CLCA-II Project: Where are we now?

Mourad Rekik, Zied Idoudi

Tunisia, 05th March 2020
Total area (ha) directly targeted by the Project

- Algiers:
  - CLCA Phase-I: 36 ha
  - Interphase: 58 ha

- Tunisia:
  - CLCA-II 1st Year: 477 ha
  - CLCA-II 2nd Year: 1440 ha

Total area directly targeted by the Project:
- 1982 ha

Project timeline:
- 2013-15: CLCA Phase-I
- 2015-17: Interphase
- 2018-19: CLCA-II 1st Year
- 2019-20: CLCA-II 2nd Year
- 2020-21: Scaling Up Full CLCA packages
Algeria CLCA: 2019 – 2020

Extended Partnership

15 CapDev for Farmers and Extension Specialists: 695
Farms affected directly by the project: 242
Total area (ha) directly targeted by the project: 982
Total area (ha) indirectly targeted by CLCA activities: 1258
ESP, MSc, PhD (Defended, ongoing): 21
Tunisia CLCA: 2019 – 2020

Extended Partnership

16 CapDev for Farmers and Extension Specialists 560
Farms affected directly by the project 95
Total area (ha) directly targeted by the project 1440
Total area (ha) indirectly targeted by CLCA activities 2500
ESP, MSc, PhD (Defended, ongoing) 17
CLCA Data Collection Tool/ODK: Open Data Kit

Survey Design

1. Design the survey template in the office

2. Upload survey template to the ODK cloud server

3. Download survey template to mobile device

4. Undertake survey data collection in the field

5. Send completed survey data to the ODK cloud server

6. Download and analyse the data sets

Survey Collection
Scientific evidence: Conservation Agriculture (CA) to adapt wheat-based-systems to climate change in Tunisia

IF: 5.589

Assessing the long-term impact of conservation agriculture on wheat-based systems in Tunisia using APSIM simulations under a climate change context

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b Institut National de la Recherche Agronomique de Tunisie (INRAT), Tunisia.
c International Center for Agricultural Research in the Dry Area (ICARDA), Tunis Office.

This evidence from Tunisia is important to demonstrate to policy and decision makers that the sustainable production of durum wheat under climate change conditions in Tunisia is possible through the adoption of CA practices in both sub-humid and semi-arid areas.

This study shows how CA based on Zero-tillage and soil residue retention vs. Conventional Tillage over 260,000 ha contributes to make wheat production more resilient to climate change in Tunisia through:

- Enhancing wheat yield (15%),
- Improvement of water use efficiency (13% to 18%),
- Increase organic carbon accumulation (0.13 t ha$^{-1}$ year$^{-1}$ to 0.18 t ha$^{-1}$ year$^{-1}$);  
- Reduction of soil loss caused by soil-water erosion (1.7 t ha$^{-1}$ year$^{-1}$ to 4.6 t ha$^{-1}$ year$^{-1}$ of soil loss).

Healthy Soils (under CA), Kef, Tunisia
Scientific evidence: The value of CLCA system (6 consecutive years) to combat soil erosion

SOIL RESILIENCE - PREVENTING WATER EROSION
Chouarnia Site - Seliana, Tunisia

<table>
<thead>
<tr>
<th></th>
<th>Soil loss (Kg ha⁻¹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLCA system</td>
<td>68</td>
</tr>
<tr>
<td>Conventional Tillage</td>
<td>365</td>
</tr>
</tbody>
</table>

SOIL RESILIENCE - PREVENTING WATER EROSION
El Krib Site - Seliana, Tunisia

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</thead>
<tbody>
<tr>
<td>CLCA System</td>
<td>62</td>
</tr>
<tr>
<td>Conventional</td>
<td>72</td>
</tr>
</tbody>
</table>

At the end of the CLCA-II Project in 2022, results from these two (2) sites related to soil health and water use efficiency will provide invaluable information with regard to the impact of a CLCA system on natural resources.
Traveling Workshop: Improving the integration of crop-livestock systems and conservation agriculture in the sheep-cereal production systems of North Africa

Date & Place: 1st to 4th July 2019, Tunisia;
# of Total participants: 23 (07 female) [Technical advisors, coordinators and collaborators];
# of countries: 03 (Algeria, Morocco, Tunisia);
Places visited: Tunis, Fernena-Jendouba, Chouarnia/Makthar-Seliana, El Krib-Seliana, Laaroussa-SELIANA;

➢ Validation of unified tools for the sustainable use of stubble consistent with CA package,
➢ Introduction of alternative feeding methods under CA,
➢ Intensification of forage options,
➢ Keeping livestock for profit,
➢ Development of KM tools for the packages under consideration.
Thank you!