



Biodynamic Farming: A Holistic Approach to Climate Change Mitigation

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Biodynamic farming is a holistic approach that considers farm as an interconnected living system comprising soil, crops, livestock, biodiversity and natural resources. Change in climate, increasing temperatures, erratic rainfall, extreme weather events, soil degradation and water scarcity pose major challenges to agricultural sustainability and productivity. Biodynamic farming provides a solution to these challenges through practices such as composting, nutrient recycling, restoration of soil organic matter, biodiversity conservation and the use of biodynamic preparations. Biodynamic farming has potential to enhance the resilience of agricultural systems by improving soil fertility, microbial activity, water-holding capacity and carbon storage. Overall, biodynamic farming provides an integrated framework for reducing dependence on external inputs and promoting climate-resilient, ecologically sustainable and resource-efficient agriculture.

Keywords: Biodynamic farming; Climate change mitigation; Soil fertility; Biodiversity; Biodynamic preparations; Nutrient recycling; Soil organic matter; Carbon storage; Sustainable agriculture; Climate resilience.

Introduction

Climate change poses a major challenge to global agriculture through rising temperatures, changing monsoon and rainfall patterns, extreme weather events, crop failures and water scarcity. In this context, biodynamic farming offers a holistic approach to addressing these challenges. The term “biodynamics” is derived from the Greek words *bios* (life) and *dynamis* (energy). It integrates biological practices, such as organic farming methods, with dynamic approaches that consider natural, lunar and cosmic rhythms. Biodynamic farming emphasizes the integration of crops and livestock, nutrient recycling, soil health and the well-being of plants and animals. It helps develop healthy soils, support sustainable agriculture and produce high-quality food by reducing soil degradation and erosion, recycling farm resources and maintaining ecological balance.

Biodynamic Farming

Biodynamic farming is a sustainable, holistic and regenerative agricultural system that considers the farm as a self-sustaining living organism. It integrates crops, livestock, soil and natural resources through practices such as nutrient recycling, composting, biodiversity conservation and the use of biodynamic preparations.

Principles Of Biodynamic Farming

- **Soil fertility:** Biodynamic farming focuses on maintaining a healthy and biologically active soil through efficient nutrient cycling and soil organisms such as micro-organisms and earthworms. Healthy soil improves nutrient availability, aeration, water retention, thereby increasing its productivity.

- **Soil organic matter and humus:** Biodynamic farming emphasizes the restoration of soil organic matter and humus through addition of compost, organic residues and biodynamic preparations to soil which helps in enhancing microbial activity, nutrient cycling and long-term soil fertility.
- **Cow manure:** Cow manure, particularly in BD 500, is an important component of biodynamic farming. It provides organic matter and nutrients, improving soil structure, promotes nutrient cycling, microbial activity and water-holding capacity. Cow Pat Pit (CPP) may also be used as a soil or compost preparation.
- **Biodiversity preservation:** Through conservation of soil organisms, plants and animals, biodynamic farming maintains and promotes biodiversity and ecological balance. Crop diversification and habitat conservation help create resilient and sustainable farming systems.
- **Cosmic forces and planetary influences:** Biodynamic farming considers lunar and celestial cycles while planning activities such as planting, harvesting and applying biodynamic preparations. These activities are often guided by a biodynamic calendar.
- **Biodynamic preparations:** BD 500 and BD 501 are applied to soil or crops, while BD 502–BD 507 are used in compost preparation. These preparations stimulate biological activity, nutrient cycling and compost quality.
- **Peppering:** It is a traditional biodynamic practice which control weeds and pests without chemical pesticides. In this practice, selected plant or animal materials are burnt to ash, diluted and applied to the field, although the practice has limited scientific validation.
- **Liquid manures and herbal teas:** Fermented liquid manures and herbal teas stimulate biological processes and support crop health. These enhance microbial activity and help in suppressing certain plant diseases.
- **Composting:** Composting converts manure and crop residues into valuable organic matter, thereby improving soil fertility, microbial activity, humus formation and carbon storage.
- **Farm organism:** Biodynamic farming considers the farm as an integrated living system. Crops, livestock, soil, water and biodiversity are managed together so as to promote nutrient recycling, self-sufficiency, ecological stability and sustainable productivity.

Method Of Biodynamic Faming

Biodynamic Preparations and Planting Calendar

The two major components of biodynamic farming are the creation of planting calendar and biodynamic (BD) preparations, including composts and specially prepared organic materials, are used to support soil and crop health. The planting calendar is based on lunar and cosmic rhythms and is used to schedule agricultural operations.

Biodynamic Planting Calendar

Biodynamic planting calendar is based on earthly and cosmic rhythms. The planting calendar considers six lunar patterns occurring over approximately 27–29 days: ascending and descending periods, apogee, perigee, full moon and new moon. Farmers use these rhythms to plan farm operations

Ascending Days: The ascending Moon is associated with increased above-ground plant activity. It is suitable for seed sowing and foliar applications of liquid manures and Panchagavya, BD 501 application and harvesting fruits and leafy vegetables.

Descending Days: Plant activity is considered more concentrated below the soil surface. It is suitable for transplanting, ploughing, compost application, application BD 500 and liquid manures and harvesting roots and bulbs.

Apogee and Perigee: These represent the Moon's farthest and nearest positions from Earth, respectively. Soil cultivation, sowing and pruning are generally avoided around perigee, while some biodynamic practitioners consider apogee suitable for planting bulbs and tubers.

Full Moon: Associated with increased plant vitality and above-ground growth. Seeds may be sown before the full moon, while BD 501, Panchagavya and liquid manures may be applied as foliar sprays.

New Moon: Associated with root growth and below-ground activity. Suitable for seed sowing, transplanting and seed collection.

One Page Biodynamic Planting Calendar - 2025													
Note to read	Date(Time)												
Month	Moon Opposite	New Moon	Full Moon	Moon's		Moon in		Node	Sowing / Planting Based on Moon's Position				
				Ascending	Descending	Apogee	Perigee		Seed- Fruit Day	Root Day	Flower Day	Leaf Day	
January	18 (5.15am)	29 (6.06pm)	14 (3.57am)	1 to 13 28 to 31	14 to 27	21 (10.25am)	8 (5.05am)	6 (1.16am) 19 (7.18am)	7 (5.52pm) 16 (11.18am) 26 (8.28am)	1 (6.09am) 9 (8.48pm) 18 (9.30pm) 28 (2.54pm)	3 (10.49am) 11 (11.57pm) 21 (10.05am) 30 (6.37 PM)	5 (2.37pm) 14 (4.21am) 23 (10.34pm)	
February	14 (7.25pm)	28 (6.15am)	12 (7.23pm)	1 to 9 25 to 28	10 to 24	18 (6.41am)	2 (8.13am)	2 (3.36am) 15 (12.23pm)	3 (11.18pm) 12 (7.37pm) 22 (5.42pm)	6 (2.18am) 15 (5.46am) 25 (00.58 am)	8 (6.23am) 17 (6.04pm) 27 (4.39am)	1 (9.00pm) 10 (11.58am) 20 (6.51am)	
March	14 (9.12am)	29 (4.28pm)	14 (12.25pm)	1 to 8 24 to 31	9 to 23	17 (10.07pm)	2 (2.48am) 30 (10.56am)	1 (11.10am) 14 (7.15pm) 28 (9.59pm)	3 (6.41am) 12 (2.17am) 22 (1.48am) 30 (4.37pm)	5 (8.15am) 14 (12.58pm) 24 (10.27am)	7 (11.47am) 17 (1.17am) 26 (3.16pm)	1 (6.00am) 9 (5.48pm) 19 (2.09pm) 28 (9.59pm)	
April	10 (9.57pm)	28 (1.01am)	13 (5.52am)	1 to 4 20 to 30	5 to 19	14 (4.18am)	27 (9.45pm)	11 (1.26am) 25 (7.53am)	8 (7.57am) 18 (8.23am) 27 (3.41am)	1 (4.32pm) 10 (7.06pm) 20 (6.06pm) 29 (2.55am)	3 (6.24pm) 13 (7.41am) 23 (00.33am)	5 (11.27pm) 15 (8.29pm) 25 (3.27am)	
May	8 (9.43am)	27 (8.32am)	12 (10.26pm)	1st to 2nd 18th to 29th	3rd to 17th 30th to 31st	11 (6.19am)	26 (7.07am)	8 (5.14am) 22 (1.35pm)	5 (2.03pm) 15 (2.09pm) 24 (1.50pm)	8 (00.59am) 18 (00.06am) 26 (1.42pm)	1 (3.16am) 10 (1.44pm) 20 (7.37am) 28 (1.38pm)	3 (6.39am) 13 (2.29am) 22 (12.10pm) 30 (3.44pm)	
June	4 (8.36pm)	25 (4.01pm)	11 (1.14pm)	14th to 26th	1st to 13th 27th to 30th	7 (4.12pm)	23 (10.13am)	4 (7.03am) 18 (5.11pm)	1 (9.38pm) 11 (8.13pm) 20 (9.47pm) 29 (3.57am) 6 (3.56am)	4 (7.37am) 14 (5.40am) 22 (11.05pm) 24 (11.47pm)	6 (8.08pm) 16 (1.12pm) 24 (11.47pm)	9 (8.52am) 18 (6.37pm) 27 (1.42am)	
July	2 (6.25am) 29 (2.34pm)	25 (00.41am)	11 (2.07am)	11th to 23rd	1st to 10th 24th to 31st	5 (7.58am)	20 (7.22pm)	1 (9.16am) 15 (4.12pm) 28 (2.00pm)	9 (3.17am) 18 (3.41am) 26 (3.54pm)	1 (3.26pm) 11 (12.10pm) 20 (6.14am) 29 (00.02am)	4 (5.21am) 13 (6.59pm) 22 (8.17am) 31 (11.17am)	6 (4.03pm) 24 (11.01am)	
August	25 (8.31pm)	23 (11.36am)	9 (1.25pm)	7th to 19th	1st to 6th 20th to 31st	2 (07am)	29 (9.01am)	11 (8.23pm) 24 (9.11pm)	5 (11.25am) 14 (9.08am) 23 (00.18am)	7 (8.13pm) 16 (11.45am) 25 (8.31am)	10 (2.13am) 18 (2.42pm) 27 (7.23pm)	2 (11.54pm) 12 (6.12am) 20 (6.37pm) 30 (7.55am)	
September	22 (00.12am)	22 (1.24am)	7 (11.39pm)	4th to 16th	1st to 3rd 17th to 30th	26 (3.16pm)	10 (5.40pm)	8 (4.38am) 21 (4.43am)	1 (7.57pm) 10 (4.05pm) 19 (7.08am) 29 (3.57am)	4 (5.23am) 12 (5.32pm) 21 (4.00pm)	6 (11.23am) 17 (00.30am) 24 (2.58am)	8 (2.31pm) 17 (00.30am) 26 (3.26pm)	
October	19 (2.41am)	21 (5.55pm)	7 (9.18am)	1st to 13th 28th to 31st	14th to 27th	24 (5.01am)	8 (6.06pm)	5 (2.50pm) 18 (10.04am)	8 (1.30am) 16 (12.44pm) 26 (10.48am)	1 (2.29pm) 10 (1.25am) 18 (10.14pm) 28 (10.17pm)	9 (9.29pm) 12 (2.26am) 21 (9.38am) 31 (6.50am)	6 (00.47am) 14 (6.01am) 23 (10.08pm)	
November	15 (6.01am)	20 (12.17pm)	5 (6.49pm)	1st to 9th 25th to 30th	10th to 24th	20 (8.18am)	6 (3.59am)	1 (11.16pm) 14 (12.08pm) 29 (3.03am)	4 (12.36pm) 12 (6.37pm) 22 (4.49pm)	6 (11.49am) 15 (5.53am) 25 (4.29am)	8 (11.16am) 17 (3.37pm) 27 (2.09pm)	2 (11.29am) 10 (1.05pm) 20 (4.16am) 29 (8.35pm)	
December	12 (12.31pm)	20 (7.13am)	5 (4.44am)	1st to 6th 22nd to 31st	7th to 21th	17 (11.39am)	4 (4.46pm)	11 (1.04pm) 26 (3.33am)	1 (11.20pm) 10 (2.25am) 19 (10.53pm) 29 (7.43am)	3 (11.16pm) 12 (10.22am) 22 (10.09am) 31 (9.25am)	5 (10.17pm) 14 (9.43pm) 24 (7.48pm)	7 (10.40pm) 17 (10.28am) 27 (3.12am)	

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Fig. 1: Biodynamic planning calendar

Biodynamic Preparations

The preparations are broadly divided into two groups. The first group consists of the field spray preparations BD 500 and BD 501, while the second group consists of compost preparations, such as, BD 502–507. The ninth preparation, BD 508, is mainly used under wet conditions to protect crops from fungal diseases.

BD 500: Cow Horn Manure- It is prepared from cow dung buried inside cow horns during winter. The resulting humus-like material is dynamized and applied to the soil to improve fertility, biological activity and root growth.

BD 501: Cow Horn Silica- It is prepared from finely ground quartz buried inside cow horns from spring to autumn. It is sprayed on the above-ground parts of plants to support growth and vitality.

BD 502: Yarrow- It is prepared from yarrow (*Achillea millefolium*) flowers and is used in compost. It supports trace element availability and nutrient processes.

BD 503: Chamomile- It is prepared from chamomile (*Matricaria chamomilla*) flowers and cow intestine. It helps to retain nutrients and stimulate soil biological activity.

BD 504: Stinging Nettle- It is prepared from dried stinging nettle (*Urtica parviflora*). It supports soil structure and the balance of important nutrients.

BD 505: Oak Bark- It is prepared from oak bark placed inside a cow skull. It is traditionally used to support plant health and reduce fungal problems under wet conditions.

BD 506: Dandelion- It is prepared from dandelion (*Taraxacum officinale*) flowers and is used as compost preparation. It supports soil biological activity and nutrient availability.

BD 507: Valerian- It is prepared from valerian flower juice and used in compost. It improves phosphorus utilization and frost protection.



Fig.1:BD808,Horsetail herb

Fig.2:BD506, Dandelion

Fig.3: BD500, Cow horn manure

Conclusion

Biodynamic farming represents a holistic and regenerative approach to agriculture integrating soil, crops, livestock, biodiversity and natural resources as interconnected components of a living farm system. It aims to improve soil fertility, organic matter, microbial activity and ecological stability through practices such as composting, nutrient recycling, the use of biodynamic preparations and the conservation of biodiversity. Biodynamic farming can contribute to greater resilience of agricultural systems under changing climatic conditions by enhancing soil carbon storage and water-holding capacity. Although some biodynamic practices, particularly those associated with cosmic rhythms and pepping, require further scientific validation, the system provides an integrated framework for reducing dependence on external inputs and strengthening ecological sustainability. Therefore, biodynamic farming has the potential to contribute to climate-resilient and sustainable agriculture through its emphasis on healthy soils, efficient resource recycling and long-term farm sustainability.

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