Boron in Barley

Study Details
Research institution: Agraria Foundation for Agricultural Research (FAPA)
Date: 2020-2021 growing season
Location: Candoí, PR, Brazil
Soil: Aluminic Oxisol; pH (CaCl₂) = 5.07
Fertilizers: Crop B: Granubor® and ulexite before planting barley (0, 0.43, 0.75, and 1.5 kg B ha⁻¹).
System B: Granubor and ulexite (0, 0.86, 1.5, and 3.0 kg B ha⁻¹) before planting barley (50%), and before planting soybean (50%), in successive barley-soybean rotation with no-tillage practice. Granubor and ulexite were blended with NPK fertilizer before planting.
Crop variety: Daniele
Trial design: Randomized complete block with three repetitions

Results
Application of 3 kg Granubor ha⁻¹ (system B fertilization | 50% of the dose before planting barley + 50% of the dose before planting soybeans), gave the highest barley grain yield compared to the control and acidulated ulexite source.
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Control: 5291 b
Acidulated ulexite: 5484 ab
Granubor: 5592 a

Fontoura et al. (2022)
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Barley yield, Kg ha\(^{-1}\)

 Acidulated ulexite
 Granubor

\[ \begin{align*}
  y &= 5.264 + 91.68x - 2.68x^2 \\
  R^2 &= 0.78 \\
  y &= 5.173 + 78.56x \\
  R^2 &= 0.64
\end{align*} \]

Fontoura et al. (2022)