

GROWING FIBRE CROPS

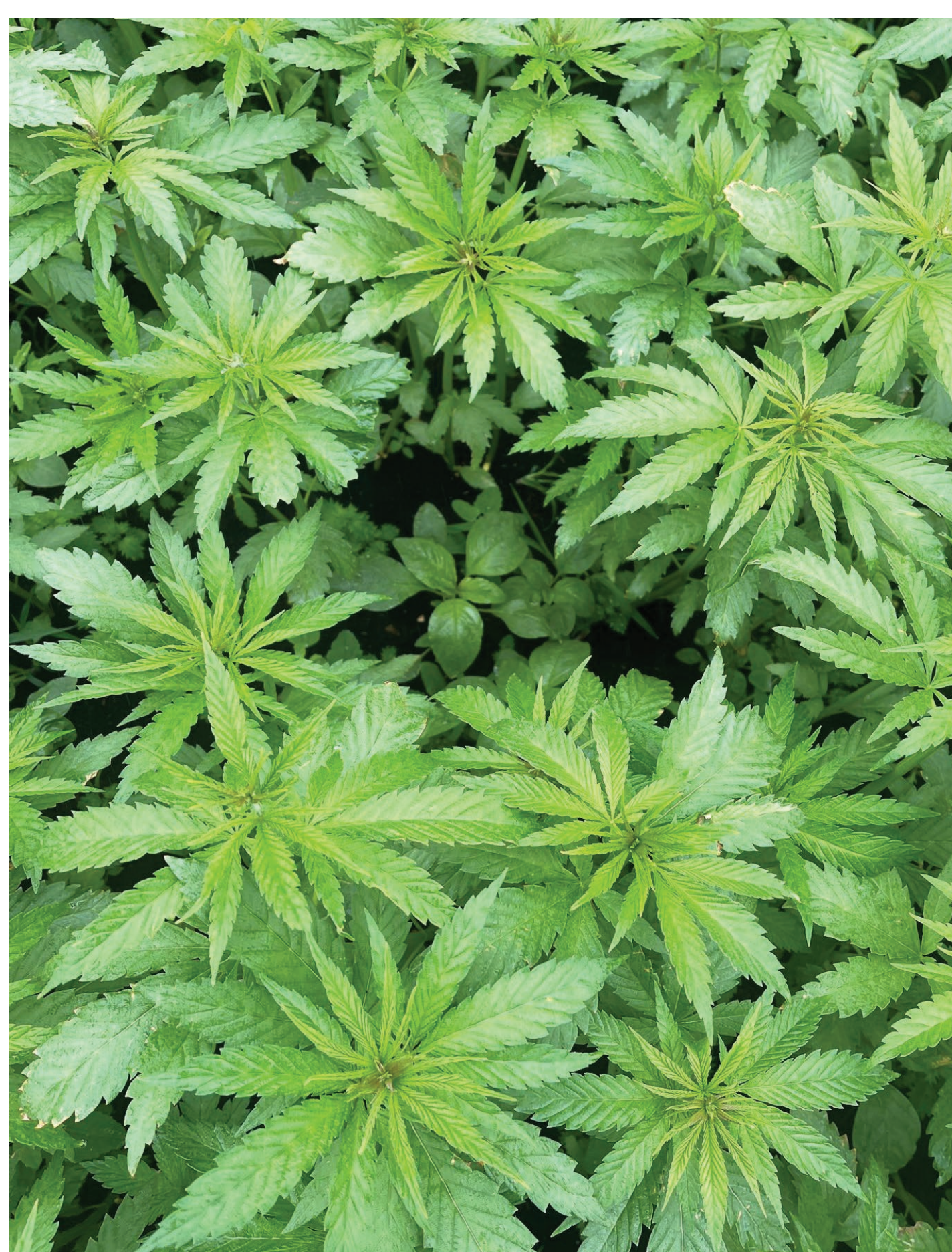
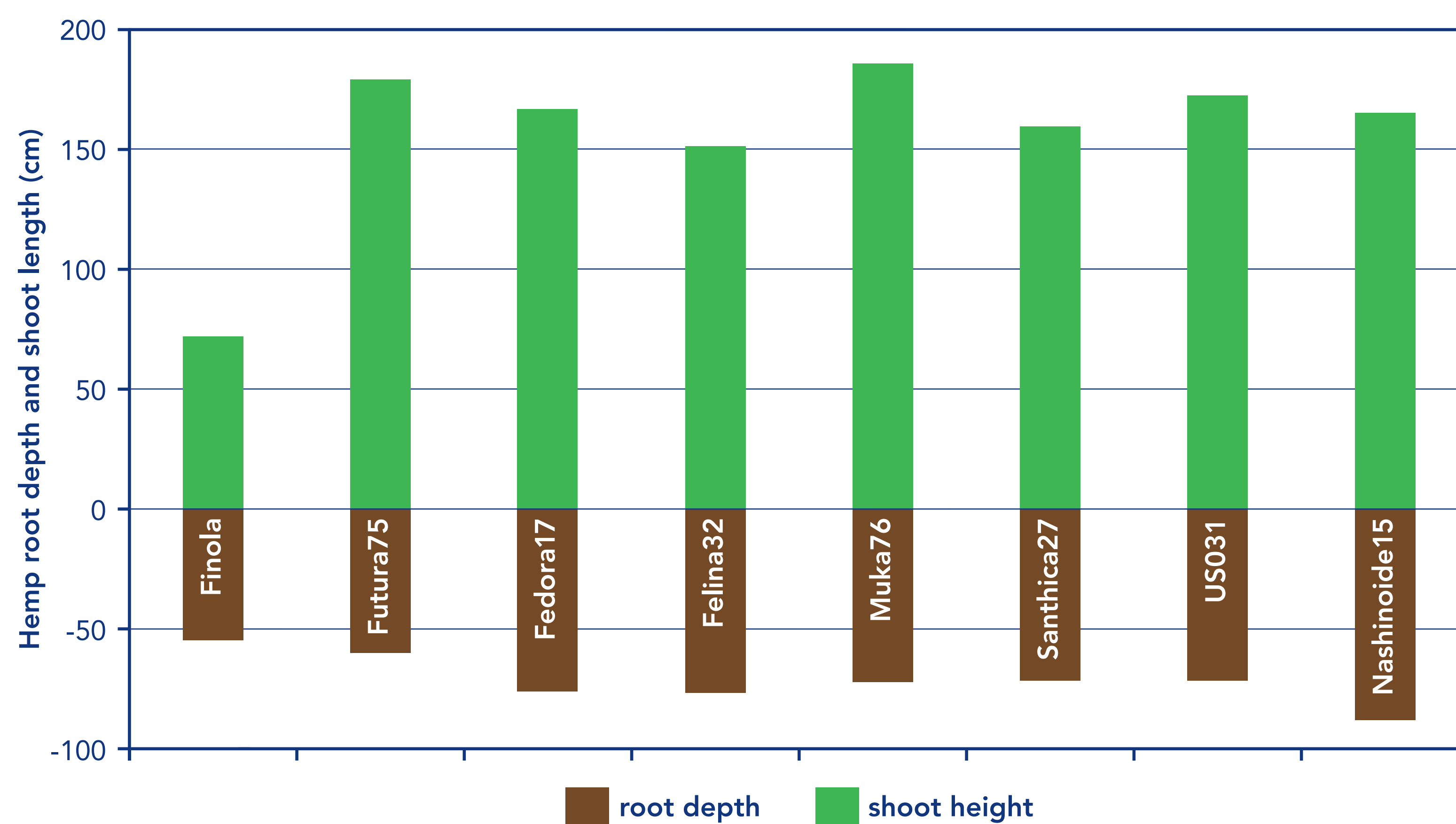
CHCx3 is looking at selected cropping choices that have potential for high levels of atmospheric CO₂ carbon capture as a strategy to help mitigate climate change.

One crop-choice is fibre crops – specifically industrial hemp and flax. These crops have considerable potential for direct C-capture into soil via their deep root systems, alongside long term C-sequestration by using the above-ground biomass in end products with a long life-expectancy.

These include many house construction products, including loft and wall insulation, chipboard/ MDF replacements and HempCrete® building blocks. Many other products are in development or already available, for example components of beds and vehicles, fabrics and upholstery, and as bioplastics in many applications.

Field research at Niab Cambridge in 2025 showed good hemp shoot and root growth, even in a difficult dry year in a compacted soil (Figure 1). The crop required no irrigation and just 80 kg/ha N. Significant differences were seen between varieties tested. The short (seed) variety Finola was the least productive, the most productive were (fibre) varieties Muka76 and Futura 75.

Figure 1. Hemp root depth and shoot length at Niab Cambridge July 2025



A crop of hemp



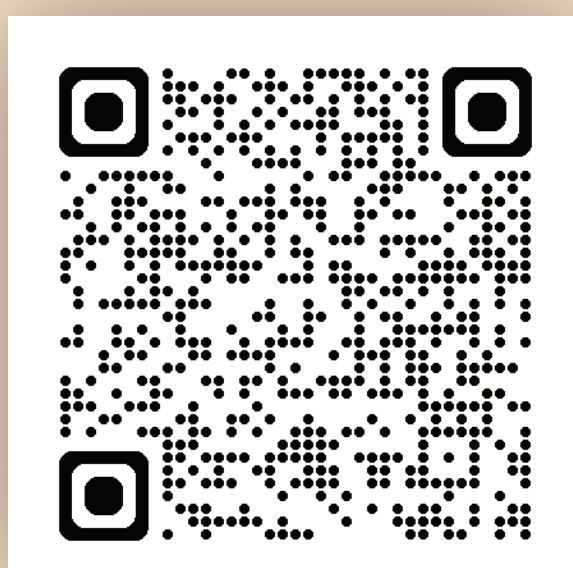
Hemp is used in building products



Harvesting hemp in Cambridgeshire

For more information

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The CHCx3 project, led by Niab, is investigating opportunities to improve economic returns, environmental outcomes and carbon capture through grassland management, species integration, and incorporating herbal leys into cropping systems