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Science for resilient livelihoods in dry areas

Extension Survey Questionnaire Instrument

Perceived Effectiveness of Agricultural Transfer Methods for CLCA improved Technologies: Evidence from extension and technical agents in Tunisia

Use of conservation agriculture in crop–livestock systems (CLCA) in the drylands for enhanced water use efficiency, soil fertility and productivity in North East, North Africa (NENA) and Latin America and the Caribbean (LAC) countries

Boubaker Dhehibi[(1)], Ayoub Fouzai[(2)], Mohamed Arbi Abdeladhim[(2)], Aymen Frija[(1)], Hatem Cheikh M'hamed[(3)], Zied Idoudi[(1)], and Mourad Rekik[(1)]

(1) Resilient Agricultural Livelihood Systems Program (RALSP), ICARDA, Tunis, Tunisia
(2) Higher School of Agriculture, Mograne (ESA Mograne), Zaghouan, Tunisia
(3) National Agricultural Research Institute of Tunisia (INRAT), Ariana, Tunisia

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1. Background

The project "Use of conservation agriculture in crop–livestock systems (CLCA) in the drylands for enhanced water use efficiency, soil fertility and productivity in North East, North Africa (NENA) and Latin America and the Caribbean (LAC) countries" aims to develop contextually relevant processes for enhancing the broad uptake of conservation agriculture (CA) within integrated crop–livestock systems in drylands and in NENA regions (Algeria and Tunisia). Experience across North African countries has shown that the adoption and dissemination of CA technologies is low. Farmers are considered very conservative in regard to change and are unaware of CA technologies when it comes to the integration between cropping and livestock. Wide-scale adoption of these technologies remains a challenge, especially among smallholder farmers in arid areas.

There is evidence that extension activities can help to accelerate the adoption of new technologies, particularly if the new technologies can be proved to be more successful than existing ones, if their effects can be observed, and if they are socially compatible, simple to learn, and can be trialed or tested—as is the case with CLCA technologies. However, the level of adoption should not always be used as a measure of the success or failure of an extension program because it is the effectiveness of the extension delivery mechanism that is, to a large extent, responsible for the success or failure of an extension program. An alternative means of evaluating CLCA extension programs is through the assessment of the technology transfer methods applied by the project. This mainly consists of the measurement and empirical evaluation of the learning situations provided—the extension delivery mechanism or process—as a means of measuring the effectiveness of extension methods as part of a transfer model for these improved and sustainable technologies.

Within this framework, the CLCA project team is conducting interviews with extension officers and technical technicians who are experienced with CA and CLCA cropping systems. The aim of this study is to (i) determine the perception of the effectiveness of extension methods for the CLCA improved technologies by this category of stakeholders, and (ii) assess the factors affecting the effectiveness of the extension methods deployed to disseminate CLCA technological packages. The findings will help decision makers and extension program planners to accelerate the adoption process and consequently conduct a rigorous assessment of its impact relative to the effectiveness and efficiency of the extension delivery process for CLCA improved technologies.

2. Implementation process of the survey

The overall characteristics of the tool are as follows:

- **Length of the interview:** The interview is around 25 minutes long.
- **Reason for choosing the interviewee:** You have been identified as an interviewee because of your experience with CLCA technology packages and your knowledge and experience of CA and sustainable cropping systems methods.
- **Number of interviewees**: 35–40 of extensionist and technicians in direct relation with the CA and CLCA systems.
- **Objective of the questionnaire:** The focus of this interview is on questions related to your perceptions of CLCA technologies transfer methods and the factors affecting effectiveness of these methods:

- Effectiveness of the agricultural technology transfer methods for CLCA improved technologies.
- Major factors influencing the effectiveness of the extension methods in transmitting CLCA improved technologies

- **Questionnaire distribution and flow:**
  - A synthesis report from this survey will be made available for all potential stakeholders and decision makers in the CLCA farming system.
  - You may have more to say for some questions or may choose not to answer a specific question. In both cases, please feel free to state this and respond to the questions to the best of your knowledge.

3. Survey sections

3.1. Effectiveness of agricultural technology transfer methods for CLCA improved technologies

Please score (on a scale of 1 to 5) the effectiveness of the following technology transfer methods used to transmit information on CLCA improved technologies to you and other farmers in your region (where 1 is least effective and 5 is most effective).

Agricultural technology transfer method	CLCA Technological Package I: CLCA–Agronomic-related practices	CLCA Technological Package II: CLCA–Livestock-related practices	CLCA Technological Package III: CLCA–Natural resources-related practices
Farmer-to-farmer			
Households/neighboring			
Individual farm visit			
Study groups (travelling workshops, trainings)			
Research center (demonstration, trials, etc.)			
On-farm trials and research			
Printed materials			
School: lecture			
Farmers field school			
Field days (exchange field visits, cross-site visits, etc.)			
Extension staff (visits)			
Extension office calls			
Mass media – radio			
Mass media – mobile phone (green number, SMS, agricultural application for youth)			
Mass media – video			
Mass media – TV			
Mass media – posters			
Mass media – newspaper			
Other (specify……)			

Note:

- **CLCA Package I**: CLCA–Agronomic-related practices (crop mixtures options in rotation with cereals, etc.).
- **CLCA Package II**: CLCA–Livestock-related practices (forage production systems and stubble management/grazing).
- **CLCA Package III**: CLCA–Natural resources-related practices (soil erosion, soil organic matter (SOM), and water use efficiency (WUE)).

3.2. Factors affecting effectiveness of the extension methods in agriculture information transmission

There are several agricultural extension methods used to transfer/transmit information on CA/CLCA technologies to farmers. However, several factors could affect the effectiveness of the extension methods used by various actors in the technology transfer space.

Please score the importance of the following factors on a scale from 1 to 5, where 1 is least important and 5 is most important.

Factor	CLCA Technological Package I: CLCA–Agronomic-related practices	CLCA Technological Package II: CLCA–Livestock-related practices	CLCA Technological Package III: CLCA–Natural resources-related practices
Cost of the extension method			
Type of farmer being targeted			
Geographic location of the farmer (agro-ecological context)			
Sociocultural conditions of the farmer			
Economic conditions of the farmer			
Age of extension officers			
Sex of extension officers			
Years of experience of extension officers			
Qualifications/skills of extension officers			
Ability to reach women beneficiaries			
Number of farmers per extension officer and categories of farmers			
Nature of the technology transferred (element of the technology)			
Location and availability of extension offices			
Availability of resources (transport for extension officers, information technology and equipment, etc.)			
Other (specify……)			

Note:

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