

GROWING FLAX FOR CARBON CAPTURE

The Centre for High Carbon Capture Cropping (CHCx3) is a four-year, multi-partner research project that aims to help UK farmers capture more carbon and increase resilience to climate change. It is focusing on four major cropping groups, including the fibre crops, industrial hemp and flax.



Flax, *Linum usitatissimum*, is the same species as linseed, but different varieties are grown for fibre rather than oil. CHCx3 trials at Niab's Cambridge site has assessed quality and quantity of the flax biomass, and the crop's impact on soil structure, health, and carbon.

Soil structure

To assess soil structure, the Visual Evaluation of Soil Structure (VESS) score card was used. Compared to leaving soil as a weedy stubble, Figure 1 shows that soil structure can be improved in a single season by growing flax. However, there was little difference between varieties in how much the soil was improved.

Biomass

Above-ground biomass samples were taken from the freshly cut flax and repeated when it had retted. The percentage of the crop biomass that would be useable for fibre products was then calculated. Although the variety 'Avian' produced the highest fibre percentage, there were no statistically significant differences between varieties.

Next steps

CHCx3 is repeating the trial for a second year to provide a more robust dataset. At the end of the project, these data on biomass, soil, and carbon will be made available through the project website (www.carboncapturecropping.com) and publications.

There are a variety of emerging and maturing markets for flax. Scan the QR code to read the CHCx3 topic sheet on uses for fibre crops in bio-composites.



Figure 1. Visual Evaluation of Soil Structure (VESS) - mean score for flax varieties on a clay-loam soil (November 2025). Best score = 1, worst score = 5. The control was a weedy stubble. Trial site in Histon, Cambridge, UK. Flax seed provided by Elsoms Seeds. VESS Score card, SRUC www.sruc.ac.uk

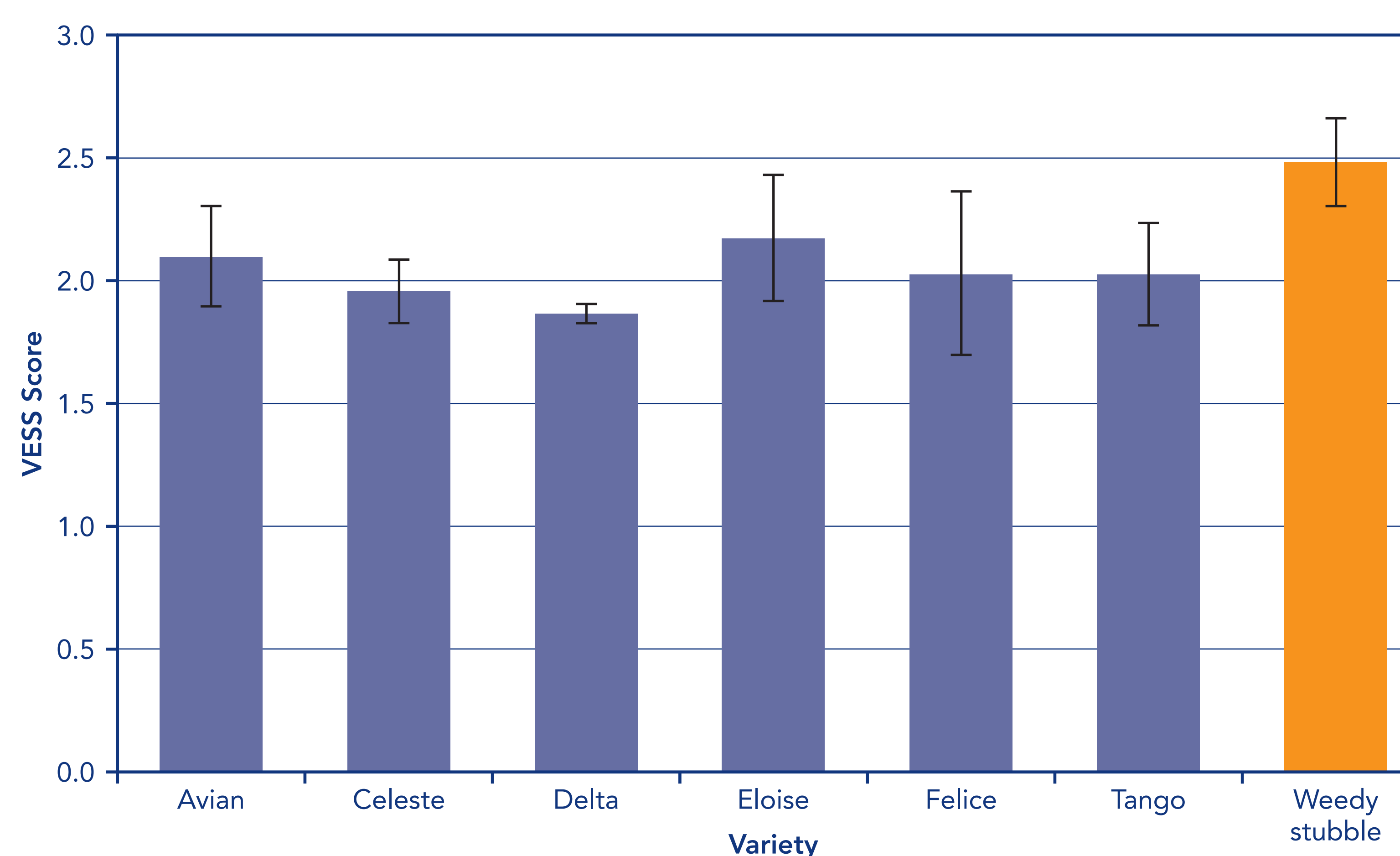


Figure 2. Average fibre percentage of flax varieties grown on a clay-loam soil. Flax harvested 4th September, retted samples taken in October 2025. Trial site in Histon, Cambridge, UK. Flax seed provided by Elsoms Seeds

