



World Soil Day 2024

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Background:

World Soil Day is celebrated annually on December 5th to highlight the critical role of healthy soil in sustaining life. The United Nations established this day to emphasize the link between soil health and overall well-being. But why is it necessary to draw attention to soil every year? The answer is simple: the state of our soil directly impacts our planet's ecosystems, natural resources, biodiversity, and people. Recognizing this, the International Soil Science Association initiated the first World Soil Day on December 5, 2002, to raise global awareness about soil health and promote sustainable management practices. Later, in June 2013, the United Nations General Assembly officially designated December 5, 2014, as the first UN-recognized World Soil Day, a tradition that continues annually.

Vaagdhara actively facilitate to the members of Krishi evam Adivasi Swaraj Sangthan, Gram Swaraj Sangthan and Sakshin Samuh in this celebration across 1168 villages. The organization focuses on educating communities about soil conservation through various activities, including awareness rallies, dialogue meetings to motivate community for soil conservation and improvement in soil health, soil worship, Oath ceremony etc.

Theme of World Soil Day-2024:

World Soil Day 2024 embraced the theme, "Caring for Soils: Measure, Monitor and Manage" emphasizes the need for accurate soil data and information to better understand soil characteristics and support informed decision-making for sustainable soil management. The goal of World Soil Day 2024 is to promote soil health, conservation measures, and community awareness by fostering collaboration between local communities and administrative bodies. Through sustainable practices, we can ensure the long-term health of our soil and water – securing food production and environmental stability for future generations. 95% of our food depends on soil and water. Soil regulates the supply of water, heat, and nutrients, enabling biomass production, while water dissolves essential trace elements in the soil, making nutrients accessible to plants. This symbiotic relationship forms the foundation of our ecosystems. However, this delicate system is under threat. Human economic and agricultural activities are accelerating land degradation, leading to soil erosion, reduced crop yields, and increased flooding – all of which put immense pressure on our water resources and food supply.

To counter these challenges, it is crucial to adopt sustainable soil management practices. Methods such as reducing deep plowing, practicing crop rotation, increasing organic matter, minimizing landfilling, and planting on ridges help maintain soil structure and biodiversity while reducing strain on natural resources.

Material Preparation

Vaagdhara prepared a guide in advance to organize a World Soil Day festival in the villages of the community. On the expertise of the facilitators and the members of the organization, a guideline was prepared which included the history and the outline of the event, possible activities, collection of various facts and information related to soil, etc. With the support of FAHO, IECs were created on the following topics: (1) Importance of soil data (2) What is soil data (3) 6 reason why soil data matters (4) Innovative soilutions for better soil data.

Event Preparations

To celebrate World Soil Day on a large scale, prior preparations for the campaign were made. These included: To ensure the successful organization of World Soil Day, all facilitators, including implementation team members, block officers, and team leaders, were provided with essential information. This included the significance of the event, planned activities, and strategies to enhance community engagement. Additionally, IEC materials, banners, and participant list forms were distributed for proper event documentation. The team also received detailed insights into the social, economic, environmental, and biodiversity impacts of soil, along with comprehensive training on the sustainable management of soil and water.



Capacity Building in the Villages

In the week leading up to "World Soil Day", facilitators contacted with CBO members of 1,168 villages under their care to engage and prepare local communities for the celebrations. They informed residents about the event and encouraged them to bring soil on the day of the program.

To enhance awareness, facilitators also distributed posters designed by Vaagdhara based on this year's theme. Additionally, a village-specific program was collaboratively planned with residents, ensuring participation from all parts of the village. Members of the Gram Swaraj Samooh and Saksham Samooh were entrusted with the responsibility of mobilizing community involvement.

Organization of World Soil Day

On the 5th of December 2024, World Soil Day was organized under the leadership of the organization in 1167 villages of Rajasthan, Madhya Pradesh and Gujarat. The celebrations began in the morning when the members of the Saksham Samuh, the Gram Swaraj Samuh and the Bal Swaraj Samuh of the villages joined hands with the villagers and took part in the morning procession. During the morning procession and awareness rally, slogans related to soil and water conservation were raised and folk songs that carried the messages of awareness were sung. The rally passed through the main parts of the village and reached the centre of the village. There, the children, youth and elders united with enthusiasm and clay in their hands.

No.	Participant Details	Female participation	Male participation	Total participation
1	Krishi Evam Adivasi Swaraj Sangthan	179	300	479
2	Saksham Samuh	21910	0	21910
3	Gram Swaraj Samuh	5155	10310	15465
4	Bal Swaraj Samuh	11599	14177	25776
5	Community members	3480	3866	7346
Total		42,323	28,653	70,976

Rangoli

At the event venue, participants created beautiful Rangoli designs using the soil, seeds, flowers, grains, and vegetables they had brought. As part of the tradition, villagers filled an earthen pot (Kalash) with water, placed it at the center of the piled-up soil, and topped it with a Shriphal (coconut). In tribal culture, the Kalash and coconut symbolize prosperity and are traditionally worshipped as a mark of respect and gratitude to nature.



Discussion on Soil and Water

After creating the Rangoli, Vaagdhara members organized discussions to educate villagers on the significance of soil and water in tribal culture. Traditional practices and folk songs related to soil were used to convey these messages effectively. Additionally, women from the Saksham Samuh spoke about the challenges of soil and water conservation caused by unsustainable agricultural practices. The key issues discussed were as follows:

Land Preparation: Proper land preparation is crucial for ensuring healthy crop growth and maximizing yield. The process involves loosening the soil to improve aeration, water infiltration, and root penetration while maintaining the natural soil structure.

Soil Loosening: The soil should be loosened adequately to allow roots to grow deeper and absorb nutrients effectively. However, excessive ploughing should be avoided as it can lead to soil erosion, loss of essential microorganisms, and disruption of the soil's natural structure. The depth of ploughing should be just enough to break hard soil layers without harming beneficial soil organisms.

Use of Bullocks: Traditional methods of ploughing using bullocks are beneficial for minimal tillage. This method helps in maintaining soil fertility and structure while reducing soil compaction. It is also an eco-friendly and cost-effective approach that small-scale farmers can adopt, especially in rural areas.

Avoiding Heavy Machinery: The use of heavy machinery for land preparation should be minimized as it compacts the soil, reducing its porosity and water-holding capacity. Compacted soil restricts root growth and lowers crop productivity. In regions where machinery is necessary, adopting conservation tillage techniques such as strip tilling or controlled traffic farming can help reduce soil compaction while still preparing the land effectively.

By following proper land preparation techniques, farmers can ensure a balanced soil ecosystem, promoting sustainable and productive agriculture.

Irrigation: Effective irrigation practices are essential for maintaining optimal soil moisture levels and supporting healthy crop growth, especially in areas where water availability can be inconsistent. Advanced irrigation systems, water management structures, and protective measures can greatly enhance agricultural productivity and sustainability.



- **Advanced Irrigation Methods:** Adopting modern irrigation techniques like drip and sprinkler irrigation is crucial for efficient water usage. Drip irrigation delivers water directly to the plant roots, reducing water wastage through evaporation or runoff. This system is highly efficient and ideal for areas with limited water resources, as it ensures the plants receive adequate moisture while minimizing water loss. Similarly, sprinkler irrigation mimics natural rainfall by distributing water across the field through a network of pipes and sprinklers, ensuring even coverage. These methods also promote healthy plant growth, as they prevent waterlogging and soil erosion caused by traditional flood irrigation.



- **Dams and Khantis:** Water management structures such as dams and khantis (small reservoirs or water storage systems) play a significant role in controlling water flow. Dams are used to store rainwater or river water during the wet season, which can then be released gradually during the dry season to ensure consistent irrigation. Khantis are smaller, localized structures designed to capture and retain rainwater, often built in rural or arid regions. These systems help regulate water distribution, ensuring that crops receive sufficient moisture throughout the growing period without overwatering.



- **Planting Trees and Plants at the Ridge:** Planting vegetation, particularly trees, along ridge lines or waterways serves multiple purposes in water and soil management. These plants help preserve moisture in the soil by reducing evaporation, especially in areas prone to high temperatures. The roots of the plants help bind the soil together, preventing it from being washed away during heavy rainfall or flooding. This also helps mitigate soil erosion, which can be a serious issue in areas with poor soil retention. In addition to protecting soil health, these plants act as windbreaks, reducing the impact of wind erosion and improving the overall microclimate of the farming area.

By incorporating these irrigation techniques and water conservation measures, farmers can optimize their water use, ensure better crop yields, and contribute to sustainable farming practices that help protect the environment and reduce resource wastage.



Crop and Seed Selection

- Select local crops according to the soil condition (light soil or heavy soil) and use only local seeds.
- Choose crops which are suitable for the local environment and available resources.
- Crops like cotton or sugarcane require a lot of water and nutrients which makes them less suitable than other crops.
- Adopt crop rotation, do not plant the same type of crop continuously on one field.
- Adopt mixed farming in which one crop complements another crop.



Soil Coverage

- Introduce cover crops like grass or mash on the fields.
- Plant perennial crops.
- Plant permanent bushes on the ridge like custard apple or henna as they will help to prevent soil erosion and generate additional income.



Pest Management

- Use organic pesticides and organic fertilizers.
- The crop needs proper nutrient management to grow accordingly.
- Do not use poisonous chemical fertilizers and pesticides in the field.

Members of Gram Swaraj Samuhs made the community aware of the multiple dimensions of soil. The following points emerged from different villages which were discussed in detail by the community:

Soil is the foundation of nutrition

- Today, more than 2 billion people suffer from micronutrient deficiencies.
- Healthy soil is essential for a healthy life. Life is not possible without it.
- Out of the 18 nutrients essential for plant growth and human health, 15 are obtained from soil.
- Nutritious soil increases disease resistance in crops.
- Different soil retains water differently (e.g. sandy soil absorbs less water than black soil).
- Good soil increases the speed of fruit ripening which increases the production.
- Nutritious soil enhances the quality and taste of fruit.
- Preserving soil biodiversity increases the fertility of soil.
- Soil helps to prevent climate change and to reduce its impacts.
- Soil aids climate change mitigation by absorbing carbon from the atmosphere.
- Through sustainable soil management, soil can absorb and store more carbon.
- The removal of the vegetation cover causes erosion of the top layer of the soil.

The youth participating in the program added further interesting facts related to soil and shared them with the community:

- More microorganisms live in a teaspoon of soil than there are people on Earth.
- Earthworms make the soil fertile by eating 15 tons per acre every year.
- Soil loses its capability to store carbon if it's not properly managed.
- Soil consists of 45% minerals, 30% air, 20% water and up to 5% organic matter.
- Farmers can convert their soil into organic soil within three years.
- Soil is a natural water purifier and keeps the groundwater clean.
- One-third of the soil worldwide is degraded due to improper soil management.

Letter of request:

After the discussion, the participants reflected on the status of soil and water in their village and prepared a letter of request to the community and the government to help them acquire soil and water independence. The requests have been summarized as follows:

No	Discussion points	Appeal to the community	Appeal to the government
1	Planting and conserving trees	Plant multi-purpose trees and plants on the ridges of your fields and in vacant places around your house.	• Develop community pastures and forests. • Take preservation actions.
2	Erosion control	Plant mullein in your fields. Especially in sloping fields.	Under the Mahatma Gandhi NREGA, bunds are to be planted in all the fields of the village.
3	Soil and water storage	-	Constructs dams and walls around the fields to stop the soil from flowing away. That would also protect the water supply of the village.
4	Mining ban	The community should stop mining and stand up against the administration.	Make provisions for a complete ban on illegal mining and punish offences strictly.
5	Agricultural system improvement	Adopt useful farming systems instead of carrying on useless ones.	Provide financial assistance to encourage farmers to promote soil conservation farming systems.

6	Field irrigation	Adopt drip or sprinkler irrigation.	Include marginal farmers in the irrigation scheme by expanding drip or sprinkler irrigation facilities and increasing government grants.
7	Ban on poisonous chemicals	Stop using toxic chemicals and pesticides in various food crops.	Ban the use of poisonous chemicals by the state and local governments.
8	Cross-pollinated agriculture	Adopt only local seeds and organic fertilizers and pesticides in the fields.	• Establish seed banks at the district level. • Ensure the availability of organic fertilizers and pesticides. • Support organic products at the block level by creating easily accessible markets.
9	Environmental protection	Farmers should protect the environment.	Aid farmers financially that grow local crops and plants.

Soil Worship:

The community has always been worshippers of nature, e.g. soil, trees, plants, animals, forests or rivers, as these are considered invaluable gifts of nature to the community.

On the occasion of World Soil Day, the Samvad Sabha was concluded with the Aarti of Mother Earth and everyone took a small amount of clay with them as Prasad. On this occasion, saplings were also planted symbolically in some villages.

Pledge for Soil and Water Conservation

All the participants took a pledge to build, enhance and conserve soil and water by repeating various conservation practices and behaviours.



Media Coverage

World Soil Day was celebrated with enthusiasm in all villages in Rajasthan, Madhya Pradesh and Gujarat. The information about the celebrations was shared with various media groups. All of the main newspapers of Rajasthan, Madhya Pradesh and Gujarat have prominently published the events of World Soil Day. These newspapers also include the country's largest Hindi-speaking newspaper group Dainik Bhaskar, Rajasthan Patrika, Sandesh, Navjyot, Gujarat Sandesh, Dahod Live, Jan Jagran Sandesh, Daichanak Bhaskar and newspaper of Madhya Pradesh and Rajasthan Pachatraka.



मृदा दिवस पर ली मृदा संरक्षण की शपथ

मिट्टी के बिगड़ते स्वास्थ्य को बड़ी बुनौती के रूप में किया स्वीकार

बन्सवारा, 07 दिसंबर 2024

विश्व मृदा दिवस पर बन्सवारा संखल को और से मृदा के स्वास्थ्य और संरक्षण के लिए स्वयंसेवक समूहों का संघर्ष करती हुई मिट्टी के स्वास्थ्य को जगह दिया गया। हजारों स्वयंसेवकों ने मृदा मिट्टी का पूजन करके मृदा संरक्षण का संकल्प लिया। मृदा मिट्टी के बिगड़ते स्वास्थ्य को बड़ी बुनौती के रूप में किया स्वीकार। मृदा मिट्टी के बिगड़ते स्वास्थ्य को बड़ी बुनौती के रूप में किया स्वीकार। मृदा मिट्टी के बिगड़ते स्वास्थ्य को बड़ी बुनौती के रूप में किया स्वीकार।



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