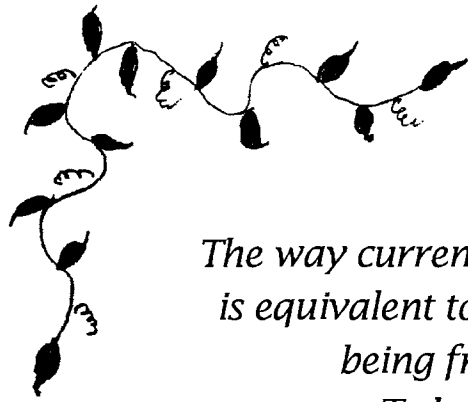




The way current science deals with the realities of agriculture is equivalent to trying to reconstruct the totality of a human being from just a little finger and an earlobe.

Today there is an absolutely urgent need to counteract this tendency with a genuine science that can encompass the large-scale cosmic interrelationships.

—R. Steiner, *Spiritual Foundations for the Renewal of Agriculture*, p. 61

SO THAT THE EARTH MAY BE HEALED

The Josephine Porter Institute
for
Applied Bio-Dynamics, Inc.
P.O. Box 133, Woolwine, VA 24185-0133



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Double Issue, Nos. 18/19
with an accompanying
Special Report

*You my heavenly friend, my Angel,
You who have accompanied me to earth and who will accompany me
Through the gates of death into the spirit-homeland of my soul;
You, you who know the paths since ancient times,
Do not cease to enlighten me, to strengthen me, to counsel me,
So that from the weaving fires of fate I may emerge
A stronger vessel of destiny,
And more and more may learn to fill myself
With the meaning of God's world-goals.*

A Guardian Angel Meditation from Rudolf Steiner
(first published in the German medical journal *Beiträge zu
einer Erweiterung der Heilkunst*, Nov./Dec. 1984, p. 247;
translated by M.I. Gardner)

MOON-SATURN OCCULTATION ALERT

by Hugh J. Courtney

This year, when examining the several calendars I use in my effort to understand the numerous cosmic rhythms that may affect things grown biodynamically, one highly unique event (or more accurately, series of events) caught my immediate attention. I use at least four different calendars: *Stella Natura*, *Working with the Stars* by Maria Thun, *Christian*

Star Calendar by Powell and Brinch, and Jim Maynard's *Celestial Influences*. Each of the calendars I use has a value in one respect or another, but it is the last calendar that most adequately identifies the phenomenon of occultation. An occultation occurs when one body of our solar system conjoins (shares the same celestial longitude or forms a conjunction with) another body in such a way that the first one hides ("occults") the second from view as seen from the Earth. When the Moon and Sun conjoin in this manner we have a solar eclipse. (A Lunar eclipse occurs when the Moon and Sun are in opposition to each other with the Earth directly between and shielding the Moon from the Sun's rays to at least some extent resulting in a partial or total eclipse.)

FROM THE EDITOR

This issue was intended to be a double issue—and so it is—but one of the articles grew to such an extent that we finally decided to enclose it as a separately bound report (“Some Guidelines for Experimentation in Biodynamic Agriculture”). Also enclosed with this mailing is the new JPI product catalog with our new prices. The article “Fiscal Reality Revisited” explains why a price increase was necessary at this time in JPI’s biography. On the other hand, we are also introducing a modest “scholarship” program to encourage people to deepen their relationship to the preparations by means of systematic observations or experiments (see “Confidence, Experimentation, and JPI ‘Prep Scholarships’”).

Our lead article concerns an unusual series of celestial events and a prediction about their possible effects, as well as advice on how to use the BD preps to compensate for these effects (“Moon-Saturn Occultation Alert”). It would be wonderful if people would be especially alert at these times and share any unusual patterns they may observe. Our last major article begins a practical series on stirring and spraying the BD preps (“Stirring Vessels and Sprayers”). Finally—or rather, in the first place—we include a beautiful but little known “Guardian Angel Meditation” from Rudolf Steiner that can restore hope in times of despair.

— Malcolm Ian Gardner

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Artwork by: Erin Coffin

SO THAT THE EARTH MAY BE HEALED

MISSION

The Josephine Porter Institute for Applied Bio-Dynamics, Inc., 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 biodynamic 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.

AUDIO TAPES OF BD SEMINAR OFFERED

On December 4, 1996, an all-day practical seminar on the biodynamic method of agriculture entitled “De-Mystifying Biodynamics” was held the day preceding the ACRES USA conference in St. Louis, Missouri. During the three-day conference itself, there was an additional presentation on biodynamic agriculture. The seminar was conducted by Alan York, Steve Moore, and Hugh Courtney. Alan is a former president of the Bio-Dynamic Farming and Gardening Association (BDFGA), a certified apple and pear grower in northern California, and a consultant to premium wine grape growers. Steve is the current president of the BDFGA and the operator of a certified 60-acre diversified avocado and lemon farm in southern California, which supplies a large (almost 300 members) community supported agriculture (CSA) project. Hopefully, the readership of Applied Biodynamics will recognize Hugh as a preparations maker and the executive director of the Josephine Porter Institute for Applied Biodynamics (JPI). The seminar was designed to explain the basic principles of biodynamic agriculture, the application of those principles and included demonstration of hands-on practical techniques used to make biodynamic agriculture a reality in a commercial setting.

For those who were unable to attend either the all-day seminar or the ACRES USA conference presentation, we hope to have available soon a set of five audio tapes covering the seminar, and a 34-page notebook of the handouts used in the seminar for the price of \$50 (shipping included). At no additional charge, we will include the two audio tapes covering the presentation made during the ACRES USA conference itself. However, in order to cover the financial costs of reproducing these tapes, we need to have a minimum of 12 advance orders for this offer. A special effort was made during the taping to ensure that all questions and comments from the audience were recorded. In addition, the notebook includes a hard copy of most of the overhead projector transparencies used by the presenters. We believe the combination of the audio tapes and the visual support of the notebook will go a long way toward “the next best thing to being there.” If you would like to subscribe to this offer, please send check, money order, or credit card information for \$50 to JPI, and specify “De-Mystifying Bio-Dynamics.”



Biodynamic Preparations Legend

- BD #500– Horn Manure
BD #501– Horn Silica
- BD #502 – Yarrow } C
BD #503 – Chamomile } O P
BD #504 – Stinging Nettle } M R
BD #505 – Oak Bark } P E
BD #506 – Dandelion } O P
BD #507 – Valerian } S S
T
- BD #508 – Horsetail
(Equisetum arvense)

belief and knowledge, the only pottery still making crocks of this size in the entire country. The pottery involved is the Robinson Ransbottom Pottery, P.O. Box 7, Roseville, OH 43777. Their telephone number is (614) 697-7355 and the FAX number is (614) 697-0475. They do have a nationwide network of sales representatives and serve portions of Canada as well. They make crocks in the following sizes: 1, 2, 3, 4, 5, 8, 10, and 15 gallon sizes. Their January 1997 price for the 15 gallon size is \$41.20 at the factory, with substantial freight charges involved when purchased elsewhere. However, if you have ever stirred with your bare hand in a nice 8, 10 or 15 gallon crock, it is much more esthetically pleasing than the 5 or 6 gallon plastic bucket which is often the only receptacle readily available. On the other hand, I have suggested quite often to people that it is acceptable to stir in a 5 gallon plastic pail because I believe that it is more important to stir and spray the preparations than to skip doing so because one has a less than perfect stirring vessel. (If you ever happen to visit Woolwine, we do keep a few crocks on hand for sale.)

Now, regarding the subject of sprayers, I will defer any detailed coverage of large-scale or farm spraying equipment and applications to a future article. For this particular article, I will only mention a few hand or garden sprayers and perhaps give greater coverage of the various kinds and brands in a future article as well.

First of all, suppose you already have a sprayer on hand and can’t really afford a new one. However, you must confess to having used some chemical sprays in the tank before you became acquainted with reasons not to use chemicals. What recourse do you have? As a minimum, I would recommend washing the tank out very thoroughly with a good “natural” soap or cleaner such as manufactured by Amway (“L.O.C.” - Liquid Organic Cleaner) or Shaklee (“Basic-H”) or an equivalent product by another manufacturer. Give the sprayer a good, thorough scrubbing out with one of these products at least a couple of times (even more if you are dealing with a plastic spray tank). While a metal tank, especially stainless steel, is the best candidate for rejuvenation, some of the better quality plastic tanks can also recover from chemical usage. However, if you can still smell the chemical residue in the tank after several efforts to clean the tank, then I would put a very high priority on replacing the tank, if not the entire sprayer, at the very first opportunity. On the other hand, while it is well and good that we provide the best opportunity for the preparations to work without the noxious carry over from previous chemicals contaminating our spray equipment, I feel that I must express the opinion that the biodynamic preparations carry very potent positive forces within them and they are capable of overcoming a great deal of the negative environment in which they must operate in today’s world. They are by no means as fragile as some practitioners of biodynamics are inclined to view them.

My own personal preference in a sprayer for the last 15 years or more has been a 5 gallon stainless steel knapsack or backpack sprayer manufactured by Chapin. Regrettably, this is a product no longer manufactured. The fact that I do already have a couple of them on hand plus the fact that the manufacturer does continue to provide all necessary replacement parts makes this Chapin 5 gallon backpack sprayer a lifetime investment. This sprayer does have a serious shortcoming, however, in that it does weigh quite a lot when

spraying a full tank, and if spraying several tanks in one day, it can affect the back and shoulders. Some individuals have rigged their Chapin sprayers with the same kind of straps used for an army backpack, and have helped the wear and tear on the shoulders as well as relieved the impact on the back. My one experience with a plastic sprayer was one made by Berthoud, which although quite well made, suffered a broken tank early in its career when a neighbor borrowed it to spray out some barrel compost. It seems that he loaded his pick-up truck with the sprayer full of already stirred barrel compost that we had provided, but failed to properly secure the sprayer. So it fell over and the tank was irreparably damaged. At that point I was unable to replace the tank because the original supplier, Necessary Trading Company, no longer carried the Berthoud sprayer. It is only recently, that I have learned that the Berthoud is now available in this country once more through Indiana Berry & Plant Company, 5218 W. 500 South, Huntingburg, Indiana 47542, Tel: (800) 295-2226 or (812) 683-3055, with Fax: (812) 683-2004. Because the one I originally had was a superior quality plastic sprayer, I believe I would consider the same brand again when next I invest in a lighter weight plastic sprayer, a consideration that becomes more important as I get older.

Although Chapin no longer manufactures a stainless steel sprayer, thanks to the diligent research of Nick and Gisela Franceschelli, it seems that a lighter weight 4_ gallon stainless steel sprayer is still being made by the Hudson Manufacturing Co. located in Chicago. This sprayer can be obtained from several suppliers among them the following:

- NASCO: 901 Janesville Ave. Tel: (414) 563-2446
Fort Atkinson, WI 53538 Fax: (414) 563-8296
~ or ~
4825 Stoddard Road Tel: (209) 545-1600
Modesto, CA 95356 Fax: (209) 545-1669
- Langenbach: P.O. Box 1420 Tel: (800) 362-1991
Lawndale, CA 90260 Fax: (800) 362-4490

Gisela’s use of the Hudson sprayer was brief, but she was very pleased with it before it was transferred to use in the Hawthorne Valley gardens in Ghent, New York (where Nick and Gisela moved when they left us here in Woolwine). From all reports the sprayer is giving good service and has far less of a weight problem than the Chapin stainless steel backpack sprayer.

In future issues we will look at favorite sprayers of other gardeners and growers and, as promised earlier, we will also look at methods of applying the biodynamic spray preparations over larger areas. We do hope to hear from our readers as well about their favorite sprayers and methods of large-scale applications.

NOTES:

1. Steiner, Rudolf. *Spiritual Foundations for the Renewal of Agriculture*, tr. Creeger & Gardner (Kimberton, PA: Bio-Dynamic Farming and Gardening Assoc., 1993), p. 73.
2. Ibid. p. 73.
3. Ibid. p. 73.
4. Schwenk, Theodore. *Basis of Potentization Research*, tr. M. Spock (Spring Valley, NY: Mercury Press, 1988), p. 15.
5. Ibid. p. 7.

After spending the winter underground, the cow horn contains an immense astral and etheric energy, which you can now use by diluting the contents with ordinary water, which should perhaps be warmed up a bit.¹

His initial recommendation for an area that was later measured as $\frac{3}{10}$ of an acre was “one hornful of manure diluted in about half a bucket of water.”² According to a later question and Steiner’s answer, the amount of water contained in a half bucket would be approximately one gallon. Subsequent practical experiments to determine the right proportions of the preparations to use, although varying somewhat in different parts of the world, are now set at about 1¼ ounces (45 grams) by weight (approx. 2 ounces or ¼ cup by volume) of horn manure to 3 to 5 gallons of water to achieve coverage of one acre. The actual volume of water is determined more by the volume of water needed per acre of coverage of the spray equipment (known as the calibration) than by a rigid proportion of BD #500 to water.

Steiner gives no detailed description of the term “ordinary” when speaking of the water, and the reader should note the permissive rather than mandatory statement regarding warming the water. In general, good clean spring water or rain water was recommended in the early days of biodynamics, but with the recognition of acid rain and the serious pollution problems affecting ground water with the resultant impact on wells and springs, Steiner’s “ordinary” water is becoming a more rare commodity. Our recommendation is to obtain the cleanest possible water available, and if that happens to be city water treated with chlorine and fluorine, let the water sit out in the sunshine for at least 24 hours before using it. This allows various volatile water treatment chemicals, most particularly chlorine, to offgas into the atmosphere while exposure of the water to the sun’s rays has its own purifying effect. On the question of warming the water, it is not presented as a mandate by Steiner, and I am not aware of any research ever done on warmed versus unwarmed water. If any reader has information otherwise, I would greatly welcome it. I am aware of the work of Viktor Schauberger who claimed that water had the greatest ability to absorb cosmic forces when it was at a temperature of 4°C (39.2°F), a significantly cool temperature. My first applications of BD #500 on the land here in Woolwine never involved a warming of the water and the soil reacted positively (i.e., by an increase in pH from a low 5.0 to a high 6.0) to those applications of BD #500. However, since I now prefer to stir with my bare hand, I do like the water temperature “warmed up a bit.” This question of water temperature is simply one more of the many areas for future research in biodynamic agriculture.

The actual stirring process now generally used is dictated by the following remarks by Steiner:

You must make sure, however, that the entire contents of the horn have been thoroughly exposed to the water. To do this, you have to start stirring it quickly around the edge of the bucket, on the periphery, until a crater forms that reaches nearly to the bottom, so that everything is rotating rapidly. Then you reverse direction quickly, so that everything seethes and starts to swirl in the opposite direction. If you continue doing this for an hour, you will get it thoroughly mixed.³

The first sentence in the quote just cited could also describe the process which is referred to as potentization. According to Theodore Schwenk, “The term ‘potentization’ signifies a method of preparing remedies in which the medicinal substance is subjected to progressive rhythmical dilution.”⁴ In stirring a preparation, we generally take the process only as far as the first dilution, or first degree of potentization. In the shaking of a remedy, which can be seen as analogous to the stirring of a preparation, the mechanism is further described by Schwenk:

The shaking process creates adjacent surfaces between streams of fluid slipping past one another at varying speeds, along with innumerable bubbles, droplets and vortices, all of which present considerable surfaces. They are, as it were, the gate through which universal forces enter the world of earthly matter. They imprint themselves on these surfaces like a seal impressing its form into a mass of softened sealing wax. According to Rudolf Steiner, the medium is stamped with something resembling a structure during the potentizing process.”⁵

The rhythmical shaking used in the potentization of remedies can be as brief as 4 minutes or even just one minute. Traditionally in homeopathy, potentization is accomplished by striking the container holding a homeopathic remedy against a cushioned surface, say a book. This process is known as “succussion”. In the making of anthroposophical medical remedies, a rhythmical movement which results in a “lemniscate” or “figure eight” movement of fluid within the container is thought to give more harmonious results than the violence associated with succussion. The admonition found on many a bottle of liquid medicine to “Shake Well Before Using” is taken to a much more comprehensive and refined conclusion.

Whether one stirs with a stick or directly with the bare hand is more a matter of personal preference. My first choice for a stirring vessel for hand stirring is a glazed clay crock. We have been fortunate enough to find two very nice 20 gallon crocks at auctions in the years since we have been here. We have also located a commercial source where 15 gallon crocks are still being made. This source is, to the best of my

NEW CREDIT CARD AND OLD CREDIT DUE

Please note that we have now graduated to the high finance world of the credit card, and are now accepting credit card payment for orders (VISA, MasterCard, Discover, and American Express). This new adventure was undertaken for two major reasons: first of all, we do recognize it as a convenience for those we seek to serve, and secondly, too many of those we have served in the past have not responded with payment for preparations we have trustingly sent.

We have a considerable number of people who owe JPI a balance. The peculiarity of a computer is such that it does not distinguish between 25¢ or \$150.00 owed. In closing our books for 1996, it was necessary to write off as a “bad debt” more than \$400 for 1994, and more than \$600 for 1995. Given the very narrow margin upon which JPI has operated, this represents a serious concern. Some of our old customers may be dismayed to learn that our computer must now carry them in the “bad debt” category. If we advise you of this, please understand that for the majority of such “bad debts” we are talking about \$5.00 or less. We trust that no one will take offense at finding that a past oversight on their part has placed them in this category. We do hope that you will respond positively by clearing your record up, and, incidentally, helping further alleviate the indigestion problem from which our computer suffers.

The reverse of this problem, of course, is that we also have a long list of people who have a credit balance with JPI. Our computer does not allow us to ignore a credit balance whether it is for \$0.03 or for \$30.00. In a future issue we will try to list these individuals in the hope that they will either claim their credit or authorize us to enter that credit balance as a donation so that we may relieve our computer of a basic problem of indigestion.

THANK YOU!

We are very grateful to the following people who have helped out at JPI in one way or another during the last few months.

Amanda Allen; Dave Gell; Polly Heiser; Charles Howell; Rose and Volker Imschweiler; Ann & Ellis Karr; Steve Lassner; Jim Marquardt; Julie McCallan; Norman McKenzie; Harold, John and Lloyd Nelson; Lorinda Palin; Keith Schlusser; Carolyn Touryniere; Sara and Tracy Tufts; Solly Walker.

Thun Calendars Available for 1996(!) & 1997

In the “Brooklyn Bridge for Sale” department, we would like to recommend to the serious practitioner of biodynamics the purchase of not only this year’s Maria Thun calendar *Working with the Stars* 1997 (\$12.95, plus \$3.00 postage & handling), but also her calendar for 1996, a few of which are still available from JPI (\$6.00 each). This recommendation is made because *Working with the Stars* 1996 begins the serialization in English of Maria Thun’s very valuable work on controlling weed and animal pests.

OCCULTATION CONTINUED FROM PAGE 1

In 1997, beginning May 4, *Celestial Influences* delineates an occultation of the planet Saturn by the Moon. This phenomenon of occultation is then repeated approximately every 27 days or so thereafter for a total of *nine* times through the end of 1997. (It may be that this series of occultations also continues into 1998, but the opportunity to research this has not yet presented itself.) I was quite startled to discover this, and asked the publisher of the calendar to please verify that this was not a typographical error. The publisher furnished a copy of the almanac page published by the Naval Observatory which, indeed, listed a total of nine consecutive occultations by the Moon of the planet Saturn. Since my previous impression of the occultation phenomenon was that it was a fairly rare event, I tried to establish just how rare it really is. Such records as I have show no Lunar occultations of Saturn from 1996 back through 1992. In February and March 1991 there were two Lunar occultations of Saturn, and in October, November and December of 1990 there were three, almost resulting in a series of six occultations in a row, except for January 1991 which was likely a near miss. In 1989 there were again none, and this is as far back as I have been able to check as of the time of writing this.

The phenomenon of occultation first came to my direct attention in 1990, when I identified it as a *possible* factor in connection with two back to back failures for a grower who had attempted the sequential spraying technique to encourage rain. In examining the dates when the grower did his spraying, I was struck by the fact that both efforts were made during a time when a Lunar occultation of Jupiter occurred, with the first time involving an occultation of Venus as well. I felt that this might have some significance and speculated that the cosmic forces of these planets were sealed off by the Moon and could not support the forces of the particular biodynamic preparations to which they might bear a relationship.

However, should my speculation be correct, what might be the effect of a blockage of the Saturn forces by the Moon on such a regular basis? In biodynamic or anthroposophical terms, Saturn relates to the forces of warmth. In terms of the solar system, while heat is deemed to originate from the Sun, the sphere of Saturn can be viewed as a mirror or shield which turns the warmth forces back upon the Earth. If that warmth-focusing reflective power is blocked every 27 or so days for at least nine straight times, we may well be subjected to an extended cold period beginning in late spring and continuing through summer and fall all the way to the end of 1997 and perhaps into 1998 as well.

In traditional astrological terms, Saturn is viewed as the planet of limitations and boundaries. Should the Moon occultation of Saturn negate these forces of limitation, we could see an increase in earthquakes and especially volcanic activity. A significant increase in volcanic eruptions could provide the immediate causative factor for a cooling of the Earth as was the case when Mt. Pinatubo erupted in June 1991, some three months after the last series of five Lunar occultations of Saturn previously mentioned.

On the other hand, traditional astrology views a conjunction as signifying an enhancement of the energies of the planetary bodies involved. Inasmuch as an occultation is a

OCCULTATION CONTINUED FROM PAGE 3
most exact conjunction event, an *enhancement* of Saturn's warmth forces could lead to a different agricultural effect, namely, drought and ultimately dust storms and the like. (As regards an enhancement of Saturn's limiting forces, I have for the most part avoided any effort to interpret this agriculturally other than to wonder about limitations on germination and growth.)

Should my speculations of a scenario of either unusual cold or warmth for the major part of the growing season in 1997 turn out to be prophetic, is there any remedy available for the biodynamic grower to ameliorate the situation? I believe there is, if one thinks of the biodynamic preparations as carriers of forces.

In the event of a much colder growing season than is the normal case, one should be prepared to make frequent applications of the Valerian preparation, BD #507. There are numerous cases of practical experience where biodynamic growers have avoided frost damage by a judicious application of BD #507. Valerian has most often been seen as the preparation most associated with the forces of warmth, and almost everyone attempting to correlate the planets to the various preparations has assigned BD #507 to the planet Saturn.

Should there be a drought situation in this coming year, the preparation I recommend is BD #508 (horsetail herb or

Equisetum arvense). Out of personal experience, I must further recommend that one use the *fermented* recipe rather than the fresh tea recipe for this preparation.

As to the forces of limitation, be they too weak or too strong, a diligent use of BD #500, BD #501, and some form of the compost preparations, BD #502-507, should certainly help in balancing any unfavorable aspects of this factor.

I also have one recommendation with respect to the timing of a BD #507 or a BD #508 spray, should my prophecy in the direction of either cold or heat be on the mark. Since the occultation event occurs at a conjunction, the pertinent preparation should probably be applied at the time of the preceding opposition in order to obtain the best effect. Such an opposition takes place approximately two weeks before the conjunction.

I will conclude this presentation with a tabulation of the Lunar occultations of Saturn, with an additional listing of the date and time of the opposition which immediately precedes the particular occultation to be observed. Lunar occultations involving other planets in 1997 are also shown to give the reader an idea of the frequency of the occultation phenomena. While it may turn out that this series of Moon-Saturn occultations has no noticeable effect, at the very least it may stimulate in the reader of this article a closer observation of the relationship of the cosmos to events here on the Earth.

LUNAR PHENOMENA 1997

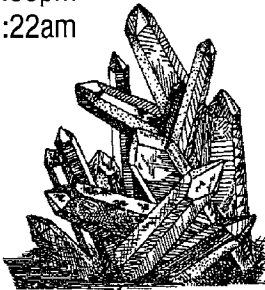
(Times = EST or EDT)

OCCULTATIONS

OPPOSITION PRECEDING

May 4	Saturn	11:06am
May 5	Mercury	12:48pm
May 31	Saturn	10:54pm
June 13	Mars	11:45am
June 28	Saturn	7:54am
July 25	Saturn	3:14am
August 5	Mercury	3:44pm
August 21	Saturn	10:18pm
September 18	Saturn	5:53am
October 15	Saturn	1:38pm
November 11	Saturn	7:35pm
December 9	Saturn	1:22am

April 21		2:08am
	N. A.	
May 18		4:12pm
	N. A.	
June 15		5:31am
July 12		4:40pm
	N. A.	
August 9		0:28am
September 5		4:48am
October 2		6:58am
October 29		8:14am
November 25		12:40pm



CONFIDENCE, EXPERIMENTATION, AND JPI "PREP SCHOLARSHIPS"

by Malcolm Ian Gardner

Whether you are someone with great confidence in the biodynamic preparations, or are someone plagued by doubts about them, we at JPI would like to encourage you to take every opportunity to conscientiously experiment with and test them. It is well and good that many of us do have confidence in the biodynamic preps, but this faith can become "blind" if we do not exercise it actively. If we start to use the preps automatically, instead of thoughtfully, we become blind to the subtle aspects of nature. Active faith, on the other hand, opens our eyes to ever new wonders and is the basis for eventual insight and understanding. Alternatively, those who use the preparations but are filled with doubt may be overlooking the objective influence of this doubt—it may be a self-fulfilling prophecy. They owe it to themselves to undertake some careful experimentation that will eliminate this possibility.

Doing such experimentation does not have to be particularly difficult; the three critical aspects are careful planning, consistent execution, and disciplined record-keeping. The actual additional labor involved may be quite minimal. On the other hand, there are also such things as natural or unplanned experiments. For example, you may see a few odd plants in a plot and discover that they are rooting in some old biodynamic preps you had forgotten you had buried there; or you may stir one of the biodynamic sprays too vigorously and accidentally spill some on part of your lawn. In the latter case, the only thing necessary is to observe the subsequent results; in the former case you must become a detective and mentally reconstruct the earlier events. Of course, the relationships that come to light in such cases should be

confirmed by deliberate experimentation, for our confidence is strengthened when we successfully repeat an experiment.

Such elementary experiments and observations by practitioners are not aimed at "proving" biodynamics to the world, but at solidifying our own self-confidence. Though farmers and gardeners may not be formally trained researchers, their lack of academic specialization often makes them all the more observant and open-minded. If they are done well, even the simplest experiments in one's backyard can be of value, and not only to oneself but also to others.

To promote such research, particularly among newcomers to biodynamics, the Josephine Porter Institute is offering the following "prep scholarships":

a) you may receive a **10% discount** on your preps (up to 5 units of each) simply by pledging to make systematic observations or experiments with them;

b) you may receive a **free** set of replacement preps by submitting a detailed report of your observations or experiments.*

At our discretion we will publish these reports in *Applied Biodynamics* ("negative" results are OK too, though we may want to investigate the circumstances further). In addition, this newsletter will also try to provide some in-depth reviews of the literature about specific areas of biodynamics (e.g., stirring techniques or prep ingredients) so that people can refine their own experiments accordingly. A general overview of methodology as well as some of the more profound reasons to take up experimentation are described in the special report that accompanies this issue ("Some Guidelines for Experimentation in Biodynamic Agriculture").

Through this modest "scholarship" program and this newsletter we hope to kindle and foster an active learning community—a community of practicing biodynamic researchers. Please contact us if you have any questions about this program, or if you have any suggestions about how we can be of more help.

STIRRING VESSELS AND SPRAYERS (PART 1)

by Hugh J. Courtney

Very often here at JPI, we are asked to comment on proper containers for the stirring of the preparations as well as the suitability of this or that sprayer, especially one that has been put to other, perhaps chemical, uses. In this article we will examine the subject from the point of view of the small-scale grower or backyard gardener. In future issues of *Applied Biodynamics* we will look at this from a large-scale grower's perspective. In the meantime, some growers may feel inspired to send us their own experiences and preferences on the matter.

To begin with, let us remind ourselves of some of Rudolf Steiner's comments regarding stirring and spraying. In describing the cowhorn manure preparation now known as BD #500, Steiner says:

