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The Importance of
Soil Carbon

Worth its Weight in Water

About John

Director at Charton & Bang

10 years in agriculture

10 years working in composting

Nearly 1,000,000 m³ of compost made

Food sustainability and ecosystems in agriculture



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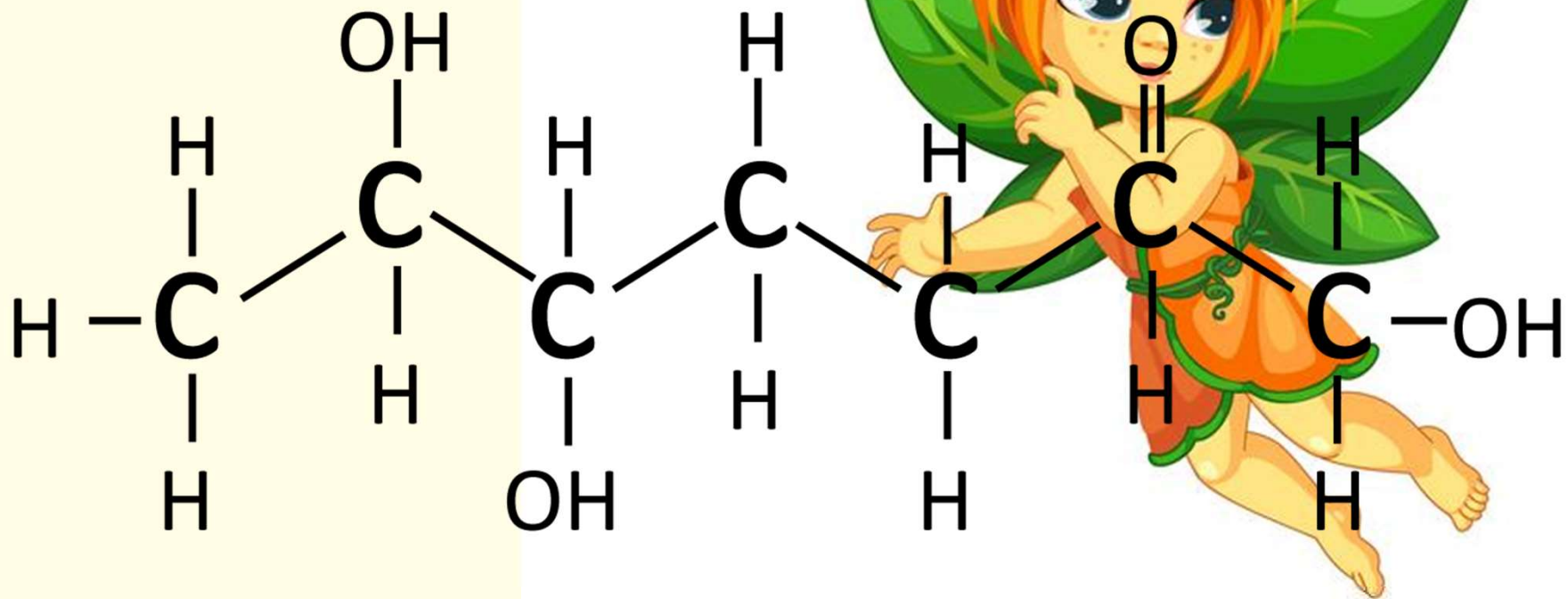


What is soil carbon?

Hippy fairy magic

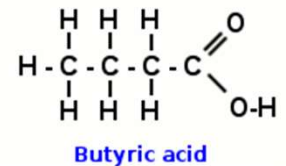
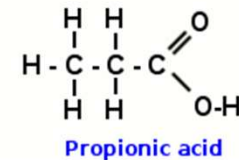
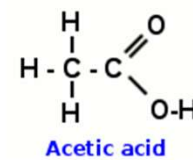
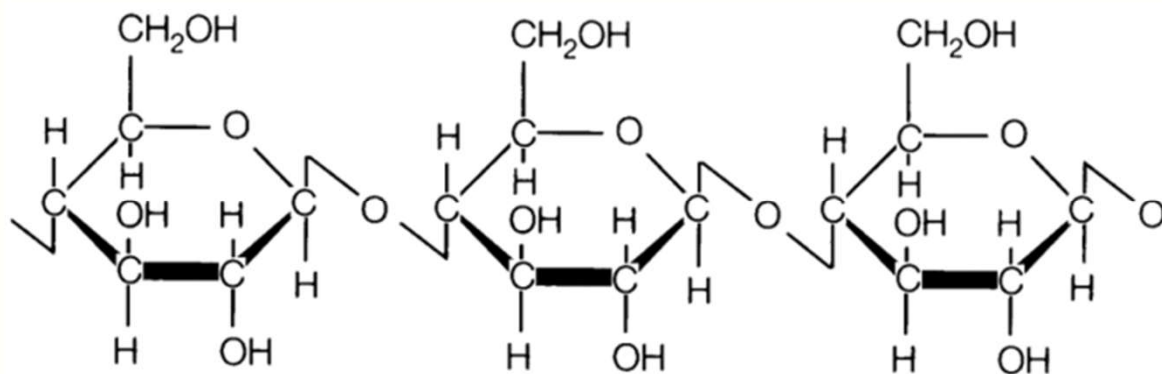
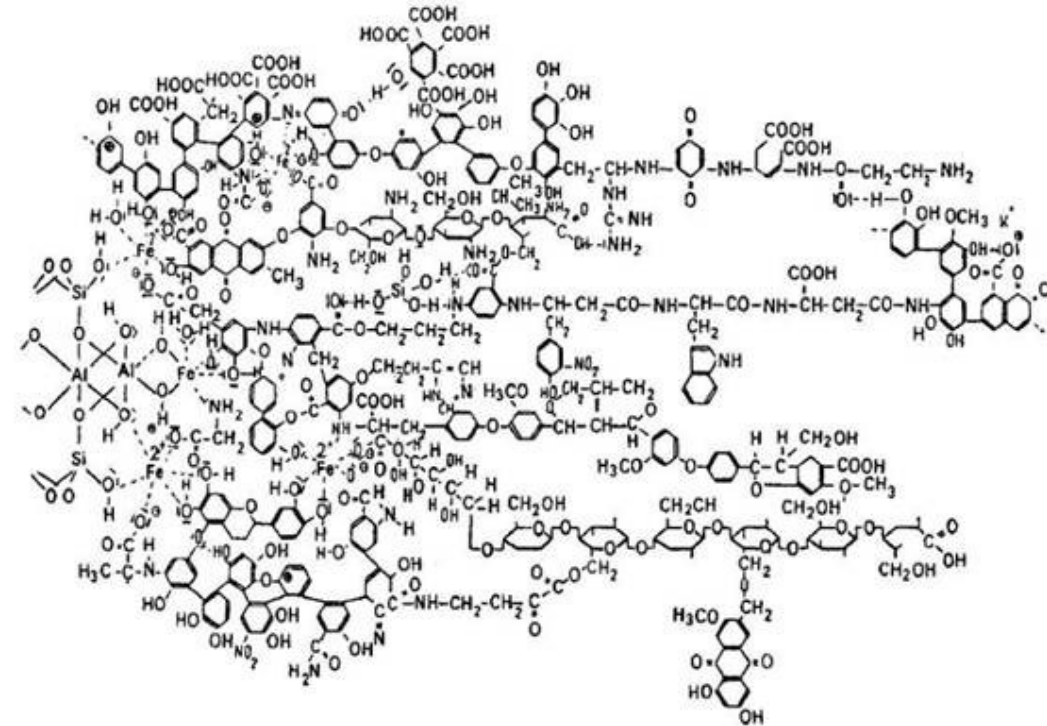
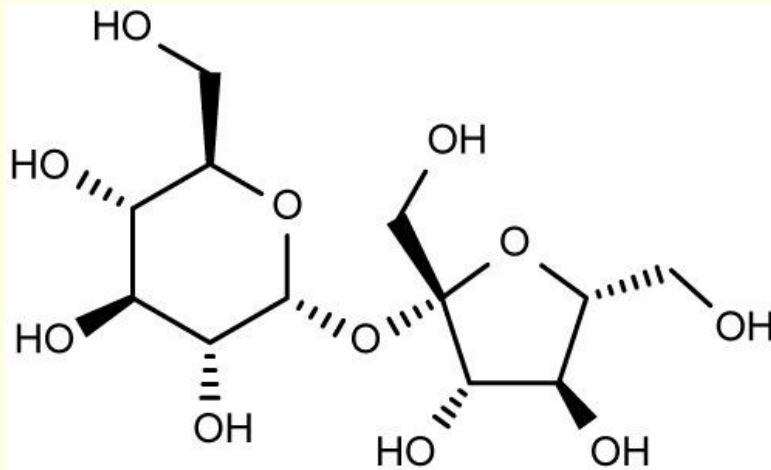
The backbone of every function in the soil

The backbone of living molecules



Soil carbon

Soil carbon is incredibly diverse



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What is it actually?

Living

Plant roots, fungi, bacteria, worms, insects

Dead

Recently deceased of the above plus plant sugars

Very dead

Chemically transformed – microbial decomposition, weathering and fire



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Where does it come from?

Plants take carbon from the atmosphere and pump it into the soil



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Soil Carbon and Soil Water



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Soil water

Too much

Too little

We don't have a word

The Goldilocks zone



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Soil water

Broaden the span of the Goldilocks zone



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How do we do that?

By building soil carbon



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How does soil carbon help?

By making better use of the water you have

Collecting more water

Holding more water

Giving more water

All of these are improved with increases in soil carbon

If you increase soil carbon, you increase soil water

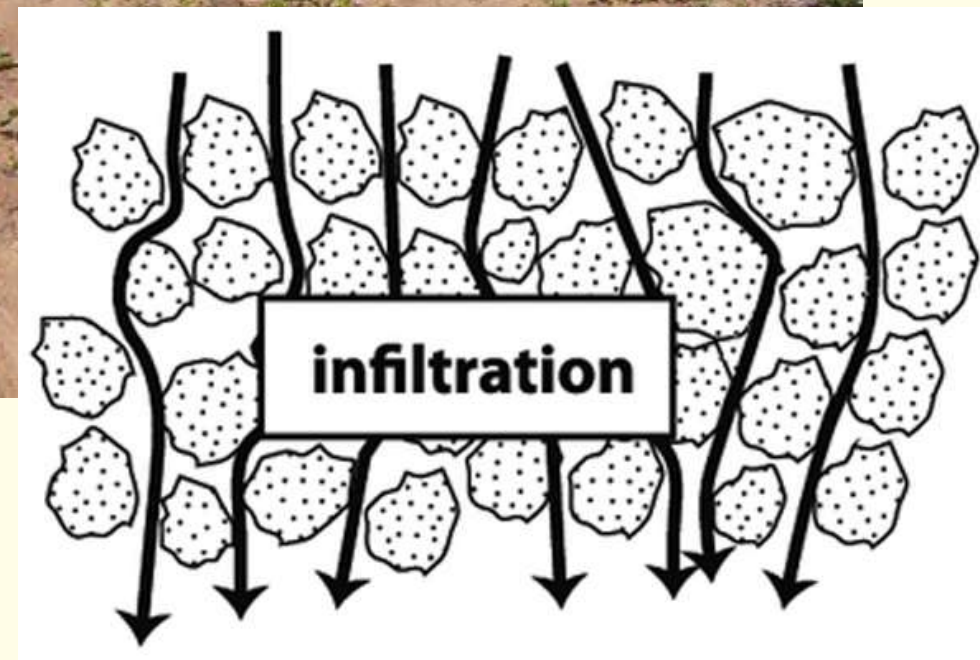
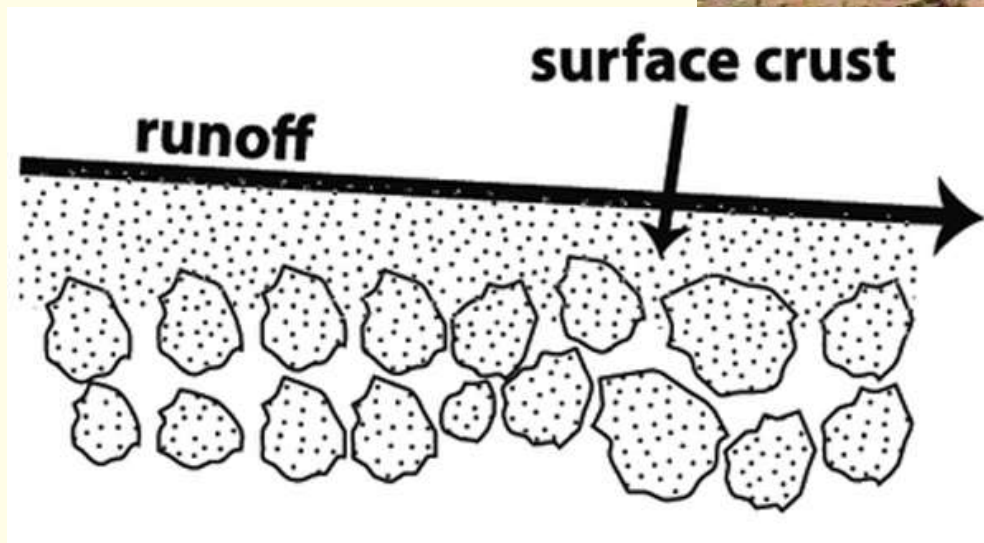


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Collecting more water

Reducing runoff

Opening up the soil – allowing rainfall in quickly



Collecting more water

Reducing runoff

Opening up the soil – allowing rainfall in quickly

Reducing water repellency





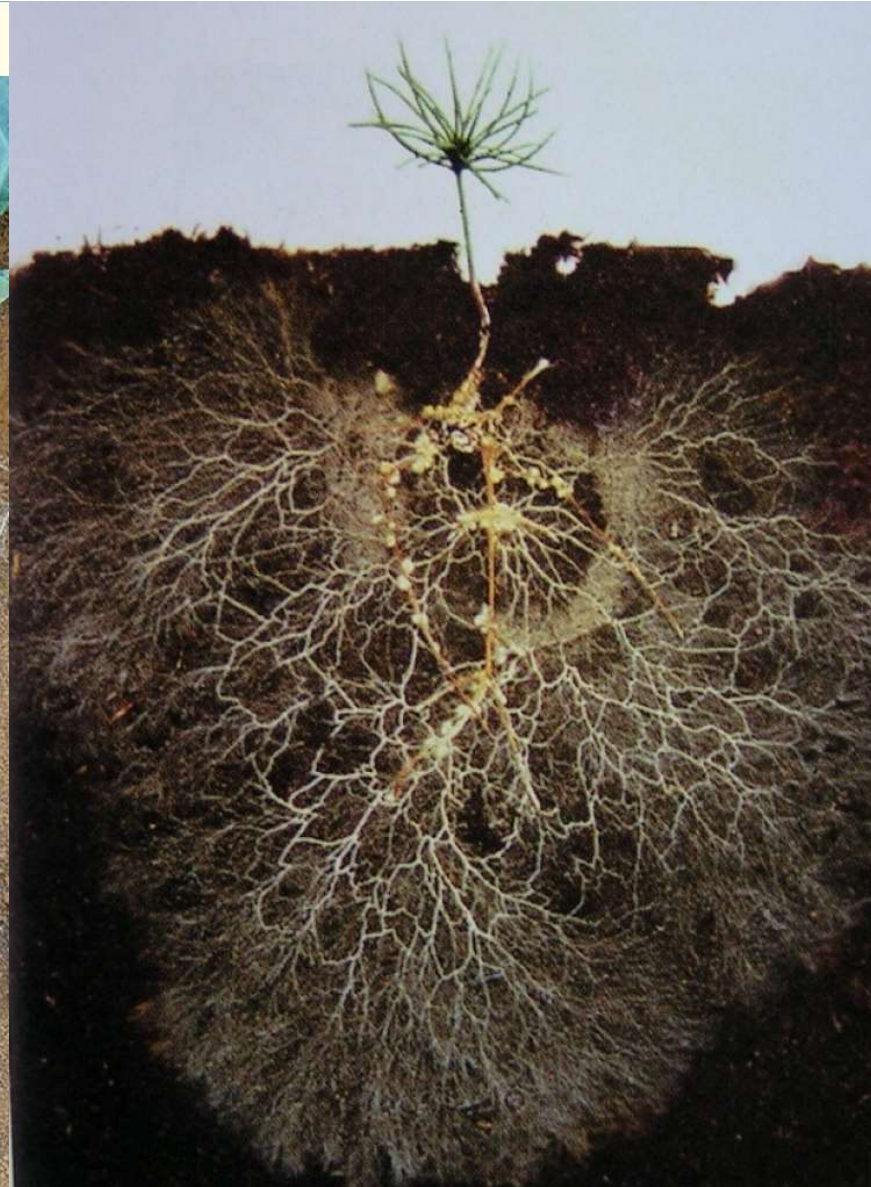
Giving more water

Making it easier for roots to push through

Stimulating the growth of roots

Increasing mycorrhizal fungi symbiosis

Reducing soil acidity barriers



Soil water benefits from carbon

Collecting more water

Holding more water

Giving more water

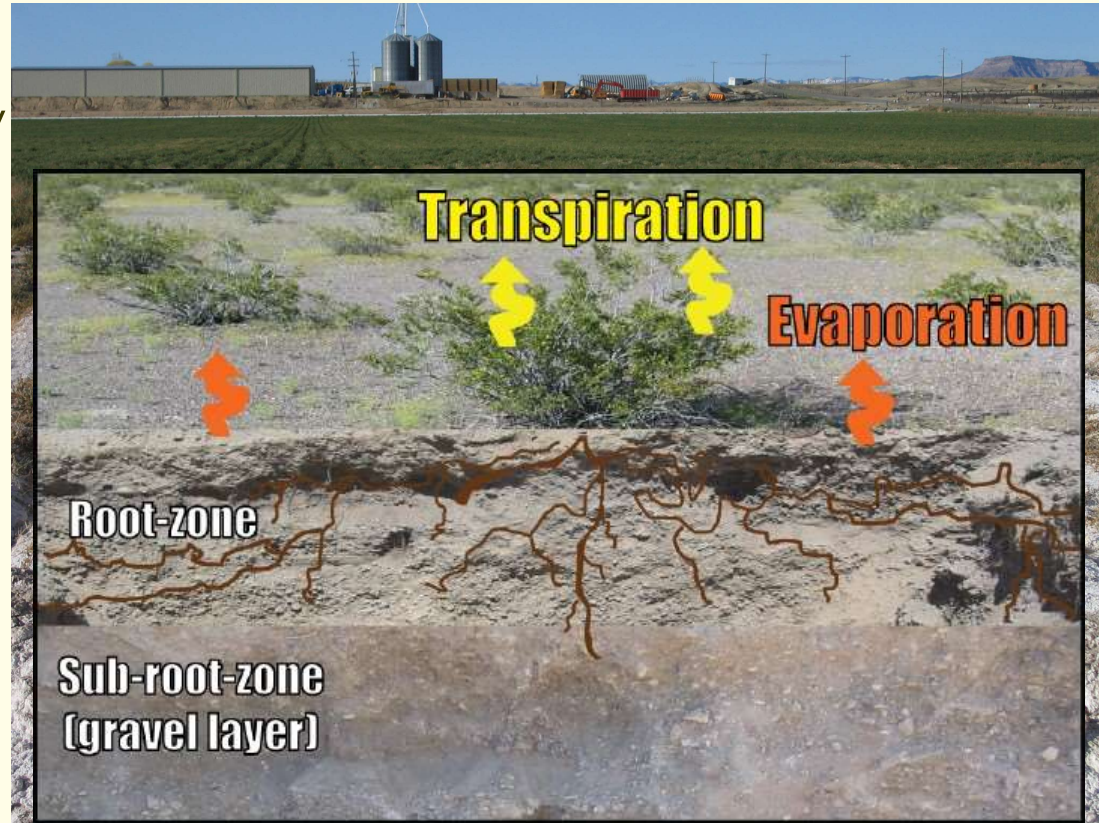


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Reducing losses

Reducing deep drainage - salinity

Reducing evaporation



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Goldilocks zone

Increasing soil carbon increases the goldilocks zone

More years will be okay

More years will be great

Collecting, holding and giving back more rainfall moves your farm to a higher rainfall zone

Increasing soil carbon increases profit and the value of your land



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Last pithy slide

Expanding the Goldilocks zone of soil water increases profit
and farm value

john@chartonbang.com.au



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