms. Armenier states, music and agriculture are kindred spirits. Perhaps this is why certain experiments have shown that music affects plant growth (documented in *The Secret Life of Plants*). Play this music after a long day in the field, and you will feel quieted and relaxed. Perhaps you will even be inspired to do as I did, a bit of research on the lives and music of Brahms and Schubert, two influential composers. Thank you, Ms. Armenier, for refining our cultural sensibilities and enlightening our outlook.

The CD is available from JPI for \$14.99 plus shipping and handling.



Children look on as the grown-ups dig up BD #500

the group. Anyone can attend these meetings. Over the years, the participation in the Apical Meristem group and the group at large ebbs and flows. Some members leave the core group as changes occur in their lives.

Within the last year, Roland Ulrich and his partner, Tybel Miller, moved to Philadelphia Community Farm near Osceola, Wisconsin. Roland, who came from Europe, brings his skills as one of the most highly trained chromatographers in the world. Our group arranged with him to create chromatograms of our preparations to help us evaluate their

quality. We're pleased that he was willing to work with us in this way. In the spring of 2008, Roland made chromas of all the biodynamic preparations our group made in 2007 to help us determine their quality.

Two core members of our group brought excellent leadership capabilities over the years. Brian Wickert and Parker Forsell both carry a strong sense of the importance of the social realm. Brian began as a local networker seeking to strengthen our local group. Parker became active focusing on regional interconnections and helped forge strong

Working in the Midst of Polarity: Manfred Klett's Further Reflections on Biodynamics

Hunter Francis

This article is a follow-up to my interview with Dr. Manfred Klett, published in the Fall 2008 edition of Applied Biodynamics. Dr. Klett is a renowned leader in the worldwide biodynamic movement, a steward of Dottenfelderhof Biodynamic Farm in Germany, and was, for many years, head of the Agricultural Section of the School of Spiritual Science at the Goetheanum in Dornach, Switzerland. This article includes excerpts taken from the lectures he gave at Rudolf Steiner College in Fair Oaks, California, in March 2008. As in my previous article, the quotations below are from Dr. Klett – as are all of the ideas included, which I hope I have stated accurately.

During the three-day conference last March, Dr. Klett spoke on a wide range of topics, starting with the importance of “manuring” in agriculture. I believe he was using this term in a general sense, referring to humankind’s role in returning fertility to soils through the application of organic matter – particularly manure from animals – in a variety of forms. This includes the application of manure itself, compost, and/or the biodynamic preparations. He spoke of man’s special contribution in revitalizing the earth in this way, and made the insightful observation that by so doing, we place ourselves in the midst of numerous polarities in nature. He helped to elucidate these, with a special focus on the polarities represented by the two fundamental preparations in biodynamics, horn manure (BD #500) and horn silica (BD #501).

“Life fertilizes life... You can stimulate this process through manuring.” Interestingly, Dr. Klett maintains ma-

nuring as we know it was not practiced consciously until relatively late in humankind’s evolution. “Prior to the birth of the farm organism in the ninth century, people were not in the habit of manuring. It was really in the ninth century that animal husbandry and arable work merged. In ancient Egypt, and in many of the pre-Christian cultures, fertility was brought into fields by the flooding of rivers [such as the Nile]. These cultures developed in river valleys. Water was the carrier of fertility.” He points out that in some traditional cultures, animal manure is still collected for fuel, rather than being returned to the earth. Furthermore, he characterizes modern agriculture as being retrogressive because much of its fertility is delivered in solution. “In modern times, we have reverted to this situation [of fertilizing through water] in an unwholesome way through the transformation of atmospheric nitrogen gas into nitrogen salt, bypassing the natural living processes.” He goes on to explain that this form of nitrogen “readily dissolves in



Manfred Klett at Rudolf Steiner College

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*)

water and activates it.” Therefore, as an artificial fertilizer, it displays watery qualities, not earthly ones. Thus, we do not enliven the earth.

While appropriate for the former Egyptians, who were guided by ancient mystery wisdom in their irrigation practices, and “who had to rely on the annual river flooding and the sedimentation of suspended humus and clay particles, we, on the other hand, have revived this practice in a decadent way by fertilizing the earth with easily dissolving salts. In this, we are driven by our egotism in order to maximize profits.” In the end, we treat the earth as a mere substrate (with hydroponics as an extreme example, where soil is rendered irrelevant). “This has had disastrous consequences in modern times, particularly for the Third World.” The earth is losing its natural fertility rapidly.

As an aside, I found it more than coincidental to recollect the words of Lady Eve Balfour, one of the pioneers of organic agriculture: “Modern farming is the practice of making water stand upright!” Dr. Klett’s comments also make us reflect more deeply on an adage first articulated in biodynamic agriculture, and now commonly used in organic agriculture, “Feed the soil, not the plant.”

Dr. Klett pointed to the year 1899 as a “crossroads.” At this time, he believes, materialism had developed to its utmost conceptually – our spiritual origins had become removed from our consciousness to the greatest degree. At the same time, a new possibility for freedom emerged. In essence, and this idea runs through much of Steiner’s work, we then had the choice of further pursuing materialism in an egotistic, “arbitrary” way, or to work through spiritual science (as a healthy extension of science) to begin to reconnect the material to the spiritual. This was Steiner’s goal. Of course, much of humanity took the former path.

In biodynamics, we fertilize time processes so that something can evolve.

It wasn’t long before we became capable of splitting the atom, thus making us capable of “destroying the world.” Dr. Klett maintains that Steiner’s Agricultural Course was given to balance out this destructive force. Biodynamics is a “technology in the living sphere,” and through it, “Steiner revealed the enormously beneficial forces of the preparations. The development of nuclear science was the exact counterpart to the development of the preparations. Both involve tiny amounts of substance, and both deliver tremendous forces. But the preparations are derived from the living sphere. Their forces don’t explode at once in space, they evolve gradually in time... In biodynamics, we fertilize time processes so that something can evolve.”

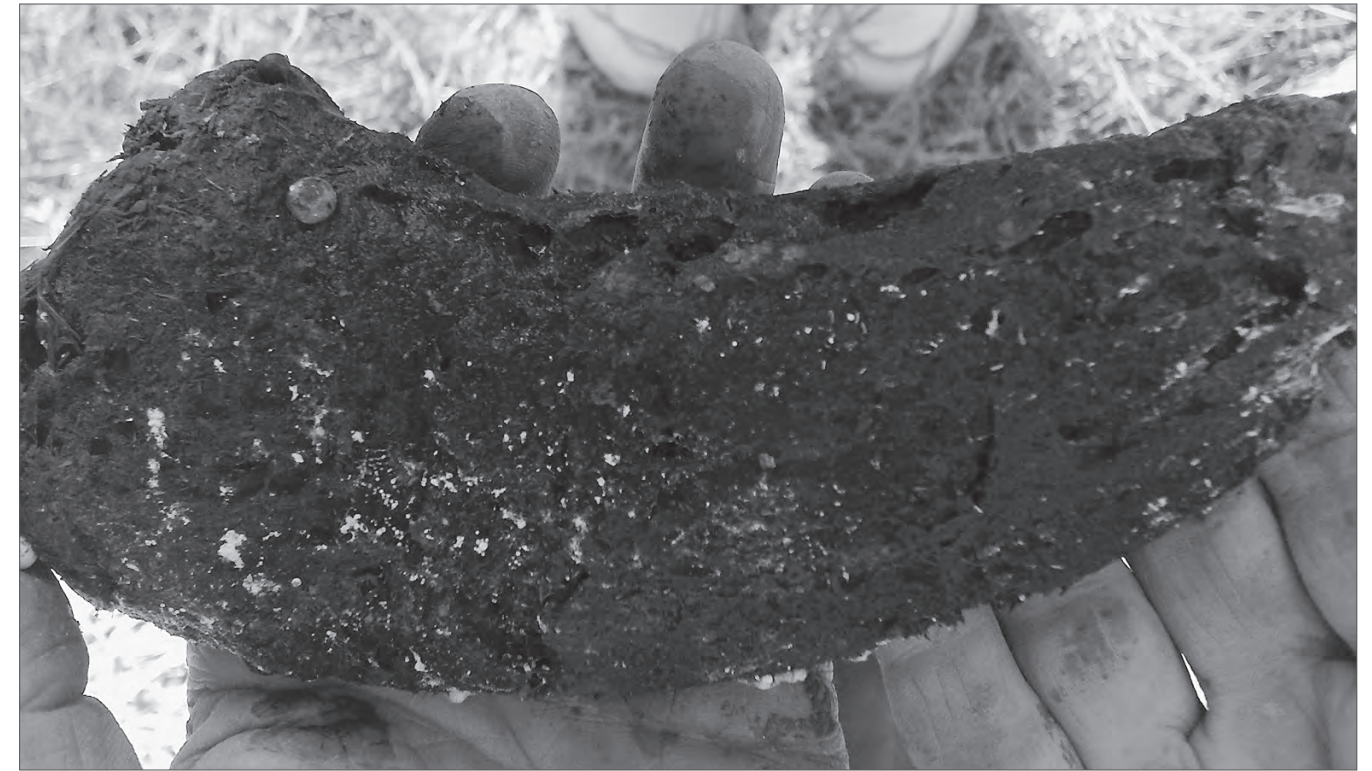
Unlike our modern attitude in science and farming, biodynamics requires a personal relationship to nature. It demands a knowledge of, or at least an openness to, the inner being of living things. Biodynamics is “the creation of Rudolf Steiner, as a scientist of the invisible, who did spiritual research. The secret of matter can only be resolved through spiritual science.” Further, “the biodynamic preparations are the kernel of biodynamic farming because through them we introduce something new into nature that is not normally there. Through biodynamics, man helps nature, a farm, a piece of earth, into wholeness as an organism. Thus, bio-

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dynamics is not just to produce healthy food, but to help spiritualize the earth. We are creating the farm as an organism. We are helping the earth to evolve. This work allows us to participate with nature, to have an inner relationship, rather than just having an onlooker consciousness.”

When it comes to the cycling of nutrients, “Rudolf Steiner said that manuring is such a deep mystery, that only spiritual science can shed light on the deeper meaning of it.” Even modern science understands the high degree of complexity in the chemistry of soil organic matter, both in terms of structure and diversity. Dr. Klett stressed manure’s ability to stimulate diversity in plant communities. “When a field is dressed with synthetic nitrogen, first the herbs disappear, then the clovers. Diversity is lost. Also, added nitrogen suppresses nitrogen fixation. Now, if you dress the field with manure, the diversity reappears.”

Dr. Klett went on to speak about the process by which plant and animal residues are broken down to create humus, the backbone of soil carbon. He explains, “The breakdown process tends to end in complete mineralization. This must by all means be avoided. Good composting means to slow down decomposition, and thereby activate humus formation.” He explained how, in the composting cycle, the organic matter goes through four processes: heating (related to warmth), aeration (related to air and the release of steam and gases), moistening (related to water and the release of sap from cells), and turning to earth (related to earth and stabilization through humification). He differentiated between two types of humus, “*Nahr*” humus (referring to the German word for “nutrition,” i.e., for soil biota) and permanent humus (consisting of compounds which are more difficult for microbes to break down and use as a



Freshly dug BD #500

Steven attended Walter’s “Take Your Farm to School” class at Michael Fields Agricultural Institute in December of 1994. When Steven mentioned to Walter that he would like to study Steiner’s agricultural lectures, Walter recommended that Steven form a group to study them together.

Consequently, Steven advertised the study group at Pleasant Ridge Waldorf School, and we began meeting in the winter of 1995. Study groups continued for several winters. Some participants did not stay connected to biodynamics, but a core group of interested people coalesced. The Viroqua Biodynamic Group started making preparations as a group in 1998. In the first year, we only made barrel compost (a.k.a. Biodynamic Compound Preparation) and horn manure. Today, the group makes all the compost preparations (BD #502–507), horn manure (BD #500), horn silica (BD #501) and *Equisetum arvense* (BD #508), as well as the Three Kings Preparation. Our group produces more of the compost preparations than we use. We hope that preparation makers around the country will address the question of how these preps can be distributed to those who need them.

In the late 1990s, the study group recruited Walter Goldstein and Clare Hall to give a mini-conference in Viroqua. That started our propensity to host conferences at various times. Over the years, we’ve hosted various workshops, conferences and gatherings. Starting in January of 2003, we hosted the North Central Regional Biodynamic Gath-

ering. In 2008, we hosted the National Biodynamic Preparation makers Conference and keynote speaker Manfred Klett. We’ve learned that we receive a lot of support within our community and can draw on expertise that helps different people assume various roles in organizing an overall event. The Viroqua Biodynamic Group sponsors three events each year. In the spring and fall, we make preparations together as a group. Each January, we host the North Central Region Biodynamic Gathering. When opportunities arise to bring other speakers here, we welcome them with gratitude.

During the intervening years, our group continues to practice the various skills in making preparations. We’ve worked on developing our record keeping, and Brian Wickert keeps the notebook. We seek advice from Hugh Courtney, Ruth Zinniker, Dewane Morgan, and any other preparation makers who pass through our area. In the last few years, we’ve begun to offer cow horns and preparations for sale to other biodynamic farmers and gardeners in our region. Two members of our group took the JPI Fall Preparation-Making Course, and we hope to send others there in the future.

We’ve discovered that a few core people regularly come to preparation-making days, but we also see a steady stream of newcomers. At some point, we decided that our group needed some stabilizing structure. So, we formed an Apical Meristem group, a loose association of core members who meet mostly in the winter to discuss, decide, and plan for

the air, and eventually it unfolds its effectiveness in and through the element of warmth while being sprayed on the earth and plant. Through the gateway of warmth, the two preparations radiate into the adjoining etheric world, releasing enormous forces, which organize and individualize healthy plant growth and fruit formation.”

“Hand-stirring allows you to build a personal relationship with biodynamics. Only in this way can you truly learn to understand the preparations. Each person has his own ego nature, therefore his own will rhythm. In stirring, you activate your will. In the first stage, before you start stirring, your thinking, acting, and willing are one. The more you expose your will to the outside world forming the vortex, paradoxically, your thinking concentrates within itself. With your feeling, you are in between willing (outward) and thinking (inward). A tension is created and polarity manifests. Your feeling is within the polarity. In feeling, you reach at moments to a higher stage of consciousness, of presence of mind. You may get intuitions, sudden insights, and you may begin to feel an identity with the farm. This ‘in between’ helps you understand. So, in stirring the preparations, we are also building up polarities and creating rhythm.”

Dr. Klett says he decided to become a biodynamic farmer when he realized “we can, in biodynamic farming and gardening, implant our ‘inside’, on the ‘outside’ world.” He recommends that young farmers study Steiner’s *Agriculture Course* word by word. “Spiritual insights are transmitted through it. The tremendous enthusiasm of the pioneers of biodynamics has vanished. We now have to enthuse ourselves through our own efforts of understanding.” And, what we learn we must teach to others.

Viroqua Biodynamic Group: Preparation Making in Southwestern Wisconsin

Marcia Halligan and Steven Adams

In searching for a way to improve our soil and learn about compost making, Steven listened to a tape from an early Upper Midwest Organic Conference presentation by Claire Hall of Wabasha, Minnesota. Her presentation included information about biodynamics and working with preparations. Then Steven called Claire and her partner, Don Jason, for guidance about how to work with the preparations. Claire encouraged us to call Hugh Courtney to order preparations. He also gave us good counsel. That first spring of 1994, we placed a single horn of silica (BD #501)

“A farmer should more and more be able to teach his spiritual motivation to people – farmers as well as city people. He must educate people on the impulse so they say, ‘It’s our impulse too.’”

This sharing of understanding will go far beyond agricultural wisdom and practice. “Biodynamics has the task of building a new social order [e.g., restructuring property ownership]. Land must not have a price. It spoils the whole social order. New legal forms must arise. The legal sphere must work to bring order to ownership and capital.... In the economic sphere, competition must be overcome. This is the future of economics – an attitude of collaboration and brotherhood. America has this task. In America, there is a natural faculty to say, ‘How can I help you?’”

Finally, ours is an evolutionary task. “The earth and the kingdoms of nature have come about for the sake of the becoming of man, but we have left them behind. Now, we have developed self-consciousness, and our task is to take what we have learned, and use this gift to merge the above, the cosmos, and below, the earth, and to establish a spiritual identity between ourselves and our earthly environment. In this, we are exercising our freedom. In olden times, a farmer was bound by nature, and only knew how to respond to the laws of nature. The new farmer must become a conscious actor, not a reactor. No outside law presses you to work with the preparations. The more we do it out of spiritual insight, the more we are able to do it out of personal freedom. The preparations are a gift to our freedom sphere, and Steiner opened the gateway for us to realize this sphere.... Don’t bind yourself to a strict system. Be open to intuitions. Walk the farm. Listen, and then rely on your own judgment.”

in the ground. Over the course of that first growing season, Steven repeatedly called Clare and Don for ongoing advice and encouragement in using the preparations.

Meanwhile, Steven contacted Walter Goldstein to talk about improving our soil. Walter invited Steven to stay at his house to be able to attend the Zinniker preparation gathering in September, hosted by Ruth and Dick Zinniker. At the Zinniker’s, Steven met Ruth and Dick, and participated in their preparation making activities. Back home, we put some compost preparations in the ground.*

food source). Dr. Klett pointed out, “Nitrogen can only be held stably in soil in the form of humus.” The creation of humus through composting is a long-lasting gift of nature. “Humus is unique; it’s a new creation. It is a sort of midway point between the plant and mineral kingdoms. Its formation is assisted through the activity of microbes, but mainly by the soil animals like insects, earthworms, etc. Humus consists of the same elements as protein. It is the protein of the living earth – and also the memory of the earth. A plant is, in form and substance, the achievement of one year. It is then kept in the earth’s memory in the form of humus for possibly hundreds of years.” It is interesting to note similarity between the word “humus” and “human” in English.

“In biodynamics, there are three aspects of manuring: what comes from the plant, what comes from the animal, and all that comes from man.” Dr. Klett explained how, in nature, roots feed soil microorganisms with plant metabolites such as sugars, proteins, enzymes, and acids secreted through root hairs. “Acids also help dissolve minerals in the soil, which are important for plant nutrition. Root hairs actually merge with mineral substances. Manuring helps stimulate this process and the plant’s ability to excrete and take in salt. In a way, you are educating the plant. Manuring educates the plant. Without it, plants get weak.” The addition of synthetic nitrogen thus becomes an addictive cycle. “Nitrogen spoils the plant!” Thus, through the secretion of living substances by the root, the formation of a coat of symbiotic microbes and fungi occurs, activating the breakdown of organic matter around the roots. The plant world helps nourish the soil in its own way.

Animals, of course, also contribute to the humus content of the soil through their residues, but they provide something further. “An animal is an ensouled being. It has the faculty to sense the world and react. The tragedy of animals is that their soul is entirely body-bound. They have no ego being, and therefore no freedom of action. To understand an animal, you must observe what it does, the milieu it acts in. There, it finds what corresponds to its soul being. Animals fertilize the world through giving a surplus of their being. They add something. Even a bird adds something through its song. Earthworms are totally unselfish in building an unsurpassed soil structure. Concerning animals, we must say, ‘soul life fertilizes soil life.’ An ensouled being produces a manure that’s a carrier of soul forces. Wildlife also participates in this contribution. We must take care to protect it.”

As might be expected, Dr. Klett reflected on the special importance of ruminants in providing fertility. “Within the realm of nature, the cow produces the highest quality

manure. This has to do with its highly developed soul being, and correspondingly with the nature of its powerful digestive system. As a cow chews from one side of its mouth to the other, it secretes enormous amounts of saliva. While chewing, cows concentrate intensely. Just look at their eyes. They develop great awareness through taste and smell. In tasting, a cow actually analyzes the substances and forces that have built the organic composition of her food. Thereby she tastes the formative qualities of the year, the field, etc. Her special faculty is to perceive the ‘in between’ of matter and forces. The earth delivers matter, the cosmos delivers forces. The perceptive power of the cow concentrates on the analysis of the composition of plant life. The cow analyzes your farm – that’s why it’s best if the fodder is produced at home.”

“In humans, life forces are a basis for thinking. As you think, you consume life forces. What you think is at work in the outside world. Forces die into our consciousness and appear as thought. We transform force into thought through our ego. But the cow is a mere soul being. The cow develops perception, has images – enormous imaginations

The creation of humus through composting is a long-lasting gift of nature.

arise – that come and go. Klett pointed out that the Greek goddess, Athena, had cow eyes, almost as a cow being. She too, was open to immense forces. Yet, a cow doesn’t have an incarnated ego, as humans have. She’s a soul being, so she can’t keep the images. Lacking an ego, she has no memory. She can’t use the results of her perceptions for herself, so they are incorporated into the dung and given away... in her manure! All the cow’s richness of perception and analysis end in manure. The cow fertilizes as powerfully as she does due to her soul forces.”

When it comes to humans, we are not able to contribute in the same way. “The excretions of man are an ‘anti-fertilizer,’ because all of the forces have been consumed by our spiritual soul being. Therefore, it has no fertilizing effect. Well, actually, experiments have been conducted which show that human manure works like mineral nitrogen. Instead, man’s true contribution is the working spirit of man. That is how we fertilize. The key is one’s attitude in working the land. Transform what you think and feel in your daily work! Even a conventional farmer with great care and devotion becomes a great fertilizer. We fertilize the earth through our work being penetrated and carried by our thinking and feeling. The guiding idea is: a farm comes into its essential being if it can be conceived of as an individuality. We must carry the notion of its self-containedness.”

Thus, in fertilizing, again, something more occurs than the extraction of chemical nutrients. Plants, animals, and humans all have their own contributions. "It is commonly understood that fertility must be replaced because crops take nutrients out of the field when they are harvested and carried away. What is not recognized by modern science is that they also carry away forces, and these forces must be replenished." Herein lies much of the importance of the biodynamic preparations, and in both the making and application of them, a certain balancing of energies occurs. Dr. Klett believes understanding polarities is essential to understanding biodynamics and its use of the preparations.

"Ultimately, all rhythms arise from the earth/cosmos polarity, and the two foundational preparations, horn manure and horn silica, reflect this." Examples of the duality created by poles are plentiful: sun/moon, sky/earth, day/night, incarnation/exarnation. Even within ourselves, we experience the polarities of sympathy/antipathy and con-

The key is one's attitude in working the land. Transform what you think and feel in your daily work! Even a conventional farmer with great care and devotion becomes a great fertilizer. We fertilize the earth through our work being penetrated and carried by our thinking and feeling.

sciousness/unconsciousness. Poles such as these relate to one another and interweave. "From that interweaving, something new emerges – a kind of synthesis. When polarities interweave, a rhythm arises." Thus are derived the endless rhythms we encounter in the seasons, the tides, and our emotions. Rhythms are inherent to living beings. Part of understanding life is to "penetrate the inner workings of the polarities that give rise to the rhythmic transformations of life – of dying and becoming." This is certainly true of farmers, who are so intimately engaged with living beings, and particularly true of biodynamic practitioners.

Farmers are at the crux of numerous polarities, and Dr. Klett talked at length to show how the biodynamic preparations play a pivotal role in mediating them. "The first step of preparations work is that we combine two poles. We have to engage our will to perform this. We ourselves create new polarities. Whenever we have a polarity, we can step in the middle of it and exert our will." In the case of horn manure (BD #500), we take two very dissimilar things, from opposite ends of the cow – the manure (substance), and the horn (form) – and we combine them. Dr. Klett began by relating the significance of the cow horn.

"The cow horn is at the top of the head. It is a principle of form. The horn encases bone, and air passages of the sinuses pass right up into it. An enormous amount of blood

streams into the horn, far more than is necessary to maintain the strongly reduced metabolic processes. The horn is like a sense organ. It consists of the highly condensed four elements of the physical realm: warmth, air, water (blood), and earthly solid." Bull horns are different, consisting of spongy bone, without a hollow. This is related to their wild passion. The bull is easily overwhelmed by the blood streaming up into the head from the metabolic pole. "The cow horn, permeated with life, creates a barrier to the outside world, and rays the forces which the blood carries up from the metabolic pole back inside her body. Interestingly, the horn begins to develop as soon as the calf begins to take in solid food. The horn is an organ of perception, a sense organ directed toward the digestive pole. It senses the cosmic forces while digesting the condensed cosmos in plant life... It is criminal to dehorn cows because we are depriving them of a sense organ. Dehorned cows do not produce the same quality of manure, and tend to be quite dull."

Into this highly structured "dead sheath organ," the horn – we introduce something from the culmination of the cow's digestive process, the dung, a substance which is amorphous (without form). "This creates a polarity. Both horn and manure are the gift of the cow. Man stands in between and unites the two. The relationship between the two is revealed by spiritual science." Then, the horn is buried in the fall into the earth and is there exposed over winter to forces that stream in from the far cosmos. They are mainly crystallization forces. "The amorphous is buried in a time when strong organizing forces are at work. Ideally, it is best if the buried horn undergoes a freeze. Freezing is a crystallizing, organizing process, thus creating another polarity. In the wintertime, the earth is open to influences from the farthest reaches of the universe – the zodiac and the outer planets. They become focused on the dung. Being dug up in spring, the horn manure is a completely transformed substance, a new creation that doesn't appear in nature. The organic becomes a carrier of crystallized forces."

The case of horn silica (BD #501) is a polar opposite. "A crystal is a form with a highly organized inner structure. The silica crystal is the outer sense of the earthly realm. It is a sense organ in the earth for cosmic forces. In humans, it appears at surfaces, as in hair, skin, and mucous. As a grain ripens, silica appears at the periphery of stem, leaf, and ears.



Harald Hoven grinding quartz for BD #501

Silica relates to the forces of light. It reflects; it's non-egoistic. Lime, on the other hand, absorbs everything. It draws everything to itself. In making the horn silica preparation, we take a silica crystal and crush it into a flourlike state. In the process of crushing it, its structure is destroyed. It is artificially made into an almost amorphous substance which maintains what it reflects. It is then placed as a powder into the horn, the form organ, and buried in the summer, a time of warmth and active metabolic forces. So again, you have a reversing of a natural process. A winter-like, crystallized substance is transformed into an almost amorphous state and is exposed to summer forces. It is exposed to the rhythm of the seasons in the late spring, summer, and early fall, and again a new substance is born."

In reflecting on the use of the two preparations, Dr. Klett referred to the threefoldness of the human body. "The head represents thinking. Thinking is the 'dead pole' of the body. It must be nourished. When we think a thought, forces die in the head. The thoracic is the area of rhythmic feeling. And the belly and the limbs constitute the metabolic pole – will, digestion, and movement. The metabolic system nourishes the others." He continues, "The earth reflects this threefoldness, yet in an upside-down way. Here, the belly is above the earth surface. Grains and fruits that develop in this region feed the metabolic in humans and animals. Horn silica is sprayed here – during the process of vegetative growth and the phase of ripening. It opens the plant towards the directly working forces of the cosmos. BD #501 fertilizes the

capacity of the plant to absorb sunlight; it is a fertilizer for the metabolic pole, the realm above the earth."

"Roots, on the other hand, are like sense organs of the plant for cosmic forces that work indirectly via the earth. They reach down into the mineral world, down below the earth into what could be called the 'head pole,' and in fact, as fruit formation takes place in the root, they nourish our head. A root is a type of eye. It perceives, as it were, the cosmic forces that are reflected by the minerals in the earth and thus stream into the roots. The soil surface is a type of diaphragm. Leafy greens, in rhythmic sequence, are found here, and they, like spinach, feed the middle section of man – the rhythmic. Leaves and shoots are also the proper food for cows. The cow, as a ruminant, is not made to be fed concentrates. Horn manure (BD #500) is sprayed on the earth, preferably before sowing, and fertilizes the realm below the soil, the root sphere. Horn manure could be considered a 'head' fertilizer in this sense. So you have a polarity created. BD #500 feeds the head of the earth which is underground, BD #501 feeds the body, i.e., above the ground – the metabolic pole." Through the work of the preparations, we are energizing a polarity as it were, and this manifests in vitality of the agricultural organism. Deeper than that, Dr. Klett says, "Through the preparations, we actively introduce evolutionary forces into earth and cosmos. Animals cannot do this through their fertilization of the earth. This is our spiritual task, to form this union of polarities within the balancing middle sphere of the diaphragm, the soil."

Stir for one hour – this corresponds to the rhythm of human will. By the work of your own ego, you bring in the sun.

Dr. Klett stressed the importance of stirring the preparations by hand, and offered additional perspectives in his lectures. "Stirring the preparations should be done in hand-warm rainwater. Stir for one hour – this corresponds to the rhythm of human will. By the work of your own ego, you bring in the sun. In the vortex, the body of water splits apart, forming almost infinitely thin layers caused by different speeds. Forming thus an infinite plane of sensitivity, we open the element of water towards the element of air. We lift it. In stirring we create a polarity of time and space – stillness and movement. We are working at the boundary of space and time. In stirring, we are transmitting a solid state of the preparation into a liquid state. The cosmic forces bound in the preparation are going into the water. You take a solid, transmit it into a liquid, dissolve it into droplets in