World Soil Day - 5 December: Healthy Soil Starts at Home

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When people think about protecting the environment, forests, oceans, wildlife, and climate change often come to mind. However, one of the most important parts of our natural environment is beneath our feet. Soil supports plant growth, provides habitats for diverse organisms, helps regulate the water cycle, and plays a key role in food production.



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Having healthy soil is essential to both natural ecosystems and human communities. According to National Geographic (n.d.), soil grows 95% of our food, while Silver et al. (2021) note that approximately 40% of global agricultural land provides over 50% of the world's food. Soil not only provides food for humans, but also supports biodiversity, stores carbon, and helps filter water as it moves through the environment. Nevertheless, soil is a limited resource, and the degradation of soil quality and conservation has caused a reduction in its functions (Construction Industry Research and Information Association, 2023).

World Soil Day is observed annually on December 5 and provides an opportunity to recognise the importance of this resource. It also encourages individuals, households, communities, farmers and governments to consider day-to-day decisions that could affect soil health. For Hope Inc. (Householders' Options to Protect the Environment), the day also offers an opportunity to explore how practical individual and household choices can contribute to responsible and sustainable environmental stewardship.

How did World Soil Day begin?

World Soil Day developed from international efforts to increase awareness of the importance of soil and promote its sustainable management. World Soil Day was endorsed by the Food and Agriculture Organization of the United Nations (FAO) and the United Nations General Assembly; this day became official as an International Day in 2014 (Food and Agriculture Organization of the United Nations, n.d.).

Since then, World Soil Day has become an international platform for education, awareness, and action. Each year, this day encourages individuals to understand the challenges facing soil, considering solutions and taking action in pro of soil health. The broader objective of this day is to promote healthy soils as the foundation of food security, ecosystem protection, and human well-being.

World Soil Day is not simply a celebration of soil, but a reminder that the condition of land affects many other environmental issues, from biodiversity loss and water pollution to agricultural productivity and the resilience of communities.

Why healthy soil is important

Soil is much more than the material that supports gardens and crops. It is a living environment containing bacteria, fungi, earthworms, insects, and other organisms that contribute to the decomposition of organic matter and the cycling of nutrients. These organisms help maintain soil structure and support the processes that allow plants to grow.

Moreover, when healthy soil has a good structure and sufficient organic matter, it can absorb and retain water, allowing it to become available to plants over time. By contrast, compacted or degraded soil may absorb less water, increasing surface runoff and the risk of erosion. Surface runoff can carry sediment, fertilisers and other pollutants into drains, creeks, rivers and even coastal environments.



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Soil also appears and is an important element of different recreational spaces such as gardens, parks, farms and natural landscapes, all of which depend on interactions between soil organisms, plants and other living things. When the soil is degraded, these relationships can be disrupted, affecting the wider ecosystem.

In Australia, protecting soil is particularly relevant because many landscapes experience dry conditions, periods of drought, and heavy rainfall events. Disturbing land unnecessarily or allowing soil to remain exposed can also reduce the amount of healthy soil available to support vegetation and absorb rainwater. All these problems demonstrate that soil conservation is not solely the responsibility of farmers or land managers, but also of householders, individuals, and local communities.

What can individuals do on World Soil Day?

World Soil Day provides a useful reason to take practical steps at home. Individuals do not need a large garden, specialised equipment or extensive environmental knowledge to begin making a difference. Small changes can help protect soil, reduce waste and encourage more sustainable use of resources.

1. ***Start composting organic waste***

A practical way to connect household waste reduction with soil health is composting. Individuals can compost fruit, vegetable scraps, coffee grounds, suitable garden clippings, and other compostable materials, which can be turned into organic matter rather than sent to landfill. When properly managed, compost systems can be used in a garden, a suitable worm farm, or another system that fits their living arrangements. For those who do not have a garden, a community composting program could be an adequate alternative or even share sustainable organic material with someone who compost. Follow local waste guidelines and avoid adding unsuitable materials, such as meat or dairy products, to systems not designed to handle them.

2. ***Reduce unnecessary fertilisers and chemicals***

Fertilisers can support plant growth when used appropriately, but applying more than plants require can contribute to nutrient pollution. Rain can wash excess nutrients from gardens into stormwater drains and waterways. Individuals and householders can reduce the risk by following product instructions, considering whether fertiliser is needed at all and using compost to improve soil where suitable.

Other products that should be used carefully are pesticides and herbicides, and only when strictly necessary. Choosing plants suited to local conditions and encouraging beneficial insects can reduce the need for chemical treatments.

3. ***Plant native vegetation***

Plants help protect soil by holding it in place through their roots and reducing the impact of wind and rainfall. Choosing native plants suited to the local area can support biodiversity while creating gardens that are better adapted to local climate and conditions. Trees can also provide shelter for wildlife and help create healthier urban green spaces. However, before planning to plant or planting, householders should consider local soil conditions, available space, and plants' water requirements.

4. ***Reduce waste and prevent pollution***

Soil can be contaminated by inappropriate disposal of household chemicals, oils, paints, and other hazardous materials. Instead, householders should use local council guidance to find appropriate disposal or collection services. Reducing waste is also important; reusing materials, recycling correctly and avoiding unnecessary consumption can help reduce environmental pressures associated with extracting, processing and disposing of

resources. These actions may appear directly connected to soil, but they form part of a broader approach to reducing pollution and using resources responsibly.

5. ***Choose biodegradable plastics***

Individual actions can also help to stop plastic pollution, such as using reusable water bottles and grocery bags as well as recycling correctly. When disposable products are needed, good options are biodegradable, compostable, and home compostable options.

6. ***Learn about the soil in your local area***

World Soil Day is also a learning opportunity. Individuals could investigate local soil types, attend community gardening sessions, or visit a community garden; families can explore the organisms found in healthy soil. It is advised that people should avoid disturbing potentially contaminated soil. Where contamination is suspected, people should seek advice from the relevant council or environmental authority.

A small action with lasting value

World Soil Day reminds us that a healthy environment depends on resources that are not always appreciated. Soil helps food production, the plants and animals around us, the water cycle, and the functioning of ecosystems. Soil that is seriously degraded can be difficult and costly to restore. This 5 of December, householders and individuals can take the opportunity to learn more about the soil around them and choose a practical way to protect it. Starting small by just composting, keeping garden soil covered, reducing unnecessary chemicals, or sharing information with others may seem like small steps, but they can contribute to a wider sustainability culture for the environment we live in.

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