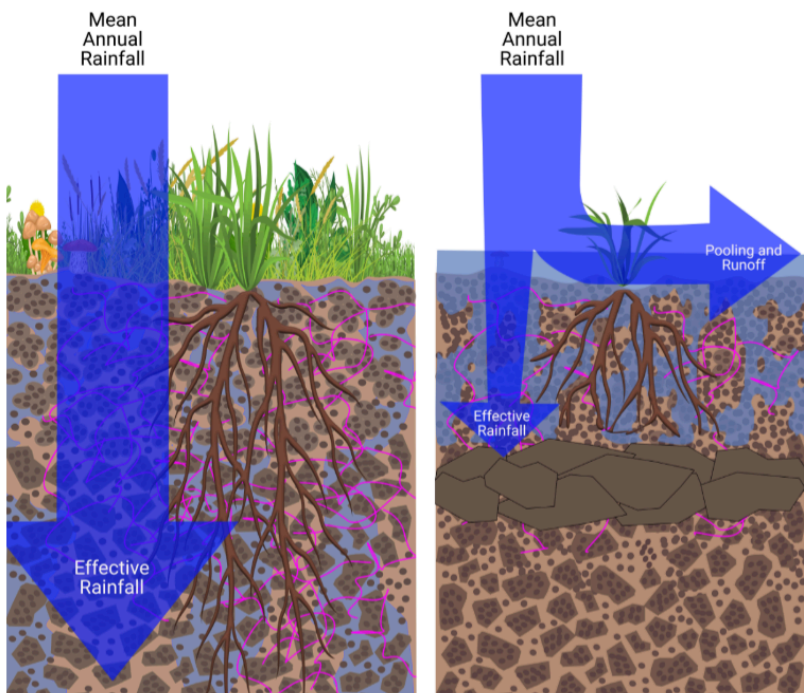


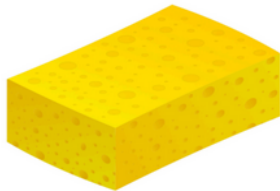
# Water Infiltration and the Soil “Sponge”



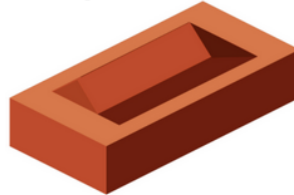
A 1% increase in organic matter in the top 30 cm of soil can increase water storage capacity by up to 354,000 litres per hectare for some soil types.

As shown in the image to the left, rainfall is most effective when it can be absorbed deep into the ground, and less effective when it pools and runs off.

**Soil Carbon "Sponge"**



**Compacted Soil "Brick"**



Good and poor water infiltration can be thought of as an absorbent soil “sponge” (through which water can infiltrate), and a compacted soil “brick” which cannot absorb water well.

There needs to be air, or “pore space” in between the organic matter to allow water to soak through. See the [Basics of Soil Biology](#) resource to learn more.

Good water infiltration is a sign of healthy soil and is essential to help mitigate unpredictable weather events, for example:

- Flooding can be reduced, as there is less water run-off and pooling when more water can be absorbed into the soil
- Droughts can have less negative impact on plant growth as there is water stored deep in the ground

## How to improve water infiltration on your farm

As explored in more detail in other resources, at least rotationally grazing your livestock but ideally adaptive multi paddock grazing (similar to mob grazing) helps

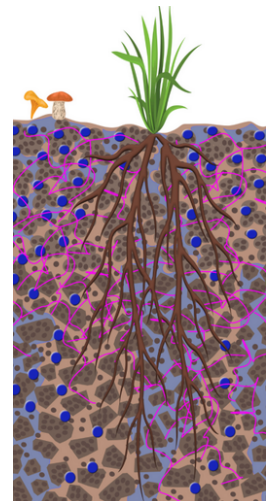
improve water infiltration as it allows for each section of your land to rest. These “rest periods” helps water infiltration in the following ways:

- Plants have time to recover and grow deeper, stronger roots into the ground. This also helps increase pore space in the soil which can help absorb water.
- There is more chance for other native species to grow in your pastures, which improves soil structure as a wider variety of soil microbes and invertebrates can be supported.
- The compaction of soil from the weight of the livestock on the land can be avoided, as areas are not overgrazed.
- Bare soil patches and low basal ground cover are avoided due to reducing the likelihood of overgrazing.

### How well can your soil absorb water?

You can learn a lot about the structure of your soil by doing an infiltration test on your farm. AHDB has an article which explains how to perform a simple [Water Infiltration Test](#) on your soil.

Another step by step guide can be found on the [Soilmentor website](#). They also explain other soil tests you can perform yourself to monitor the health of your soil.



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