

Samplig day 1-11-2021

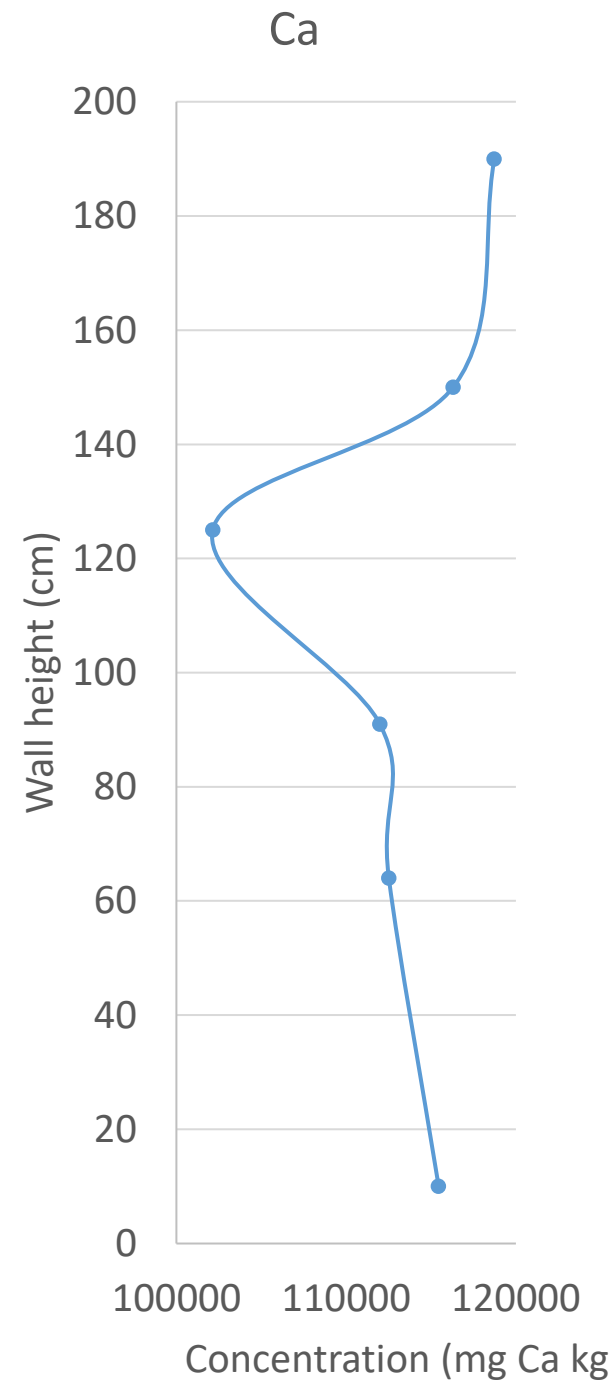
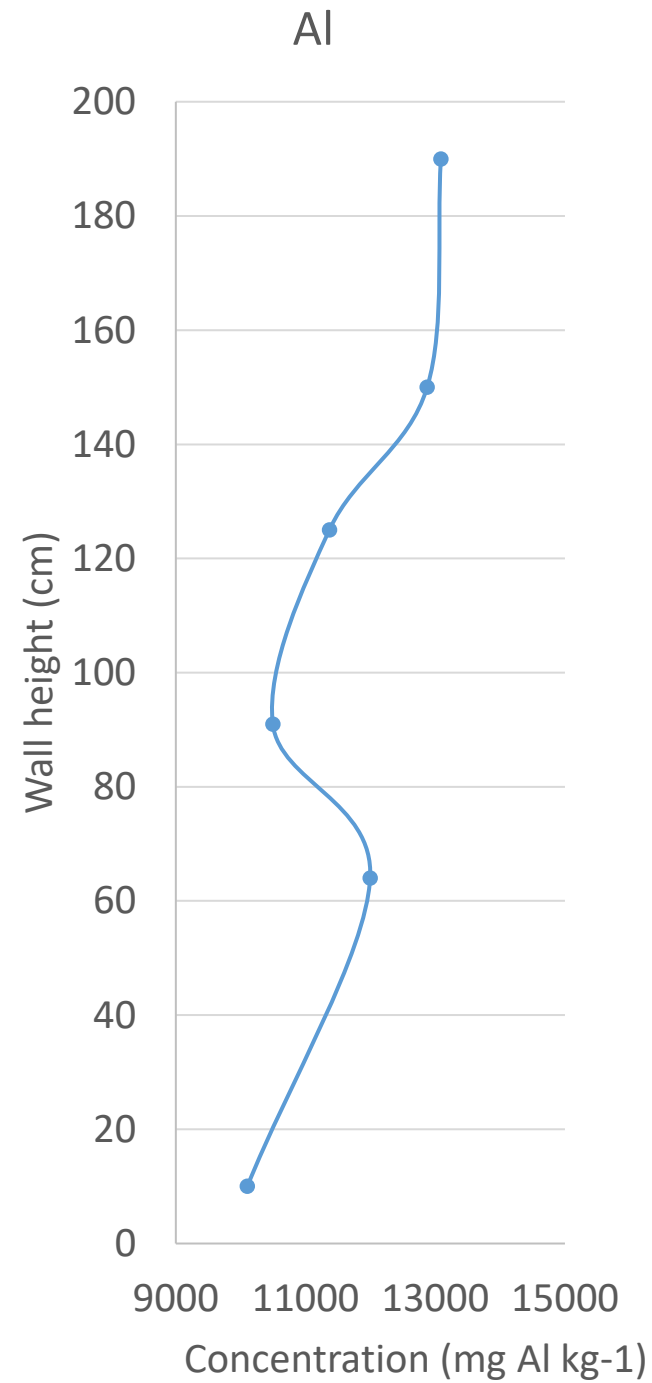
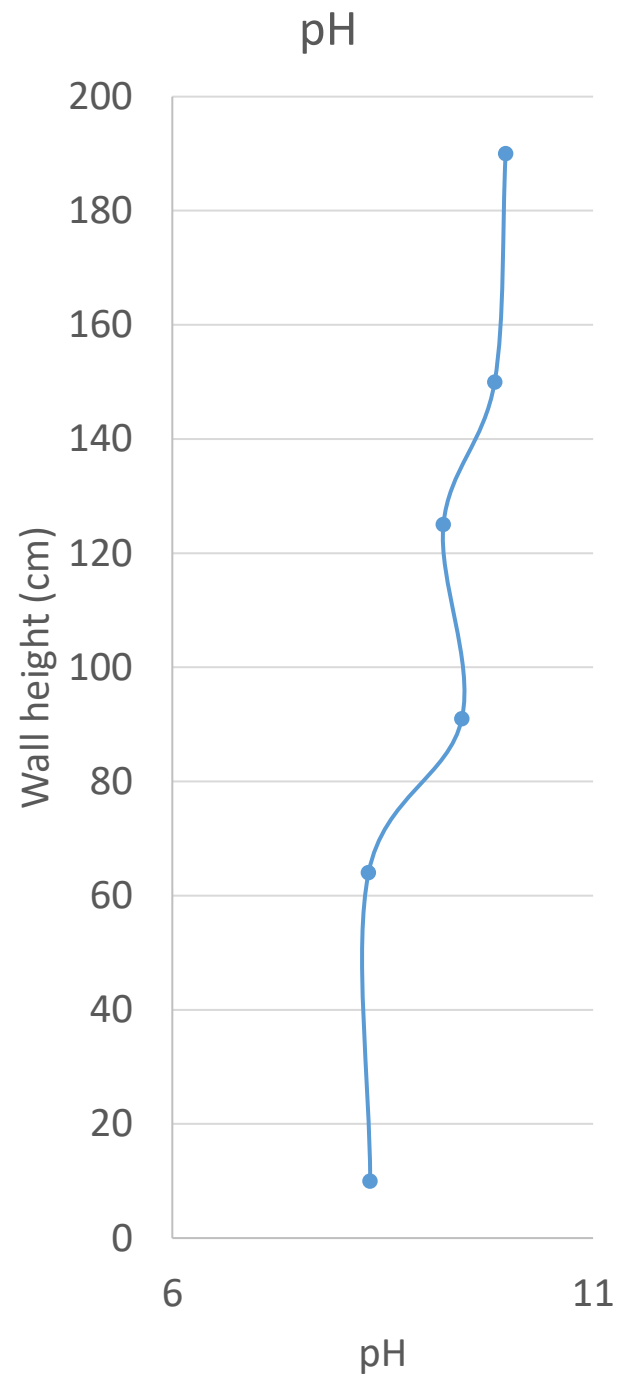
Short update

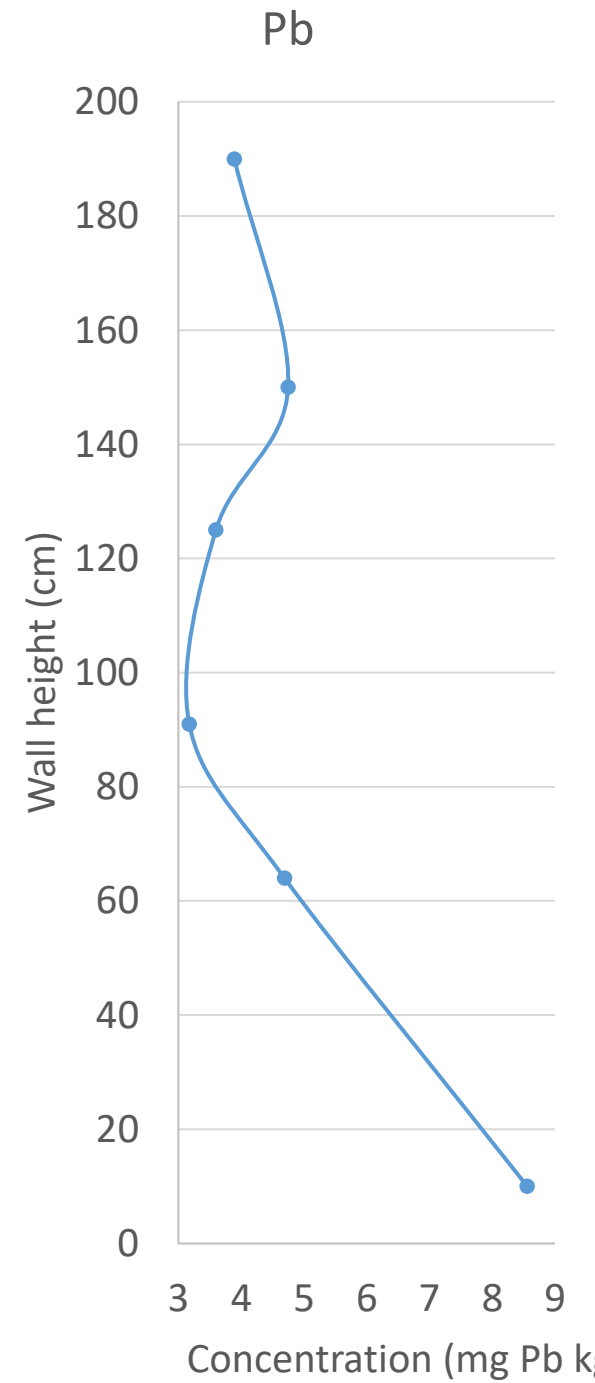
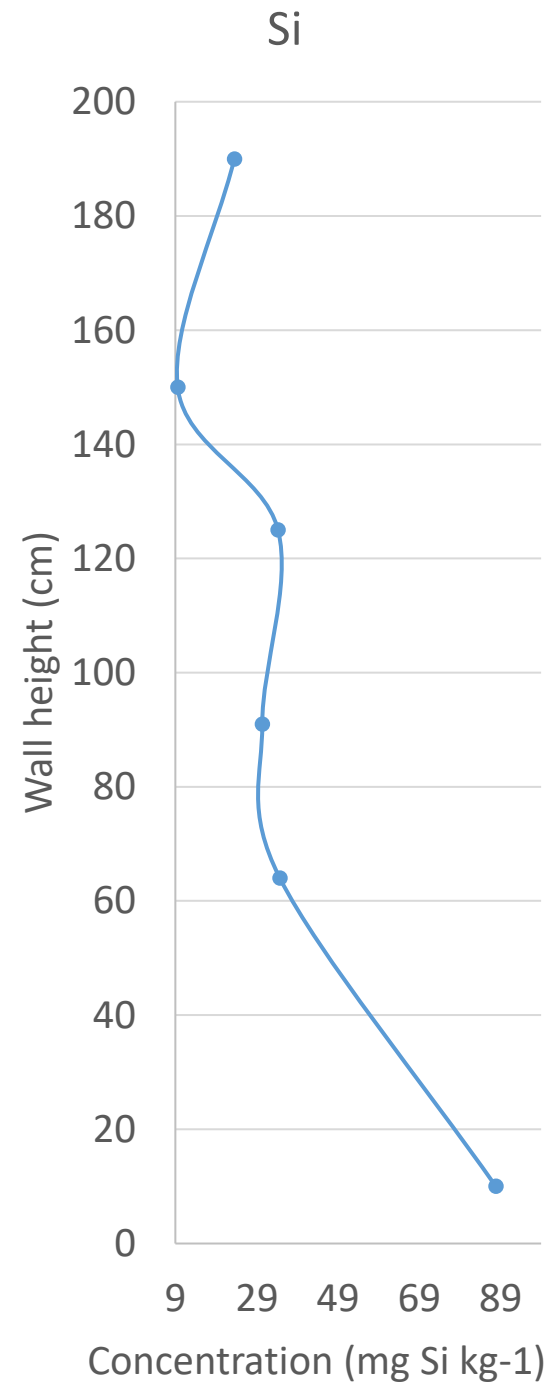
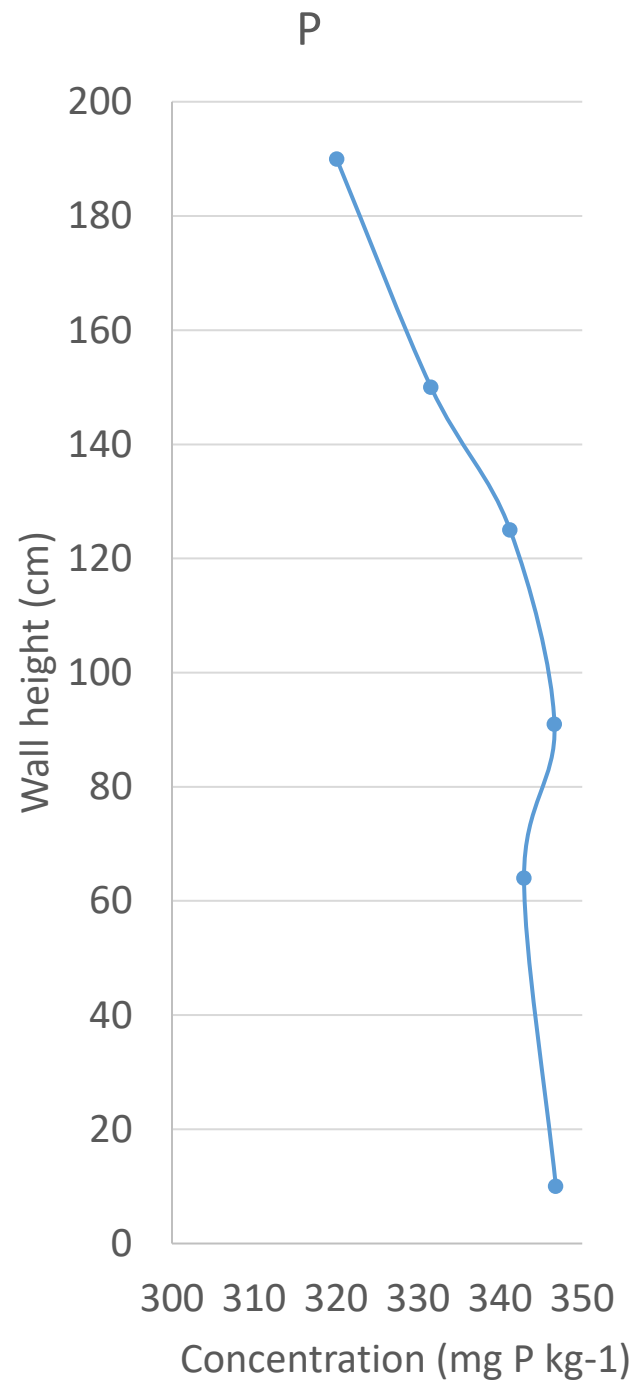




Quick overview

- NO nitrites or nitrites were found in the samples
 - Nor chloride or sulfates
 - N in pig manure is normally in the form of urea ($\text{CO}(\text{NH}_2)_2$), that quickly decomposes into ammonia (NH_3)
- We need to investigate where we can quantify ammonia contents, because our IC only identifies nitrites or nitrites
- The following are total concentrations in the concrete





Next steps

- Scenario 1
 - Look into other 30+ year old pigfarms
 - Compare strength, ions and ammonia along the wall height
 - Suggest recommendations to increase concrete durability
- Scenario 2
 - Effect of age on concrete performance (10, 20, and 30+ years of use)
 - Compare strength, ions and ammonia along the wall height
 - Recommend time restrictions on the usage of concrete in pigfarms
- Requisites:
 - All the concrete studied needs to be in the same conditions (inside walls)
 - We need a reference sample – unexposed to pigfarm leachate