



Grow flax cultivar 'Marilyn' for fibre and 'Linore x Agatha' for seed; yields increase with seeding rate.

Effects of flax variety and planting density on seed and fibre yield

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INTRODUCTION

- Flax is a versatile crop that produces oil-rich seed and fibre that can be processed into linen
- The optimization of cultivation practices is key to efficient production
- Different planting densities are recommended for seed and fibre production, but research is lacking for Fraser Valley growing conditions

OBJECTIVE

- Compare seed and fibre yield across four varieties of flax planted at four different densities

METHODS

- Completely randomized design with four varieties and four planting densities (16 plots)
 - Varieties: Avian, Emeraude, Linore x Agatha, Marilyn
 - Densities: 1000, 1500, 2000 and 2500 seeds/m²
 - Plot size: 1 x 1 m
- Sown on April 2, 2024, harvested mid-July
 - Stems collected from 40 x 40 cm square in centre of each plot to reduce edge effects
 - Data collection: Seed weight, stem length, and fibre weight (after water retting, breaking, scutching, and rough hackling to remove outer material)



The lowest and highest fibre-producing plots and their respective finished fibres.

RESULTS

- Seed weight, fibre weight, and stem length tended to increase with planting density.
- Marilyn produced the most fibre (Fig. 1).
- Linore x Agatha had the lowest germination rate and produced the least fibre but the most seed (Fig. 1).
- Avian had the shortest stems.

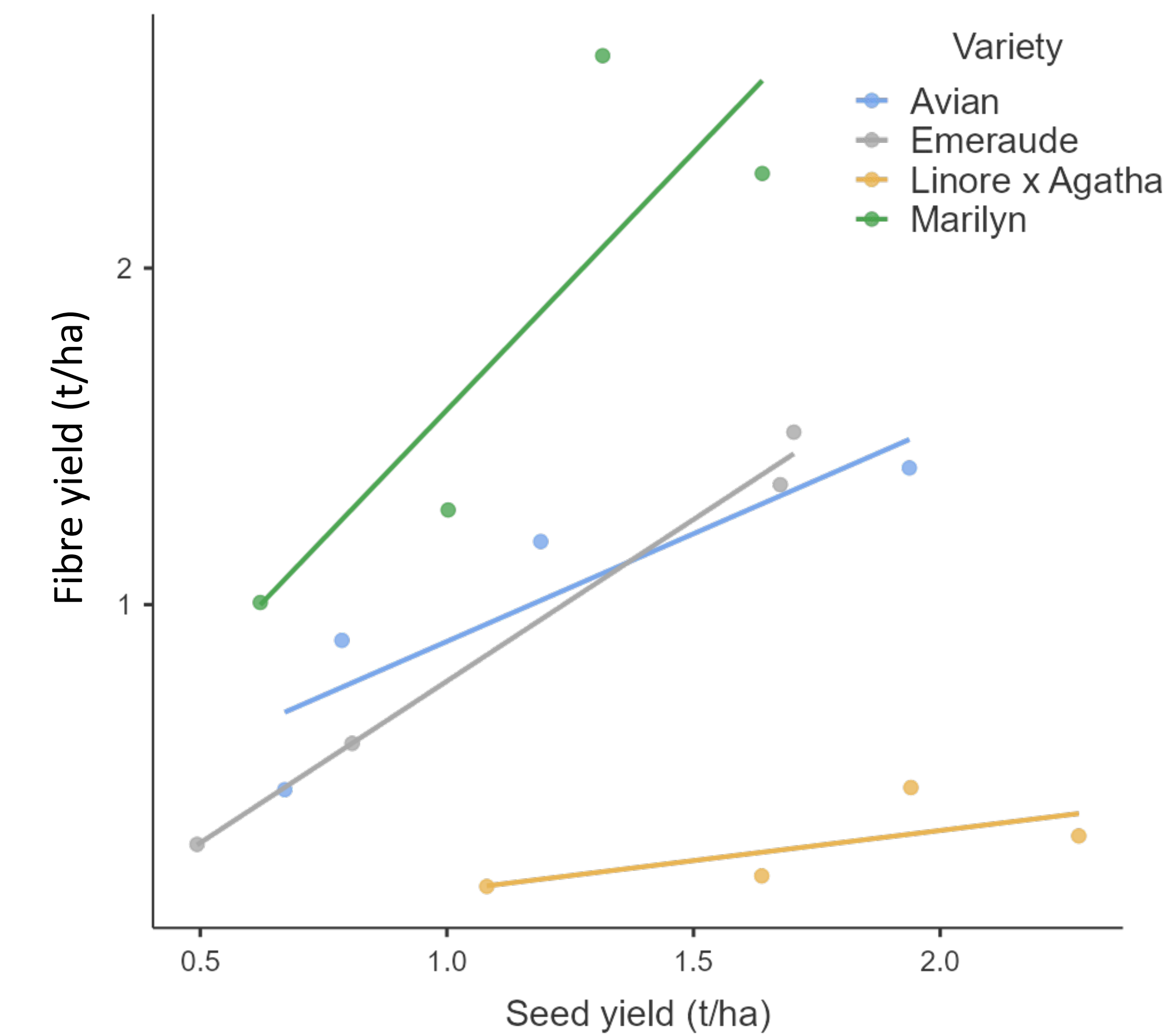


Figure 1. Relationship between seed and fibre yield of four flax varieties planted at densities between 1,000 and 2,500 seeds/m².

DISCUSSION

- Flax seed and fibre yields were in the range expected for commercial production for all varieties.
- Higher seeding rates were expected to promote fibre production and lower seeding rates to promote seed production. This was not always the case.
- Each variety had different strengths:
 - Marilyn was the top fibre producer;
 - Linore x Agatha was the top seed producer;
 - Emeraude and Avian were strong multi-purpose varieties, but Avian's shorter stem length would reduce potential fibre lengths.

ACKNOWLEDGEMENTS

Thank you to my mentors Kathy Dunster, who provided seed for this project, and Michael Bomford. And thank you to the community at EarthHand Gleaners for sharing your knowledge and cultivating my passion for local fibre production.