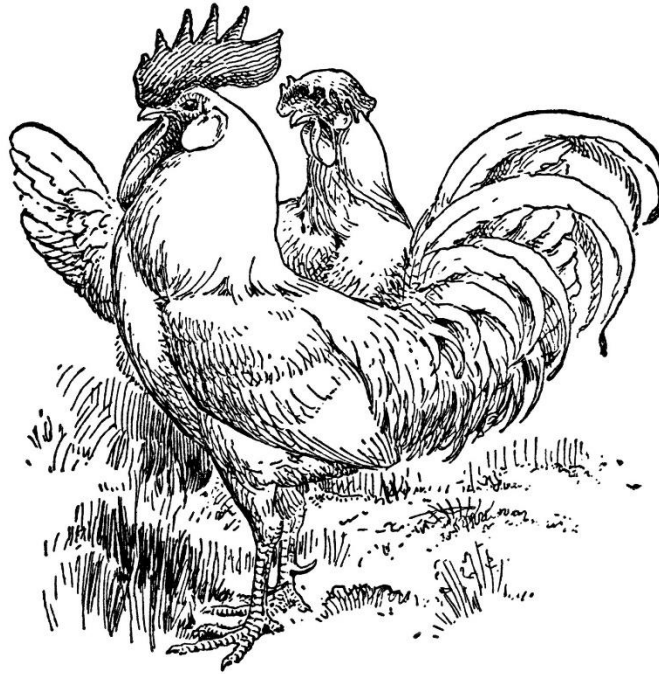


# THE BACH BIODYNAMIC PLANTING AND REASEARCH CALENDAR



2024

## Introduction

Welcome to the 2024 edition of the Bach Biodynamic Research and Planting Calendar. The planting indications given in this calendar are based on information given by Rudolf Steiner in 1923 in a course of lectures available in the book *The Agricultural Course – The Birth of the Biodynamic Movement*. This book is still in print and widely available. This series of lectures can also be read for free online at [www.rudolfsteinerarchive.org](http://www.rudolfsteinerarchive.org). Unlike other biodynamic calendars, this calendar is based on indications and methodology outlined by Rudolf Steiner. All other biodynamic calendars that I am aware of rely on the methodology given by Maria Thun developed in the 1950s. The Thun method and the Steiner method of sowing differ in several fundamental respects, and as such are at variance with one another. A more detailed discussion of this variance will be discussed below, as will this year's research, which consists of small indoor planting trials that compare the efficacy of the Thun and Steiner methods. The primary objective of this calendar has been to test these two methods using a rigorous research methodology. Surprisingly, the research on these planting methods has been, over the years, quite sparse, and where research is available, exact planting dates and times are often not furnished. Knowing the dates on which seeds are sown is essential in evaluating planting results through peer review. Over the last ten years the research in this calendar has shown conclusively that the Steiner method of sowing seeds provides better germination, larger plants and higher yields. Conversely, the Thun method has not demonstrated any correlation with seed germination, plant growth and yield. Research that I have conducted in past calendars dating back to 2013 can be viewed on my website at [www.bachbiodyncmics.com](http://www.bachbiodyncmics.com). From this previous research, and based on Steiner's indications, the following times have been found to be favourable for sowing above and below ground crops:

- two days before a full moon
- perigee, when the moon is closest to the earth
- ascending phases of the inner planets Mercury and Venus (annuals, biennials)
- ascending phases of the outer planets for trees (longer lived plants with bark)

All of these dates are indicated in the calendar. Combinations of these influences have been found to increase the germination, growth and yields of plants. The ascending phases of the planets are given according to their position in the Northern and Southern hemisphere. A planet is considered to be ascending in the Northern hemisphere when it is moving in a northerly direction in relation to the ecliptic, regardless of its location in the either of the hemispheres. Conversely, a planet is considered to be in an ascending phase in the Southern hemisphere if it is moving in a southerly direction in relation to the ecliptic, regardless of its position in either of the hemispheres. Therefore, if a planet is in an ascending phase in the Northern hemisphere, it will be in

descending phase in the Southern hemisphere, and vice versa. Rudolf Steiner's indications regarding the planets and their influence on plant growth are here quoted, taken from the Agricultural lectures of 1923 (all of the following quotes are taken from the 2004 edition of *The Agricultural Course, The Birth of the Biodynamic Method*). Eight lectures given in Koberwitz, Silesia, between 7 and 16 June 1924. Rudolf Steiner Press):

# JANUARY 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Mercury ascending SH Jan 1-Jan25, descending NH	1 Apogee- 07:29	2 Venus ascending SH Jan 1-Jan 28 descending NH	3 Mars ascending SH Jan-1-Jan 8 descending NH	4 Jupiter ascending NH Jan 1- Oct 9 descending SH	5 Saturn ascending NH- Jan 1- Jun 29 descending SH	6
7	8 Mars ascending NH Jan 8-Sep 14 descending SH	9	10	11 New moon-03:37	12	13 Perigee- 02:36 Good planting day SH fair NH
14	15	16	17	18	19	20
21	22 Good planting days Jan 22-25	23	24 Mercury ascending NH Jan 25-Apr 2 descending SH	25 Full moon-09:54	26	27
28 Venus ascending NH Jan 29-Jun 22 descending SH	29 Apogee- 00:15	30	31			

Notes:

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*Saturn goes slowly round [the sun], in thirty years.... Sometimes it shines directly on to a given spot on the Earth. But it can also work through the Earth upon this portion of the Earth's surface. In either case the intensity with which the Saturn-forces are able to approach the plant life of the Earth is dependent on the warmth-conditions of the air. When the air is cold, they cannot approach; when the air is warm they can...if you wish to plant a coniferous forest, where the Saturn forces play so great a part, the result will be different if you plant in a so-called ascending period of Saturn, or in some other period... Assume for instance that we take firewood, wood that is derived from trees which were planted in the Earth without understanding of the cosmic rhythms. It will not provide the same heart-giving warmth as firewood from trees that were planted intelligently ( p.27).*

From the foregoing, the best time to plant a coniferous forest would be in the summer when Saturn is in an ascending phase in the area where the trees are to be planted. The affect of Saturn can radiate through the Earth, regardless of whether Saturn is above or below the ecliptic, so long as it is in an ascending phase. The same can be said of all the planets that are considered in biodynamic agriculture (Mercury, Venus, Mars, Jupiter and Saturn). The outer planets affect the growth of longer-lived plants, those with rind or bark- trees for the most part. Steiner indicates that Mars, for example, affects the growth of oak trees, and as because of this, they should be planted in an ascending phase of Mars.

The inner planets Mercury and Venus affect the growth of shorter-lived plants, annuals and biennials, and perhaps shrubs like blueberries and raspberries. Steiner indicates the following: *We see what Saturn does with the help of the warmth-forces of our Earth, whenever the perennial plants arise. The effects of these forces, which pass into the plant-nature via the warmth, are visible to us in the rind and bark of trees, and in all that makes the plants perennial. This is due to the simple fact that that the annual life of the plant- its limitation to a short length of life- is connected with those planets whose period of revolution is short (p 27).*

Therefore, when sowing vegetable seeds and the seeds of annual fruits and bi-annuals the planets which affect growth are the inner planets of Mercury and Venus, when in ascending phases. It is an assumption on my part, that fruit trees, with thin bark and shorter lives than coniferous and oak trees are most likely affected in their growth by the planet Mars ascending. Research needs to be conducted in this area.

Another favourable time for planting that I have found in my research has been during perigee, when the moon is closest to the earth, which occurs every 27.5 days (known as the anomalistic lunar cycle). The full and new moon cycle takes 29.5 days (known as the synodic cycle). Perigee as a favourable time to sow was not mentioned by Steiner, but research performed by Harmut Speiss has also found perigee to be a favourable time to plant.

The synodic cycle, where the moon passes through waxing phases (culminating in a full moon), and waning phases (culminating in a new moon) was mentioned by Steiner in the Agricultural Course to significantly affect the growth of plants. This will be discussed in more detail in the research section of the calendar.

# FEBRUARY 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

				1	2	3
4	5	6	7	8	9 New moon-14:59	10 Perigee- 10:51
11	12	13	14	15	16	17
18	19	20	21 Very good planting days NH good SH Feb 21-24	22	23	24 Full moon-04:30
25 Apogee- 07:01	26	27	28	29 Ash winged insects		

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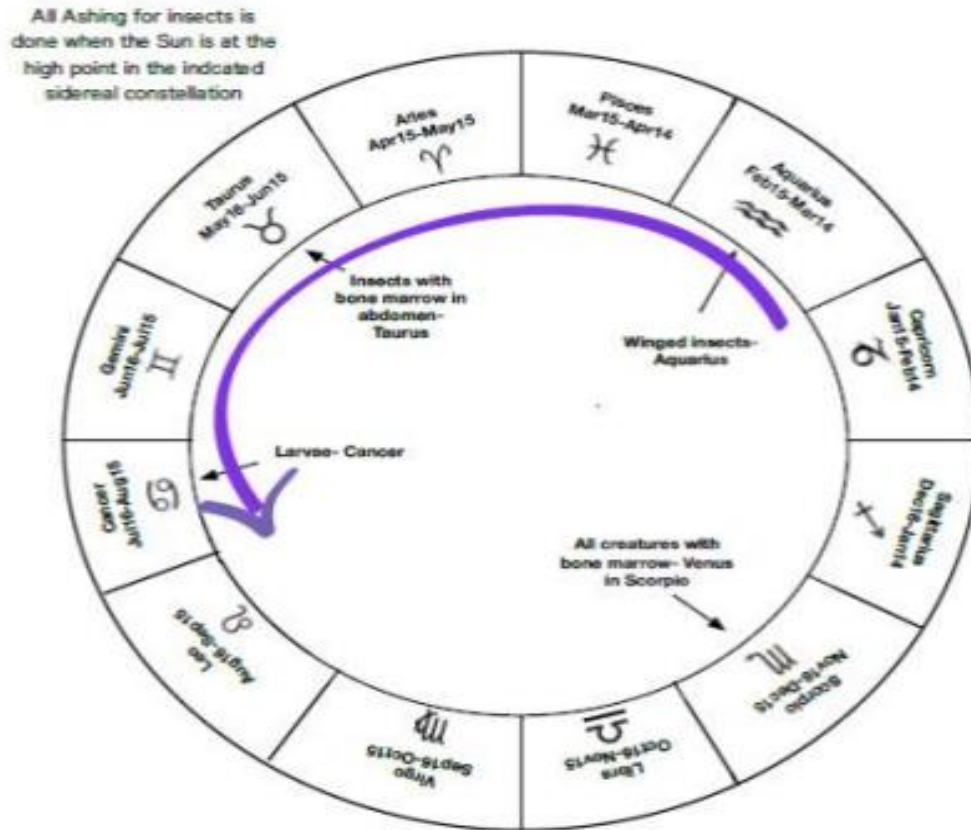
Research conducted by Lili Kolisko, in her book *Agriculture of Tomorrow* determined that the exact best planting date was two days before a full moon. Unfortunately, this important book is no longer in print. My research has also found this to be the case, but planting for the entire week before a full moon can be considered as beneficial to plant growth.

### Pest Control Using Ashing

In lecture six of the Agricultural Course, Rudolf Steiner gave practical information on the biodynamic approach to dealing with pest control. This is done through the process of

ashing, where the pest that needs to be controlled is burned in a small wood fire. These ashes are then spread over the ground in a process Steiner called peppering.

<b><u>Ashing dates for 2024:</u></b>	
All vertebrate animals:	January 7
Winged insects:	February 29
Insects with bone marrow in abdomen:	May 31
Larvae:	August 1



mice, rats and other garden rodents, the correct ashing time is not related to the Sun, but instead occurs when Venus is in the

# MARCH 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

					1	2
3	4	5	6	7	8	9 Perigee- 23:07 Fair planting day NH and SH
10 New moon-02:00	11	12	13	14	15	16
17	18	19 Fair planting days NH Mar 19- 20	20	21	22 No plant time Mar 22-Mar 25	23 Apogee- 07:45
24	25 *Full moon- 00:00 Penumbral lunar eclipse Mar 24-25	26	27	28	29	30
31						

Notes: \*Western Hemisphere, Western Europe, Eastern Australia, West Africa

constellation of Scorpio. All ashing dates given here are when the Sun or Venus is in the middle of the indicated constellation and are also listed in the calendar itself. Weed seeds should be ashed two days before a new moon, when the moon's forces of growth are weakest.

## **2024 Research**

This year's research will again explore the different planting methods outlined by Rudolf Steiner and Maria Thun. Two indoor planting trials were conducted with artificial light using radishes. Indoor planting trials eliminate many of the confounding variables that can make planting data unusable. Before a discussion of the research can take place, a review of both the Steiner and Thun method will be outlined. I have made a you tube video of this research which can be viewed at the following link: <https://youtu.be/ViuZ4FKmzGQ?si=BWc29E8LQDjilBAB>.

Before a discussion of this year's research takes place, a brief outline of Rudolf Steiner and his work will be given. Rudolf Steiner has been described as being a philosopher and a mystic, but these terms only give a vague description of this incredible human being. Rudolf Steiner was an initiate- one who could see clearly into the spiritual world in the form that is correct for the epoch in which we are now living. The breadth and scope of the revelations of his spiritual vision is truly remarkable. Education, medicine, religion, art, architecture and agriculture are all areas where Rudolf Steiner has provided guidance for the future development and evolution of the human race. A great deal of Steiner's effort was focused on describing the modern path of spiritual development, in accordance with the times in which we now live. Steiner described how the gates of the spiritual world, which have been closed for over 2000 years, are now opening again, giving humanity the opportunity to once more peer clairvoyantly into the spiritual world. All of the teachings and information that Steiner gives in *The Agricultural Course* must not be viewed as coming from investigations into the material world. They must rather be viewed as instruction given by spiritual beings that have been imparted to Steiner through his clairvoyance. How can the reports of so-called clairvoyant investigations be proven- they cannot be confirmed by the faculties of other human beings, who are not initiates. This is a valid argument, and as Steiner is a forerunner, an advanced guard so to speak, of what lies in the future of humanity there are none, or perhaps very few who can verify the accuracy of Steiner's information. Steiner speaks of the world that we live in being filled with elemental spiritual beings- gnomes, undines, sylphs and salamanders. How can this be proven? He also speaks of hierarchies of good and evil beings- ahrimanic and luciferic beings, angels and archangels, and exalted seraphim. None of this can be put on a scale to be weighed and measured in the physical world and can therefore not be proven. Biodynamic agriculture is one of the few areas of Steiner's work where research using the tools of the physical world can be used. We can test these theories by weighing, measuring and observing how different planting times affect the growth of plants, and because of this, it is imperative that this work be conducted.

The impulses that Steiner brings are vital for the future of agriculture and of humanity. The biodynamic preparations are meant to heal and bring spiritual impulses into the world again. But what if those unfamiliar, or perhaps sceptical of Steiner's work take it upon



# APRIL 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

	1	2	3 Mercury ascending SH Apr 3-May 1 descending NH	4	5	6
7 Perigee- 09:54	8 New moon- 11:30	9	10	11	12	13
14	15	16	17	18	19 Apogee- 18:10	20
21 Good planting days NH and SH Apr 21-23	22	23 Full moon-16:48	24	25	26	27
28	29	30				

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themselves to put to the test the information contained in biodynamic calendars? What if, as I have found in my research, there is no correlation between the moon and its position in the zodiac and plant growth? This would cast a shadow on all of Steiner's other spiritual work. The sceptic, or perhaps even one who is seeking for spiritual knowledge could then say, with justification 'biodynamics is one of the only areas where these spiritual impulses can be weighed and measured and they have proven to be false- they do not work. Why should I then believe in any of the spiritual information given in biodynamic or anthroposophical literature?' The impulses that Steiner has brought into the world are to prepare humanity for a new epoch in our evolution, one where the gates of the spiritual world are again opening, and humanity, will again have the ability to see into the spiritual world as did the cultures of antiquity, but now with a clear sense of self and true individual freedom. I carry a deep sense of responsibility for the impulses that Steiner has brought into the world, and for me, biodynamic agriculture does not stand alone as one method among others. Biodynamic agriculture must be considered as part of a spiritual impulse which must transform and prepare humanity for the great changes that are about to occur in the not-so-distant future. With this in mind, let us now return to this year's research.

Thun's methodology is based on the relation of the moon to its position in the various signs of the zodiac. Just as the Earth passes through the twelve signs of the zodiac in the course of a year, the moon also passes through the twelve signs of the zodiac, but in a much shorter period of time (29.5 days, which is the time the moon takes to orbit the earth). Thun divides the constellations of the zodiac into four types: Earth signs are considered beneficial to root growth and therefore root crops (Taurus, Virgo, Capricorn). Water signs are considered beneficial to leaf growth and therefore leaf crops (Pisces, Cancer, Scorpio). Warmth signs are considered beneficial to the growth of fruit crops (Aries, Leo, Sagittarius). Finally, light signs are considered beneficial to flower crops (Gemini, Libra, Aquarius). If the moon, for example, is in the zodiacal sign of Leo, then that period of time would be considered beneficial for the growth of fruit crops, like tomatoes or melons. Thun's idea that the zodiac affects the growth of plants is at variance with indications given by Rudolf Steiner regarding the different kingdoms of nature, and how they are influenced by cosmic forces.

Steiner spoke of the different aspects of minerals, plants, animals, and of the human being. The mineral, that realm of rocks and stones, metals and ores- what is called in science the inorganic world, contains only a physical body- it has only within it constituents of the physical world. When we rise to the world of plants, there is something in the plant of a spiritual nature that cannot be directly perceived by our physical senses. This was called by Steiner the etheric or life body. This etheric body gives the plant life- it gives the plant the impulse to grow and reproduce, to sprout from a seed and to gather the minerals of the world into itself in a living way. As the plant ages, the etheric body is depleted and the plant dies, and is again subject to physical, mineral forces of decay, returning again to the mineral world. All living things in the world contain an etheric body and are subject to the same forces of decay which ultimately brings about death. We now ascend to the animal, which has, in addition to a physical and etheric body, an astral body. What is the difference between a plant and an animal? An animal moves about on the earth and is governed by instinct. Animals have sense organs and physical

# MAY 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2 Mercury ascending May 2- Jun 20 NH descending SH	3	4 Good planting days NH fair SH May 4-5
5 Perigee- 14:12	6	7 New moon- 20:21	8	9	10	11
12	13	14	15	16	17 Apogee- 11:01	18
19	20	21 Very good planting days NH good SH May 21-23	22	23 Full moon-06:53	24	25
26	27	28	29	30	31 Ash insects with bone marrow in abdomen	

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organs (heart, liver, organs of digestion, etc). Higher animals can also feel pleasure, pain, anger and sadness. All of these qualities are aspects of the astral body. Finally, we come to the human being. What is it that separates the human being from the animal? It is the ability to think, and the self-consciousness that gives the human being the ability to refer to itself as “I”. The ability to think and to have self-consciousness, to have the higher emotions of compassion, love and a conscience, these are the result of human beings having, in addition to a physical, etheric and astral body, an ego as well. The ego, that which makes us human, is the crowning achievement of God’s creation. Through our ego we are also given the ability to act in freedom- to make decisions and choices, to govern our own behaviour as we see fit, instead of being governed by iron instinct, as is an animal. A wolf can only be a wolf, an eagle an only be an eagle- there is no self determination in the realm of the animal. Thus, the human being is given mastery of the world in freedom- a gift of the gods. It is through our own free actions that the world’s fate will be determined. The gods have made us custodians of the earth, and it is our responsibility to take care of the earth and all its creatures. Biodynamic agriculture is an important part of the future health of our environment and planet. We can summarise the foregoing in the following table:

Mineral realm	physical body (all that we can touch and perceive with our senses in the inorganic realm)
Plant realm	physical body + etheric or life body (that which gives life and governs growth and reproduction)
Animal realm	physical body + etheric body + astral body (gives the animal the ability to move and experience some emotion, governed by instinct)
Human being	physical body + etheric body+ astral body+ ego (self awareness, ability to call oneself ‘I’, ability to think and live as a free thinking, moral being)

In the Agricultural Course, Steiner details the following in regard to using the method of peppering (using the ashes of burnt animals) to control pests:

*Now that we are passing from plants to animals, we come to the ‘animal circle’- that is to say, the Zodiac. It was not called so in a meaningless way. **To attain our end within the plant world we can stop at the planetary system.** For the animal world, that is not enough. There we need ideas that reckon with the surrounding sphere of the fixed stars, notably the fixed stars of the Zodiac (p. 113).*

The influences that govern the growth of plants are contained in the etheric forces of the plant, described above. *These forces emanate from the realm of the solar system.* The astral forces that influence animals and are used in biodynamic agriculture to combat insect and rodent problems emanate from the spiritual forces that are radiated to the earth from the Zodiac. Here the issue becomes clear. If all of the forces that govern the growth of plants are contained in the planetary system, then how would the moon’s position in the Zodiac influence the growth of plants? The plant does not contain an astral body and can therefore not be affected by these astral forces in its growth.

# JUNE 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

						1 Perigee- 23:24
2	3	4	5	6 New moon- 05:37	7	8
9	10	11	12	13	14 Apogee- 05:37	15
16	17	18 Very Good planting days NH and SH Jun 18-21	19	20 Mercury ascending Jun 21- Aug 8 SH descending NH	21 Full moon-20:07	22 Venus ascending SH Jun 23-Nov 15 descending NH
23	24	25	26 Good planting days Jun 26-27 NH very good SH	27 Perigee- 03:46	28	29 Saturn ascending SH Jun 30-Nov 14 descending NH
30						

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Another great contrast between the Steiner and Thun method is the relation of the waxing moon, where the moon is growing and moving towards a full moon, and its relation to plant growth. On page 26 of *The Agricultural Course* Steiner says the following:

*In deed and truth, with the forces that come from the Moon on days of the full Moon, something colossal is taking place on Earth. These forces spring up and shoot in to all the growth of plants, but they are unable to do so unless rainy days have gone before (p. 26).* With the Steiner method, planting on days where the moon is waxing towards full moon is very favourable to the growth and subsequent yields of crops. When seeds are sown at any time, they of course need water. Natural rainfall is preferable, but irrigation with sprinklers or drip lines is also effective.

With the Thun method, the phases of the moon are not considered to be important factors governing plant growth. In the 2011 edition of *The Maria Thun Biodynamic Calendar*, the following was stated: “*the waxing and waning Moon is not connected to the planting times or to the ascending and descending periods. Under normal growing conditions the effects of these Moon phases are so small that we seldom go into them*” (p. 59). From this we can see the huge discrepancies in these two planting approaches. It has been my endeavour over the last decade to research these two planting methods and to ascertain which is the most effective in bringing about positive results. Having said this, we can now delve into this year’s research.

As mentioned above, this year’s research was conducted indoors, using artificial light and in a room with a thermostat where temperature could be regulated. Two trials were conducted, with the first being designed as a control. The trials are here designated as trial one and trial two, with each trial divided into two planting times, one in the days before a full moon, and one in the days before a new moon. In each phase of each trial 16 radish seeds were planted, using identical pots and soil. All plants were watered by weight, where at weekly intervals they were brought to a weight of 1.5 kilograms. The watering dates occurred in relation to the date that seeds were sown in each phase of both trials. The seeds used all came from the same packet of seeds (Pacific Northwest French Radish). Trial 1 data is as follows:

Trial 1 data: 1a- Full moon planting time (Steiner method)- Sept 27/23, two days before full moon, moon at perigee, moon in a water sign (Aquarius).  
1b- Waning moon planting time (control)- Oct 6/23- 8 days before a new moon, two days before apogee, moon in flower sign (Gemini).  
Germination: 1a- 12/16 1b- 13/16 Total weight: 1a- 58g 1b- 31.6g Weight per plant: 1a- 4.83g 1b- 2.43g  
Seeds in ground for 29 days  
Average plant in 1a full moon planting phase was 99% larger than 1b waning moon time (4.83g/2.43g= 1.987)

# JULY 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

	1	2	3	4	5 New moon-15:57	6
7	8	9 Mercury ascending SH Aug 9-Sep 4 Descending NH	10	11	12 Apogee- 00:13	13
14	15	16	17	18 Good planting days NH very good SH Jul 18-24	19	20
21 Full moon-03:17	22	23 Perigee- 21:45	24	25	26	27
28	29	30	31			

Notes:

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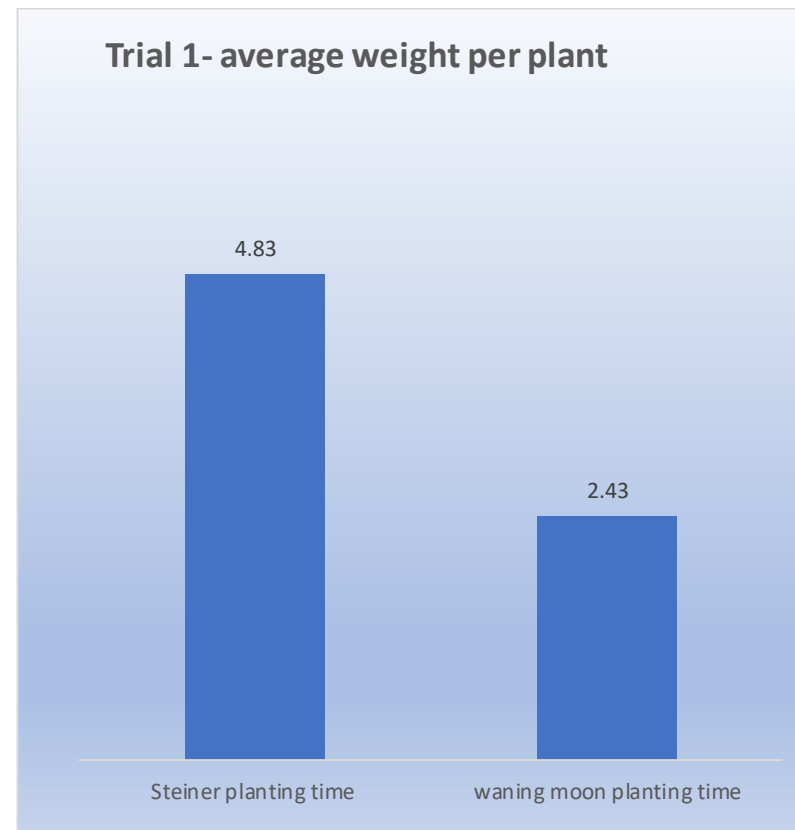
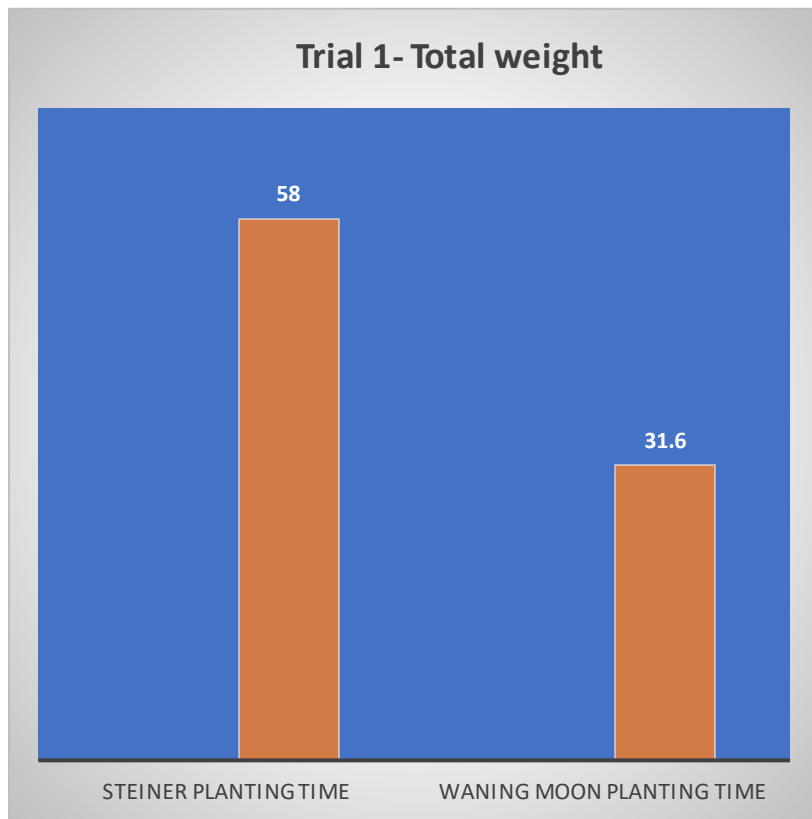


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The seeds in the waning part of this trial were not planted during a Thun root period, with the intention of making this trial a control, and to compare this waning moon data to the waning moon data of trial 2, which was planted in a root sign. The germination in trial 1b (Oct 6) was slightly better than in trial 1a (12/16 vs 13/16), but the average weight of each plant in trial 1a (planted two days before a full moon) was almost double in size from those in trial 1b (planted 8 days before a new moon). This size difference in the waxing moon plants in comparison to the waning moon plants is larger than what I have found in previous planting trials and must be considered as anomaly. When I was setting up for planting trial 2, I noticed that one of the grow lights was not working, and that this light probably burnt out part way through trial 1, which would have given more light to the plants in trial 1a. Another factor which may also explain such a large anomaly was that the light from the window would have been slightly stronger in trial 1a than in trial 1b, due to the time planted in relation to the shortest day of the year on Dec 22. The plants in trial 1a were also planted directly on perigee, a date which I have found to be a favourable planting time.





# AUGUST 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

				1 Ash Larvae	2	3
4 New moon- 04:13	5	6	7	8 Apogee- 17:33	9 Mercury ascending Aug 9- Sep 4 NH descending SH	10
11	12	13	14	15 Very good planting days August 15-21 NH and SH	16	17
18	19 Full moon- 11:25	20 Perigee- 21:06	21	22	23	24
25	26	27	28	29	30	31

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The data from trial 2 is as follows:

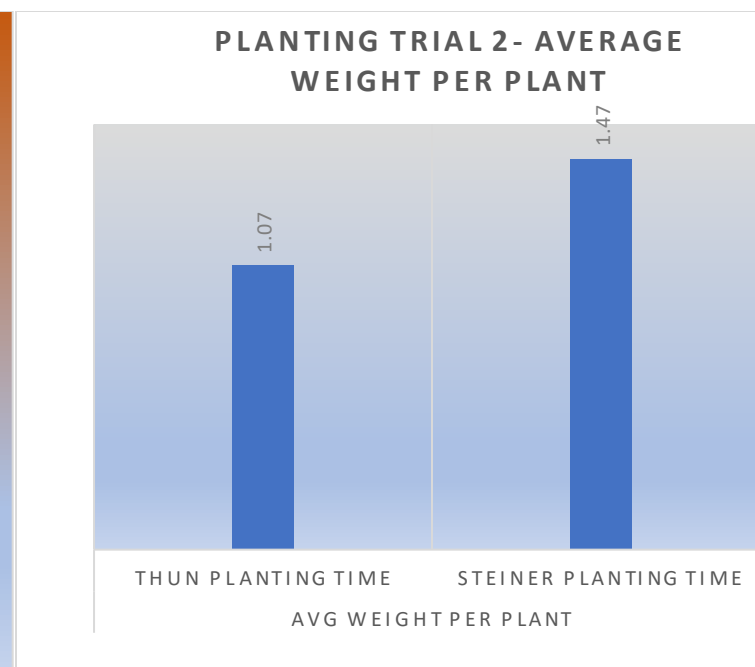
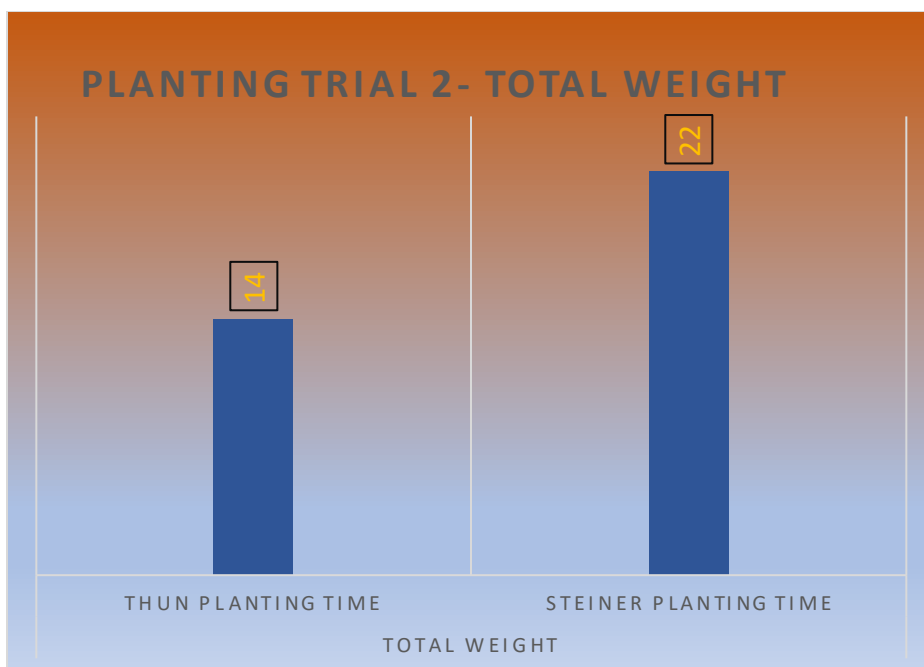
Trial 2 data: 2a new moon planting time (Thun method)- Nov 10, two days before a new moon, moon in Virgo (root day)

2b full moon planting time (Steiner method)- Nov 24, three days before full moon, moon in Pices (leaf sign)

Germination: 2a- 13/16 2b- 15/16 Total weight: 2a- 14g 2b- 22g Average weight per plant: 2a- 1.08g 2b- 1.47g

Seeds in ground for 29 days

Average plant in 1b full moon planting phase (Stiner method) was 36% larger than 1b waning moon phase (Thun method) during a planting root time ( $1.47g/1.08g= 1.361$ )



# SEPTEMBER 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 New moon-18:55	3	4 Mercury ascending Sep 5- Nov 18 SH descending NH	5 Apogee- 06:56	6	7
8	9	10	11	12 Fair planting days NH good SH Sep 12-13	13	14
15	16 No plant time Sep 16-18	17 *Full moon- 19:34 Partial lunar eclipse Sep 17-18	18 Perigee- 05:28	19	20	21
22	23	24	25	26	27	28
29	30					

Notes: \*Lunar eclipse location Western Hemisphere, Europe, Africa

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The data in trial 2 is more typical of previous research that I have conducted. Plant growth during a full moon planting phase as indicated by Steiner was larger by 36% than for the corresponding Thun root planting time sown during a new moon phase. The Thun phase of trial 2 (2a) was done first, meaning that the plants in this trial would have received somewhat higher levels of window light than the plants in trial 2b. The plants in trial 2b were planted two days after perigee, and perhaps did not receive the benefits from planting directly on the day of perigee than did the plants in 1a. The plants in trial 2 received light from a single grow light only, where the plants in trial 1 received light from 2 bulbs, for part of the trial until one of the bulbs burnt out, as discussed above. It is interesting to note that the both of the average weights per plant in trial 1 were larger than that for the plants in trial 2 (trial 1a 4.83g/plant (waxing phase), 1b 2.43g/plant vs trial 2a 1.07g/plant (waning phase), 2b 1.47g/plant (waxing phase). This would indicate that the bulb that burned out did so later in the trial, as the average weight of both of the plants in trial 1 was larger than both of the weight of the plants in trial 2. This difference could also be attributed to increased window light in trial 1.

### **Conclusion:**

As has been the case in almost all of the trials that I have conducted either indoors or outdoors in the past, planting seeds during a full moon phase produces greater results than planting seeds in a new moon phase, regardless of whether these seeds have been planted using the Thun method. Planting seeds using the Steiner method is an effective way to consistently increase plant yields. The Thun method is ineffective and has demonstrated no beneficial effect in plant growth according to my research. If plant yields around the world could be increased by 10-30% simply by planting during a waxing moon phase and with the inner planets of Venus and Mercury in ascending phases, and with the moon at Perigee (or any combination of these factors), this would mean increased yields for farmers amounting to billions of dollars, and more food for the world with no increased fertilizer inputs. This would have an incredibly beneficial influence on the world's food supply. Perhaps more importantly, this would also draw attention the true spiritual nature of the world in which we live, as the physical aspects of planting during a full moon and of planting when planets are in ascending phases (increased light from the full moon or gravitational influences, etc.) are so insignificant that they cannot explain the significant increase in plant yields using the Steiner method. It is my intention to continue this work in the future, and to conduct a large scale trial this summer. As mentioned, outdoor trials are more difficult due to the confounding variables of weather and pests, but they are certainly not impossible. I intend this year to cover outdoor trial plants with a thin fleece throughout the trial, and with cooperative weather hope to present a large scale outdoor trial in next year's calendar.

Collaboration in this research would be greatly appreciated and would increase the validity and accuracy of the data. If you are interested, please contact me at [jbbach363@gmail.com](mailto:jbbach363@gmail.com).

Thank you, John Bach

# OCTOBER 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

		1	2 New moon-11:49 Apogee- 11:41	3	4	5
6	7	8	9	10 Jupiter ascending SH Oct 10-Dec 31 descending NH	11	12
13 Very good planting days NH SUPERIOR planting days SH Oct 13-17	14	15	16 Perigee- 12:47	17 Full moon- 04:26	18	19
20	21	22	23	24	25	26
27	28	29 Apogee- 14:51	30	31		

Notes:

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# NOVEMBER 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

					1 New moon-05:47	2
3	4	5	6	7	8	9
10	11	12 Very good planting days NH and SH Nov 12-15	13	14 Perigee- 03:19	15 Full moon-13:28. Venus Ascending NH Nov 16-Dec 31 descending SH	16 Saturn ascending NH Nov 15-Dec 31 descending SH
17	18	19 Mercury ascending Nov 19-Dec 17 NH descending SH	20	21	22	23
24	25 Mars ascending NH Nov 25 Dec 31 descending SH	26 Apogee- 03:57	27	28	29	30

Notes:

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# DECEMBER 2024

SUNDAY      MONDAY      TUESDAY      WEDNESDAY      THURSDAY      FRIDAY      SATURDAY

1 New moon-05:47	2	3	4	5	6	7
8	9	10 Very good planting days NH and SH Dec 10-12	11	12 Perigee-05:20	13	14
15 Full moon- 01:01	16	17	18 Mercury ascending SH Dec 18 – Dec 31 descending NH	19	20	21
22	23 Apogee-23:26	24	25	26	27	28
29	30 New moon- 14:26	31				

Notes:

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