

From July to August, I pursued my undergraduate field work research on crop farmers' adaptations to soil salinity and water scarcity in Egypt, specifically the Nile River Delta. I was especially interested in how crop farmers find solutions to increasingly saline soils and scarce water due to climate change, as well as understanding the way knowledge on adaptations is spread amongst farmers through collaboration with the private and public sector. This led me to travel from Kafr El-Sheikh to Baltim, Sidi Salem, Mansoura, Alexandria, Tanta,... to interview crop farmers suffering from those problems. This summer was especially harsh on them since preexisting problems were coupled with abnormally high temperatures. Farmers mostly turned towards new, more resistant, crop varieties or crop types as a solution. Guava trees are, for example, more resistant to soil salinity than mango trees. They also looked at ways to improve their irrigation methods (flooding to drip irrigation) to reduce the water demand and improve the efficiency of fertilizer application. Despite that, most crop farmers have suffered yield drops this summer (sometimes up to 40%) and have thus planned to decrease their production in the future summers, leaving part of their field empty during the harsh periods, since the price of agricultural inputs are too high in comparison to the low productivity. Finally, the combination of stressors (soil salinity, low irrigation water quality, high temperatures) has made crops more sensitive to pest infection (leaf miner, fungi, nematodes...). Thus, crop farmers have had to increase their pesticide usage, an expensive agricultural input.

To find solutions, farmers often collaborate with one another and sometimes seek help from agricultural engineers coming from the private sector or academic experts sent by universities to provide advice. Through my interviews and visits of private and public institutions helping crop farmers adapt, I have understood the importance of collaboration between crop farmers and experts coming from all sectors to raise their knowledge on how to efficiently tackle environmental stressors on agriculture, such as soil salinity. Most farmers especially highlighted the need for more demonstrative experiments being conducted to witness the effectiveness of proposed solutions. This underlines the importance of working hand-in-hand with crop farmers, as well as using demonstrations through workshops to share solutions and raise knowledge.

I want to deeply thank Dr. Farouk El-Aidy for supervising my research on the ground and putting me in contact with precious resources, notably Dr. Ali El-Shereif, and Dr. Mohamed Sharaf-Eldin. The final paper should be available by the end of December.



A meeting between crop farmers and professors from the Kafrelsheikh University to discuss efficient solutions to problems faced by crop farmers.



A mango tree leaf showing signs of damages due to soil salinization.



A visit to a crop farm affected by soil salinity along with students and professors from the Kafrelsheikh University.



An interview with members of the El Nahda Society for rural development and water management.