



Foliar zinc fertilization in soybean

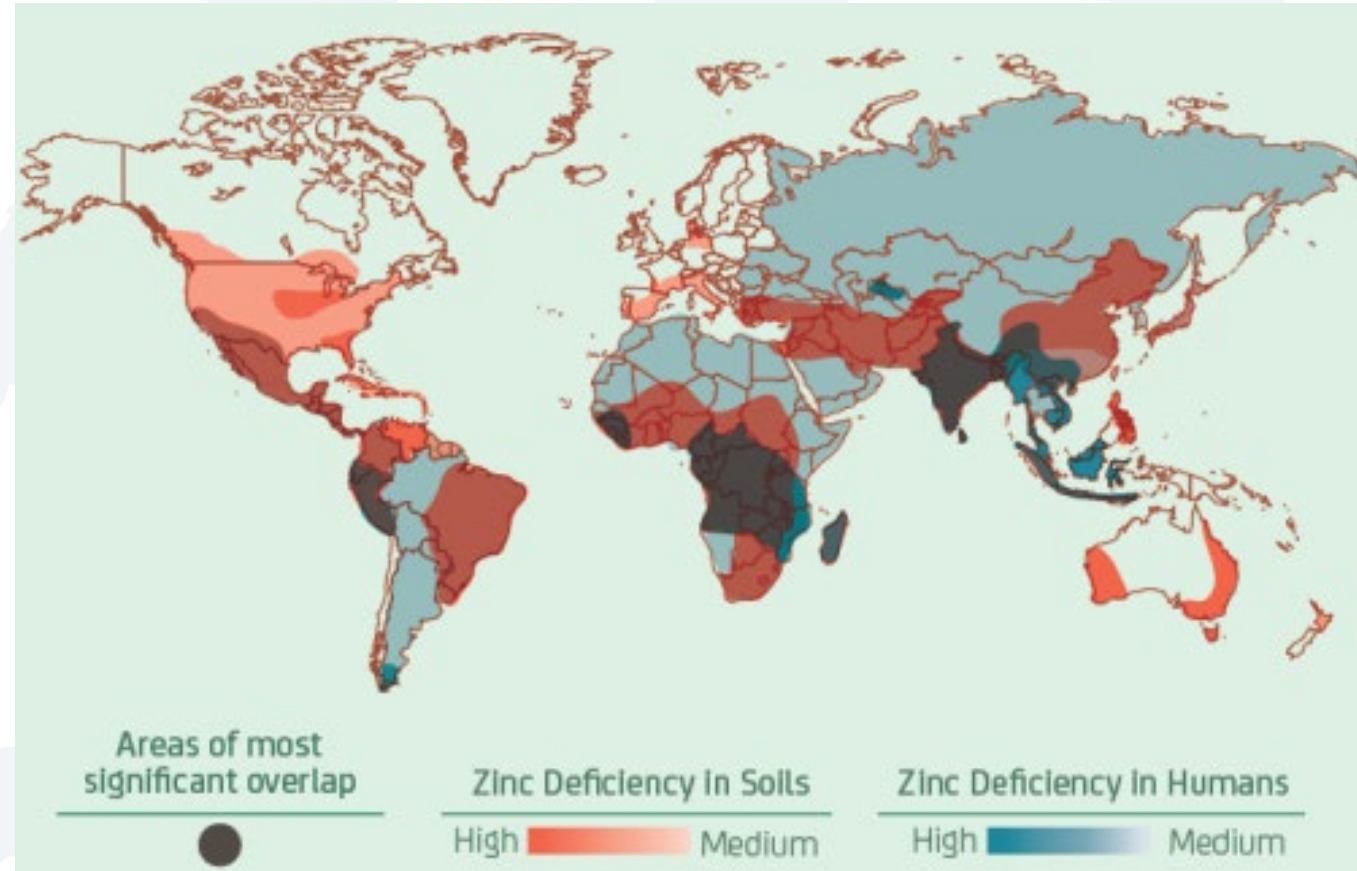
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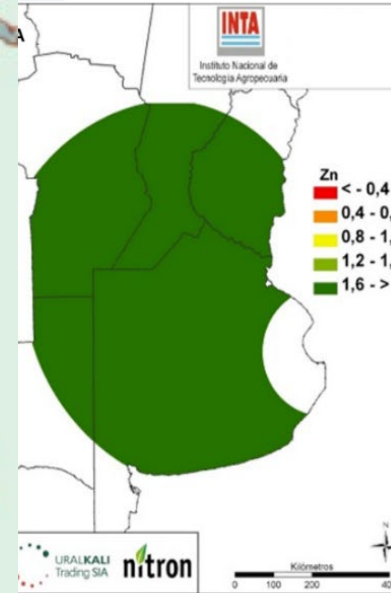
Introduction



(Alloway, 2008)

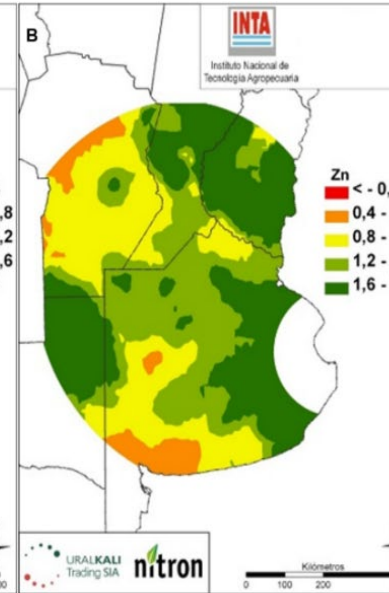
Soil in pristine condition

2011

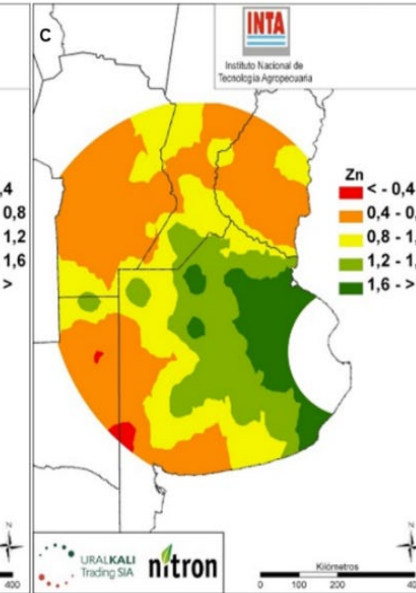


Soil under agriculture

2011



2018



(Sainz Rozas et al., 2019)

Zn-DTPA decreased by 83% in soils of the Argentina Pampas region

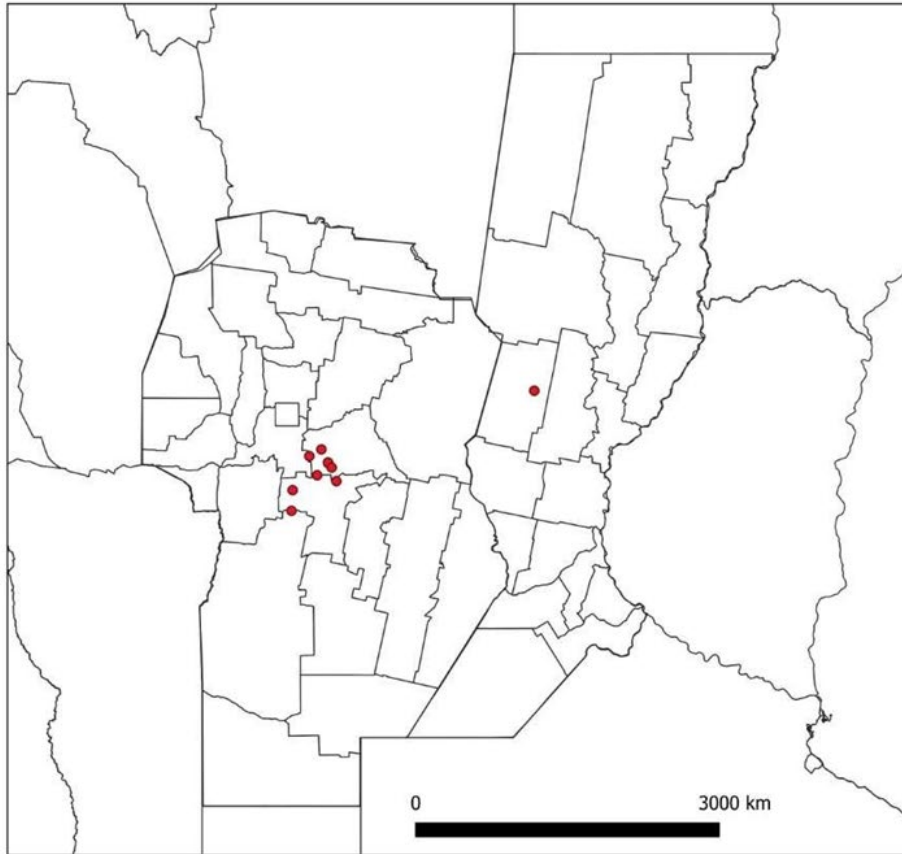
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The aim of this study was to assess the response of soybean grain yield and Zn grain concentration (ZnCg) to foliar Zn application and to evaluate the use of ZnCg as a Zn complementary Zn diagnostic tool in soybean

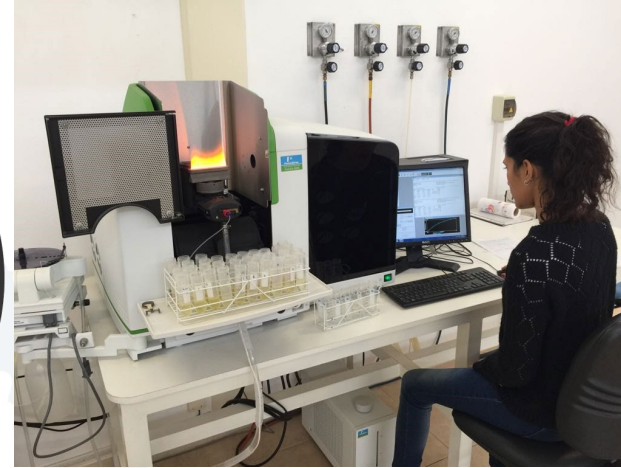


Materials and methods



- 10 soybean field experiments were carried out in 2017 and 2018
- No-tillage systems
- Haplustol soils from Córdoba province (Argentina)
- Soil Zn-DTPA (0-20 cm)= 0.82 (0.29-2.91 mg kg⁻¹)

Materials and methods



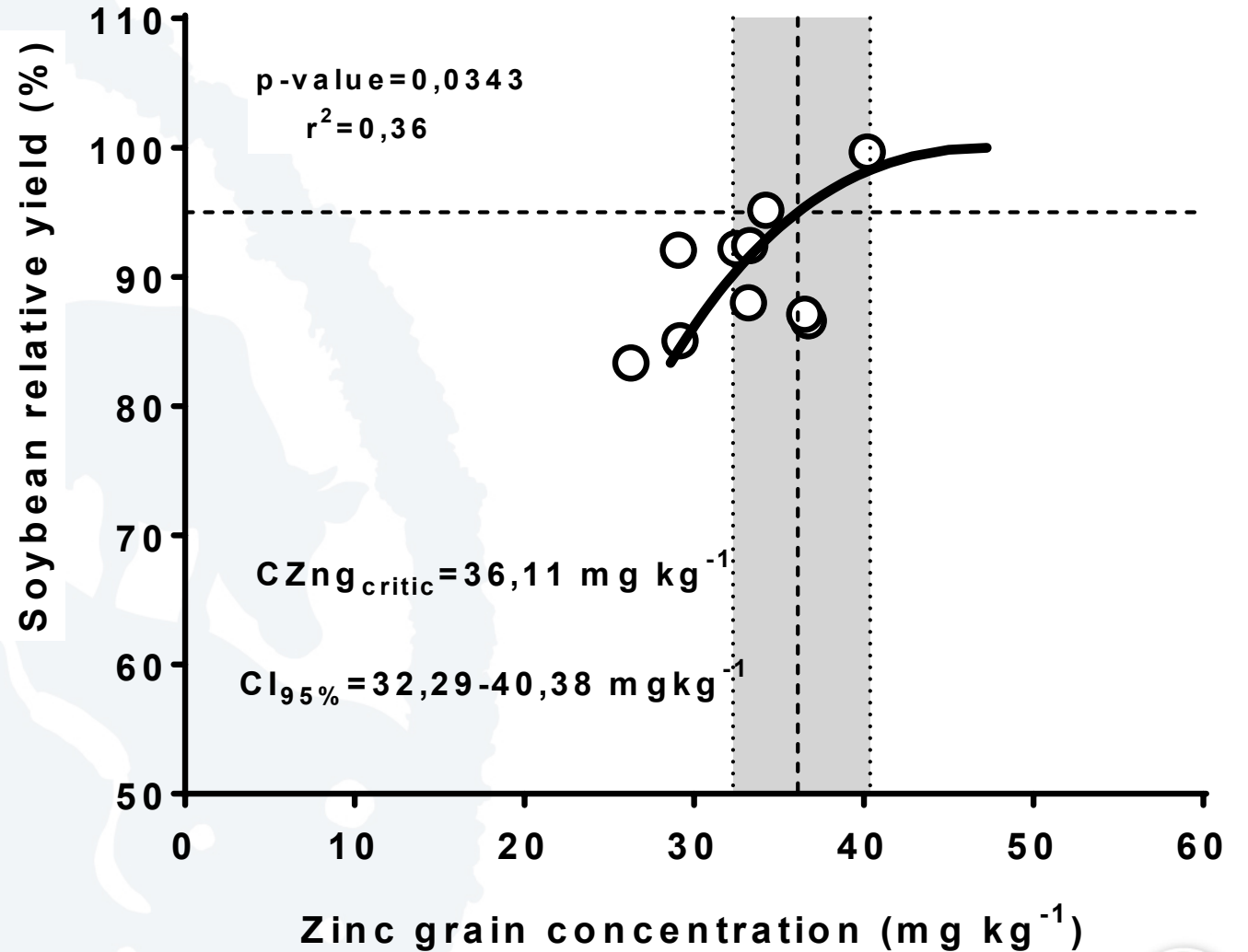
- DCBA with 4 replications
- Treatments: control (without Zn) and foliar Zn fertilization at vegetative growth stage 8 (V_8) (700 g)
- At physiologic maturity, grains were harvested and the ZnCg was determined by atomic absorption spectrophotometry
- The critical threshold (CT) was determined by the arcsine-logarithm method.

Results

Zinc foliar fertilization increased yield in 50% of sites, and the yield response was $0,51 \text{ Mg ha}^{-1}$

A significant site*fertilization interaction on ZnCg was observed, but, Zn foliar application increased in ZnCg only in two sites

The ZnCg critical was adjusted and 70% of the sites were below that threshold



unpublished data

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Thank you !
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