

ESTABLISHMENT FOR BETTER SOIL HEALTH



An insight into the soil health of fields is being investigated with the internationally recognised 'Tea bag test' – as an indicator of biological activity.

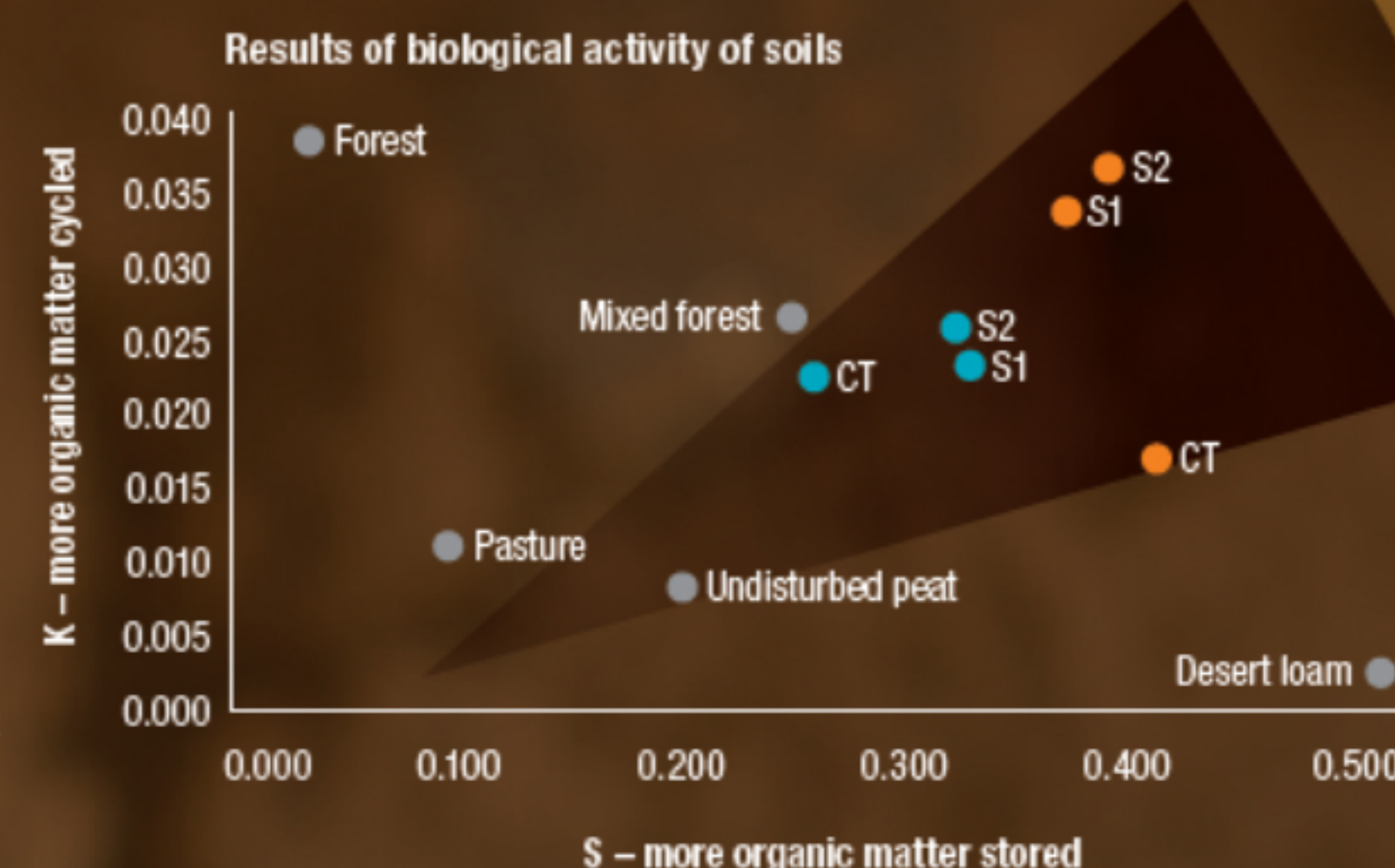
Burying bags of green tea and red tea in the soil and recording how quickly soil microbes break down the leaves enables an assessment of organic breakdown (the K factor) or the rate of stabilisation (the S factor).

SOIL CARBON CYCLING (2020)

K - gives some indication of how quickly soil nutrients would become available for crops

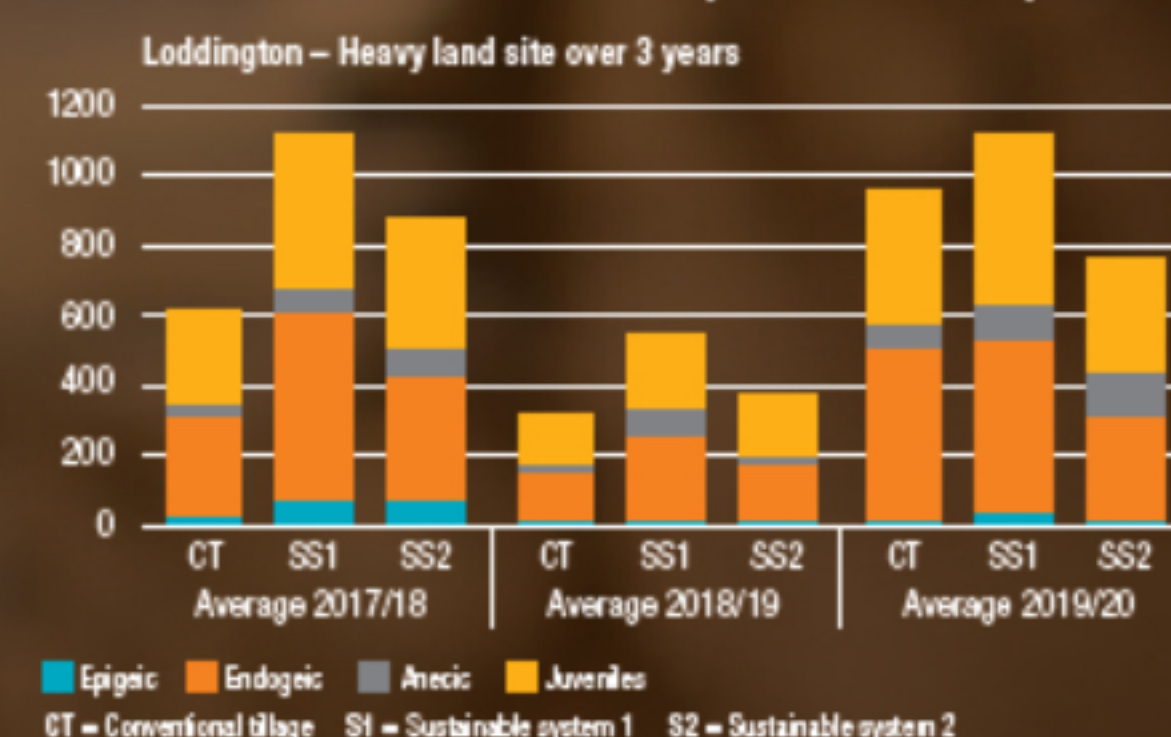
S - indicates a soils ability to retain and build up organic matter, rather than being released as CO₂

● E. Lenham ● Loddington ● World soils
CT = Conventional tillage S1 = Sustainable system 1 S2 = Sustainable system 2

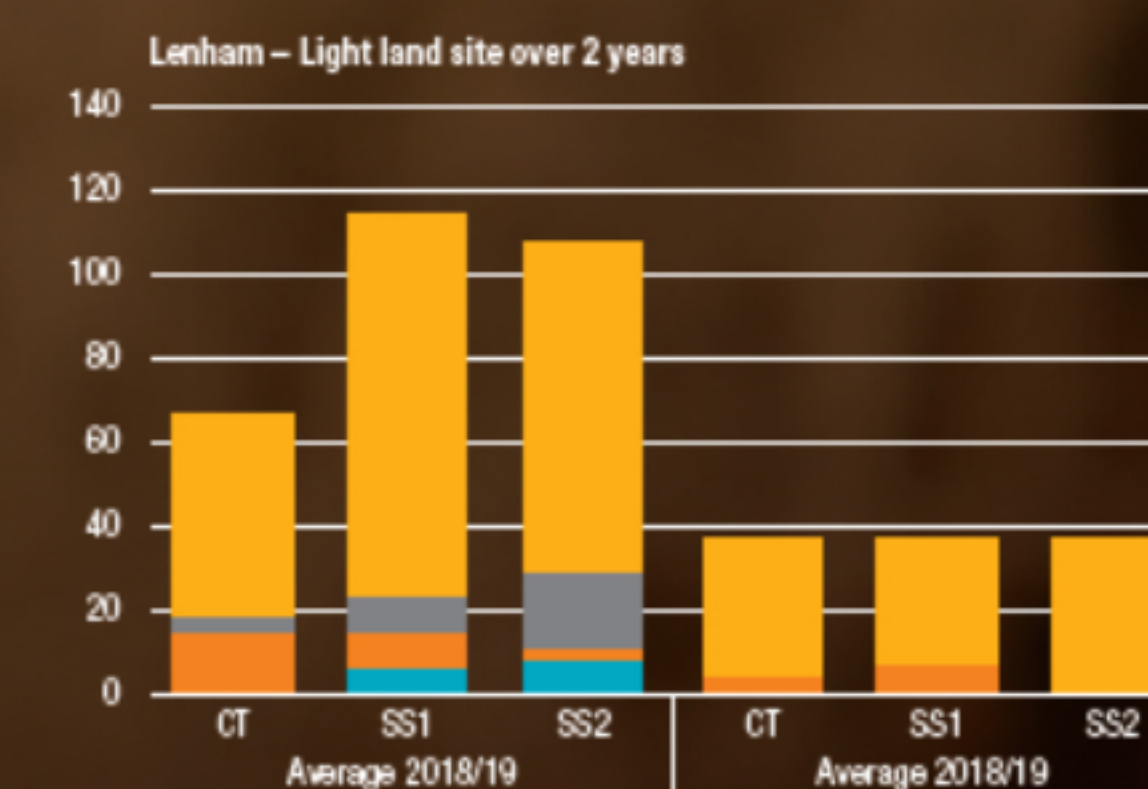


Earthworms play an essential role in the soil eco-system to recycle and incorporate organic matter as well as enhance structure. They are an important indicator of relative soil health.

Total number of earthworms per m² to a depth of 20 cm



Endogamic earthworms are the most abundant group. This group live deeper in the soil profile, with limited activity at the soil surface. Plough based systems will not only reduce compaction, aiding their movement, but also potentially introduce surface trash into their zone. This would provide them with a larger reservoir of food reserves allowing a larger population. Changes within the population greatly effect the total numbers.



On a lighter soil type total numbers of earthworms are lower than in a heavy soil type. Soil conditions are causing fluctuations on earthworm numbers between seasons.



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