



## Growing flax for regenerative textiles

### Context

Flax was once grown widely across the UK, before the advent of synthetic fibres and cheap overseas labour. A renewed appetite for more sustainable, natural textiles is driving a new wave of flax growing, to supply a sustainable and regenerative textile and fashion industry based on the principles of circularity and social and environmental responsibility. Since 80% of the world's flax is grown in Belgium, France, and the Netherlands, there is an opportunity to test new varieties in UK conditions and re-establish small-scale commercial production in the UK.

### Take home messages

- This is the second year of the fibre flax variety trial, comparing three new Dutch-bred varieties: Avian, Delta and Tango.
- All three varieties grew well, and performed better in terms of average yield and straw height compared to 2023.
- One variety – Delta – performed a little better than the other two – despite variation between sites.



### Trial design

There were 7 trial sites across central Scotland, comprising a range of soil types, altitudes and enterprise types. At each site, the three varieties – Avian, Delta and Tango - were sown in three replicated blocks or strips of 10m<sup>2</sup>.

Crops were sown in April and May, and harvested by hand after 100+ days at which point crop density (plants/m<sup>2</sup>), height (cm), and yield (kg/m<sup>2</sup>) were measured.

Four sites sent their crop to be dew-retted at Phantassie Farm (which is the location of our processing partner, Fantasy Fibre Mill) immediately after harvest, and three sites dew-retted in-situ before sending the retted straw to Fantasy for processing into yarn.

## Findings

- All three varieties performed better than industry benchmarks and the 2023 crop in terms of both yield (t/ha) and height (cm).
- The average 2023 height ranged from 64-79cm, whereas the 2024 average height ranged from 108-117cm.
- Average 2023 yield ranged from 7-10t/ha, compared to 22-25t/ha in 2024.
- Although there was variation between sites, the pattern of ranking between varieties was consistent, with Delta consistently coming out slightly ahead of the other two.



### Grower comment

“The trial demonstrates that modern fibre flax varieties can grow well in Scotland, and we know there is growing appetite among farmers, crofters and growers to produce flax as a fibre crop.

The next step is to scale up the processing capacity to allow flax to be grown on a bigger scale and harvested mechanically”.

Rosie Bristow, Flax grower and co-founder of Fantasy Fibre Mill



## Recommendations & next steps

Four of the trial sites are keen to trial the same three varieties for a third and final year in 2025. Fibre flax is normally grown on a 5-7 year rotation, so new trial plots within existing crop rotations will be selected and soil fertility building (e.g. with compost or green manure) and weed suppression will take place prior to sowing in April and May.

Alongside the final year of the variety trial, triallists will look in more detail at the retting process, and look into options for small-scale mechanical harvesting. Fantasy Fibre Mill will process the 2023-24 trial crop into linen yarn, and in partnership with Heriot Watt University will test the fibre quality and strength of both the retted straw and finished yarn for each variety – results of this work will be included in the final report in 2025.

The project is coordinated by facilitator Colleen McCulloch in collaboration with the James Hutton Institute and Edinburgh College of Art at the University of Edinburgh; with support from Fantasy Fibre Mill and Heriot Watt University, and trial seeds provided by seed specialists Elsoms Seeds.

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