

ICARDA Country Brief Series Egypt



Photo credit: James Pursey on 17 June 2020. A woman smallholder farmer harvesting wheat in Egypt

08/08/2022 With the analytical support of:















AUTHORS

Elvin Carol Kohen

SUGGESTED CITATION

Elvin Carol Kohen (10/01/2022). ICARDA Country Summary Series: Egypt. ICARDA

DISCLAIMER



This document is licensed for use under the Creative Commons Attribution 3.0 Unported Licence. To view this license, visit http://creativecommons.org/licenses/by-nc-sa/3.0

Unless otherwise noted, you are free to copy, duplicate, or reproduce and distribute, display, or transmit any part of this publication or portions thereof without permission, and to make translations, adaptations, or other derivative works under the following conditions:



ATTRIBUTION. The work must be attributed, but not in any way that suggests endorsement by the publisher or the author(s).



Table of Contents

List of Abbreviations	4
Introduction	5
About ICARDA	5
Agriculture in Egypt	5
ICARDA in Egypt	6
ICARDA Projects in Egypt	6
ICARDA project value in Egypt	8
Partnerships	9
Project delivery partners	9
Knowledge generation partners	10
Capacity Development	10
Research themes	11
Variety Development	12
Variety release	13
Impact assessment of some technologies promoted by ICARDA in Egypt	14
Innovations	15
Policy Contributions	16
Suggested actions in contribution to agricultural livelihoods, food security and resilience communities in Egypt	_
Annex 1: Summary of ongoing projects in Egypt (Source: MEL)	17



List of Abbreviations

AFESD — Arab Fund for Economic and Social Development

ARC — Agricultural Research Center of Egypt

BMUB — Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety of Germany

CDCMCT — Characterization of dairy chain in Mediterranean countries and adoption of optimum technologies to improve dairy value chain

CIMMYT — International Maize and Wheat Improvement Center

CRP — CGIAR Research Program

ET — Evapotranspiration

FAP — Farming with Alternative Pollinators

FAO — Food and Agriculture Organization of the United Nations

GDP — Gross Domestic Product

ICARDA — International Center for Agricultural Research in the Dry Areas

IFAD — The International Fund for Agricultural Development

MENA — Middle East and North Africa

NARS — National Agricultural Research System

NENA — The Near East and North Africa

OICR — Outcome Impact Case Reports

PIM — CGIAR Research Program on Policies, Institutions, and Markets



Introduction

The ICARDA country series provides a snapshot of the work ICARDA has done and what is ongoing in the different countries in which ICARDA operates. It highlights the projects implemented, the partnerships that ICARDA has formed for both project delivery and knowledge generation, the key research themes by ICARDA Scientists and features a summary of the impact ICARDA projects have delivered to the citizenry, especially the rural poor smallholder farmers.

About ICARDA

Established in 1977, the International Center for Agricultural Research in the Dry Areas (ICARDA) is a non-profit, CGIAR Research Center that focuses on delivering innovative solutions for sustainable agricultural development in the non-tropical dry areas of the developing world.

We provide innovative, science-based solutions to improve the livelihoods and resilience of resource-poor smallholder farmers. We do this through strategic partnerships, linking research to development, and capacity development, and by taking into account gender equality and the role of youth in transforming the non-tropical dry areas.

Agriculture in Egypt

Being a transcontinental country, The Arab Republic of Egypt covers the Sinai Peninsula which spans the northeast of Africa and southwest corner of Asia. Covering a 1001450 km² area, Egypt hosts about 96 million inhabitants. The Nile River plays an important role in the population's economic activities and agriculture since the country's water resources are limited and the climate is arid. The area of agriculture in Egypt is limited to the Nile Valley and delta and some cultivable areas in Sinai. Although the cultivated area represents only 3% of the total land area, agriculture is the third largest sector in the Egyptian economy. Despite the fact that its share in the GDP declined from 14% to 11% between 2010 and 2015, still about 55% of the population depends on agriculture for their livelihoods¹.

In 2018², the number of people living in rural areas in Egypt (57.3%) was higher than the ones living in urban areas (42.7%). Although the number of severely food-insecure people shows a decline in the 3-year average from 2016-2018 (8.6 million people) to 2017-2019 (7.6 million people), the number of undernourished people³ shows an increase in the 3-year average from 2014-2016 (4.2 million people) to 2017-2019 (4.6 million people)⁴. The following are the major crops produced in Egypt:

- Cereals: Rice is one of the most important cereal crops and it is the second most important export commodity after cotton. Other primary cereals are wheat and maize. Wheat covers 50% of the cultivated area during the winter season, while maize is the most commonly grown crop in the summer season⁵.
- **Fiber crops:** Cotton is the leader crop in terms of Egypt's exports, as it is a very high quality, long-staple fiber⁶.
- Sugar crops: Sugar is extracted from sugar beet.
- Food legumes: Broad beans, soybeans and other types of beans that are edible for humans.
- **Forage crops:** In the Nile Valley and delta, Egyptian clover and berseem are the primary winter crops.

¹ http://www.fao.org/egypt/our-office/egypt-at-a-glance/en/

² http://www.fao.org/faostat/en/#country/59

³The Prevalence of Undernourishment is an estimate of the proportion of the population facing serious food deprivation and is derived from official national level information on food supply and consumption, and energy needs. SDG Indicator 2.1.1 – Prevalence of Undernourishment (PoU) (fao.org)

⁴ http://www.fao.org/faostat/en/#country/59

⁵ Kassim, M. M. (2018). An Agricultural Policy Review of Egypt

⁶ Ecological and social costs of cotton farming in Egypt | Open Case Studies (ubc.ca)



- Fruits: Citrus, orange and subtropical plants are grown in Egypt, Egypt plays a major role in table olive production, and had the world's second-largest amount of production in 2018/19⁷.
- Vegetables: Tomatoes and potatoes are the two main vegetables important for the economy and export.

ICARDA in Egypt

The presence of ICARDA in Egypt goes back to 1979 when the Nile Valley project was launched. Farmers adopting the recommended faba bean packages of the Nile Valley Project saw their average incomes increase by 173%8. Today, the efforts continue through ICARDA's Nile Valley and regional Red Sea program, which strategically aligns research activities with Sudan, Eritrea, and Yemen, and provides a new thematic research platform for sustainable intensification in irrigated systems.

Egpyt has a major role as a thematic research location for sustainable intensification in irrigated systems⁹. ICARDA focuses on water and land management for greater productivity and sustainability through raised bed planting technology. This method was implemented in Al-Sharkia and increased wheat sown area from 950 ha to 40,400 ha from 2009 to 2017. ICARDA operations also combat salinity and enhance the usage of new lands through introducing new water-efficient farming methods.

Through the ICARDA-ARC Wheat Improvement Program, enhancing wheat productivity is another focus area of ICARDA to improve crop systems and strengthen food security. The program developed water-use efficient and heat-tolerant wheat varieties. Rust-resistant wheat seed distribution generated yield advantages and net benefits, and the "Enhancing Food Security in Arab Countries" initiative assisted the farmers to access the certified seeds of two varieties of barley, Giza 126 and Giza 2000.

ICARDA Projects in Egypt

Below are summaries of all active projects in Egypt. For a summary table with exact dates, budget, and project manager, see Annex 1.

Conservation of pollinator diversity for enhanced climate change resilience (2017-2021 | \$7.8 million | MEL Page)

Active in Algeria, Egypt, Jordan, Morocco, Turkey and the State of Palestine, this project aims to enhance climate change resilience through conservation of pollinator diversity without rewards for farmers and sponsored events to ensure economical self-sustainability. For this objective it brings in the Farming with Alternative Pollinators (FAP) with its cross-sector policy mix to the implemented countries, Morocco being the point of reference.

CRP WHEAT - Phase II (CGIAR) (2017-2022 | \$ 2.8 million)

WHEAT is a CGIAR Research Program launched in 2012 and led by the International Maize and Wheat Improvement Center (CIMMYT). Being active in lower- and middle-income countries, CGIAR Research Program on Wheat works with public and private organizations around the globe to increase the productivity, production and affordable availability of wheat for 2.5 resource-scarce producers and consumers who depend on the crop as a staple food.

Support for Enhancement of Food Security in Arab Countries (Phase III) (2018-2022 | \$2.4 million | MEL Page)

⁸ Egypt and ICARDA (cgiar.org)

⁷ http://www.fao.org/country-showcase/egy/product-highlights/en/

⁹ https://repo.mel.cgiar.org/handle/20.500.11766/7898



Aims to to contribute to enhancing food security in Arab countries by improving the productivity of staple food crops, especially wheat, and building the capacity of national agricultural research systems to support and sustain future growth in agricultural production.

CGIAR Research Program on Policies, Institutions, and Markets (PIM) - Phase II (2017-2021 | \$489,144)

Active in Egypt, Ethiopia, Afghanistan, and Ethiopia, PIM's research provides support for policies that help poor farmers, both men and women, improve their lives; produce nutritious and affordable foods; and protect the soil, water, and biodiversity in rural landscapes.

Establishing and Operating a Regional Network for Field Measurement of Actual Crop Water Consumption (\$716,610 | 2018-2021)

ICARDA in collaboration with FAO and five countries in the region has established a regional evapotranspiration (ET) network to establish a reliable source of ground measurement of ET with the multiple goals of calibrating and validating RS-based ETa retrievals, calibrating and validating crop models with the ET and related datasets and also for regional synthesis in the context of regional water scarcity. The NENA-ETNet will have a special focus on calibrating CORDOVA-ET system using other field ETa methods of determination to decide if CORDOVA-ET method can be used as a regional standardized validation protocol. The participating countries are Jordan, Egypt, Lebanon, Tunisia, and Morocco. The participating countries have good capacity and facilities for ET measurements using energy balance methodologies, lysimeter and gravimetric methods.

Supporting National Programs of Agricultural Research in the Arab Countries through Training (2019-2021 | \$ 975,000 | MEL Page)

Based on the ICARDA Decentralization plan and the investment made to ICARDA Research Platforms through the support of AFESD, ICARDA Capacity Development Unit manage a project funded by AFESD aiming to support and advance collaboration programs between ICARDA and the National Agricultural Research Programs in the Arab countries; in addition to contributing to funding postgraduate scholarships and fellowships in the fields of agricultural research and to support ICARDA's activities in organizing several training programs/courses to Young Arab Professionals to fulfill the needs of Arab countries from ICARDA's research. In Egypt through ICARDA Research Platform on high-input irrigated agriculture systems as such as on salinity management and genetic research.

Wastewater Reuse in the MENA Region: Addressing the Challenges (ReWater MENA) (2019-2021 | \$300,000 | | $\underline{\text{MEL Page}}$

As part of the regional project, ICARDA contributes to Output One and 3 of the project portfolio in Egypt which include: the development of a national baseline to support the development of a national strategy for reuse; and the development of Local wastewater treatment and reuse (direct and indirect reuse) models. The plans will be developed through participatory methods that involve all key stakeholders including farmers, business ventures, government institutions, and other intended beneficiaries of the reuse models.

CGIAR Research Program on WLE (CRP 5) - WI/W2 Funding (2013-2021 | \$8.7 million | | MEL Page)

Active in Egypt and Jordan, CGIAR Research Program on Water, Land, And Ecosystems aims to provide solutions for scaling up sustainable water, land, and ecosystem management innovations and investments in the decision-making process. This will ensure reduced risks in agricultural landscapes and increase the resilience of women and men in developing countries.

Innovative Agriculture for Smallholder Resilience – iNASHR (2020- 2022 | \$1.3 million)

The aim of the 'Innovative Small-holder Agriculture Resilience' (iNASHR) project is to help address Egypt's water scarcity and soil quality simultaneously and to improve food security for smallholder family farmers. The project is funded by GIZ and developed alongside Egypt's ARC and Ministry of Agriculture.



Modernization Crop Breeding Programs Arab Countries (2020-2022 | \$ 3.3 million)

Active in Egypt, Lebanon, Morocco, Tunisia, Sudan, the project's goal is to increase the productivity and resilience of agricultural production in the targeted countries in response to the accelerating challenges of the region (climate change, water scarcity, heat stress, emerging new pests and diseases) by developing new crop lines through speed breeding and training NARS scientists. While the selection and breeding of crop lines are occurring in Rabat, Morocco, product profiles were developed in partnership with the Tunisia NARS.

Egypt Bilateral Program 2019-2020 Season (2019- 2022 | \$ 250,000/year)

Egypt has been an active collaborator of the Consultative Group on International Agricultural Research (CGIAR) since 1978 with the signing of a cooperation agreement with the Ministry of Agriculture and Land Reclamation. ICARDA's partnership with Egypt and specifically the Agricultural Research Centre (ARC) is aiming the strengthen the research capacities in areas that include crop improvement, cropping system management, improved water productivity and irrigation efficiency, salinity management, crop-livestock production system, biotechnology, and human and institutional capacity development.

CGIAR Research Program: GENDER Platform (2020-2021 | \$100,000 | Website)

GENDER (Generating Evidence and New Directions for Equitable Results) is CGIAR's new platform designed to put gender equality at the forefront of global agricultural research for development.

Assessment of water-harvesting scaling-up potential for the NENA Region (2021-2022 | \$ 250,000)

The project aims to quantify the water harvesting potential for scaling up across the NENA region by 1- collecting, generating and streamlining the rich database and knowledge gateways required to assess the water harvesting potential at a regional scale 2- assessing and developing a digital map of the water harvesting potential based on spatially explicit modeling and multi-criteria analysis taking into consideration site-specific factors. It also aims at developing a GIS web-based interface to support stakeholder decision-making for target-specific scaling of interventions and investment by developing a web-based dynamic interface tool that can identify SLM practices to support decision-making for site-specific interventions and implementation through a community-based participatory and transformative learning approach.

ICARDA project value in Egypt

The next graph depicts the value of ICARDA projects in Egypt from 2016-2024, based on past and current projects. We see that since 2016, there is an annual increase of about \$150,000 in project value in Egypt. As depicted by the projected project value, if there were no new projects or funds brought into Egypt, there would be a rapid decline in total project value starting in 2022. Note that the purpose of the graph is to illustrate trends and not to provide precise budget data; several assumptions were made to create the graph, noted below the graph. Assumptions include: (1) All budget data in OCS at the time of data pull was up to date. (2) For multi-country projects, funds are distributed equally among countries. (3) Project spending is equally divided across all years.



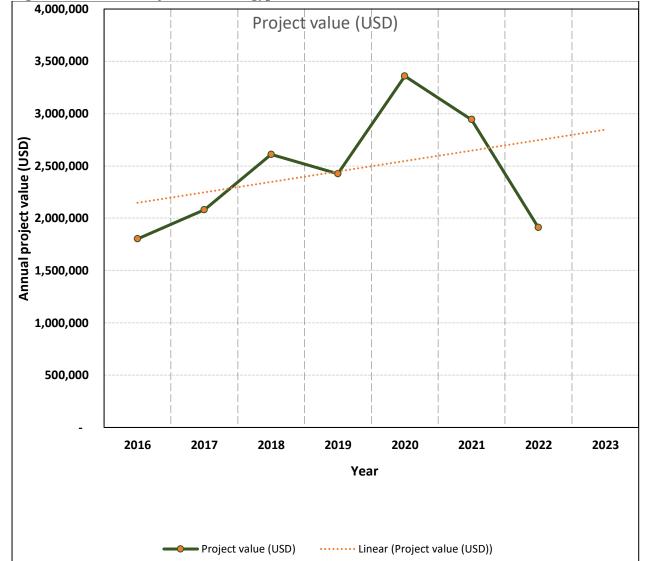


Figure 1: ICARDA Project Value in Egypt, from 2016 to 2023

(Source: MEL 2021, Elaboration: MEL)

Partnerships

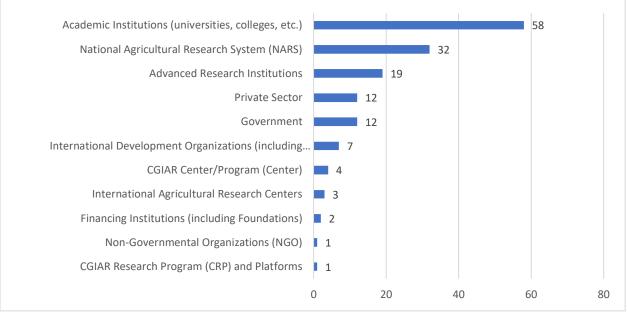
ICARDA engages several local, national, regional and international entities as a means of ensuring effectiveness and efficiency of knowledge generate and project delivery at scale. This section highlights the partners with which ICARDA has worked both in project delivery and knowledge generation and dissemination.

Project delivery partners

Over the years, ICARDA has partnered with over 151 entities that can be stratified into 12 types. Academic institutions, NARS advanced research institutions were the most involved types.



Figure 2: Project Delivery Partners for Egypt



(Source: MEL 2021, Elaboration: MEL)

Knowledge generation partners

ICARDA has a total number of 87 partners in the generation and dissemination of scientific knowledge. Over the past 5 years, ICARDA has produced 204 knowledge products with partners. The partners contributing to the most knowledge products are shown in the graph below. Local Egyptian partners play an important role as ICARDA's top knowledge generation partners in Egypt.

ARC Egypt - National

ARC - APRI - National

CIRAD - International

INRA Morocco - International

ARC - SWRI - International

O 5 10 15 20 25 30

(Source: MEL 2021, Elaboration: MEL)

Capacity Development

Capacity development is a fundamental component of ICARDA's strategy and contributes to the achievement of several goals and targets. Building the capacity of partner institutions, and beneficiaries can greatly contribute to the sustainability of ICARDA's work. Over the past five years in Egypt,



ICARDA capacity development work has involved the training of 379 men and 183 women through short-term group training, and 17 individual advanced degree training (Figure 4).

219876543210 Individual Degree **Group Training** Years Individual Degree-Male Individual Degree-Female Group Training-Male = Group Training-Female

Figure 4: Capacity Development Activities in Egypt

(Source: MEL 2021, Elaboration: MEL)

Research themes

The research themes ICARDA scientists have worked on concerning Egypt are key insights, on where the largest share of ICARDA work (priority) in the country lies and can be a useful precursor to where the most impact will be created. Figure 5 is a demonstration of the top 20 ICARDA research themes in Egypt. These account for 373 out of the 1,012 thematic areas mentioned. The top key areas are related to Egypt are capacity development, climate change, food security followed by other strategic areas such as agriculture, water management and water scarcity.



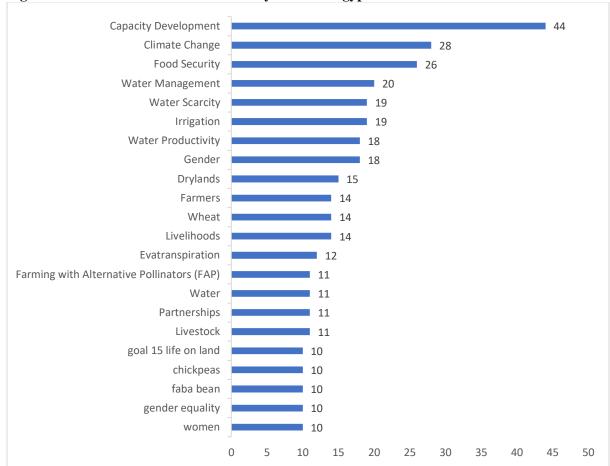


Figure 5: Most Used Research Theme Keywords on Egypt from 2016-2021

(Source: MEL 2021, Elaboration: MEL)

Variety Development

As part of the varietal nursery development process, ICARDA conducts several multi-location trials to ensure that varieties are developed and well adapted for different agro-ecological zones within its areas of operation. Egypt has participated and benefitted from this process with a total of 301 trial lines of chickpea, lentil, faba bean, grass pea, barley and wheat have been provided since 2016.



90 80 Sum of Crop Varieties/Accumulative 70 60 50 40 30 20 10 0 17-18 19-20 16-17 18-19 20-21 Years -Chickpea Lentil Faba Bean Grass Pea Spring Barley Winter Barley — Durum Wheat — S. Bread Wheat

Figure 6: Cumulative Variety Development between 2016-2021 in Egypt

(Source: MEL 2021, Elaboration: MEL)

Variety release

Variety release is a key prerequisite for taking crop technologies to scale through wide distribution networks. ICARDA has contributed to the release of 41 varieties of 6 crops in Egypt. The crops include barley, chickpea, durum, faba beans, lentil, and spring bread wheat. The release of ICARDA-germplasm varieties by the Egyptian government was greatest in the 1990s.

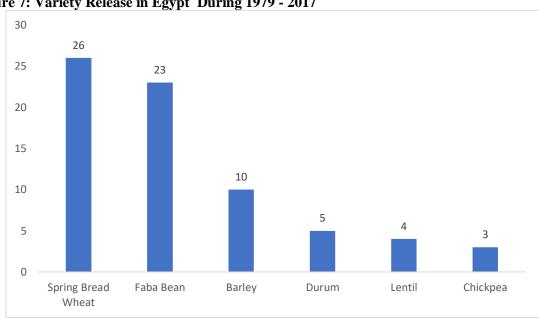


Figure 7: Variety Release in Egypt During 1979 - 2017

(Source: MEL 2021, Elaboration: MEL)



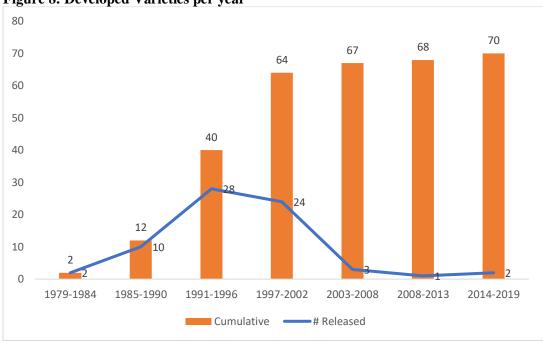


Figure 8: Developed Varieties per year

(Source: MEL 2021, Elaboration: MEL)

Impact assessment of some technologies promoted by ICARDA in Egypt

Below are summaries of the research conducted on the impact of ICARDA-promoted technologies and practices in Egypt, sourced from three Outcome Impact Case studies in Egypt between 2008 and 2019:

Fighting poverty: Impact of improved faba bean technologies in Africa

Intervention: In 2003, ICARDA launched an IFAD-funded project, Technology Generation and Dissemination for the Sustainable Production of Cereals and Cool-season Food Legumes. Scientists worked with farming communities, government research and extension agencies, universities and NGOs in four countries – Egypt, Ethiopia, Sudan and Yemen – to identify, test and promote a range of new technologies for various crops, including faba bean. The project concluded in 2005. To find out if the project has made difference, ICARDA and national research centers in each country jointly conducted a series of studies aiming to:

- Assess the adoption of improved technologies
- Identify technical, socioeconomic, and policy constraints that hinder the adoption of new agricultural technologies to draw lessons for the future
- Assess the impacts (crop yields, food security, income, poverty) on rural households

<u>Impact:</u> The analysis is based on data collected from 587 households surveyed using stratified sampling and a formal questionnaire. The survey results show that the adoption of faba bean technologies developed jointly by ICARDA and its national partners, has improved crop yields, food security, income and nutrition. It has also had a direct and visible impact on poverty in three of Africa's most populous countries. Additional work, led by national research and extension agencies in these countries, will help extend these benefits to millions of small-scale farmers beyond the project's pilot areas.



<u>Study title & source:</u> Fighting poverty: Impact of improved faba bean technologies in Africa.2008.(MEL Link)

Adaptation Technologies in Agriculture: Adoption and Impact Assessment of Raised Bed Farming System Technology (RFST) in Egypt

<u>Intervention:</u> This report is part of the "Randomized trials for assessing the appropriate mix of public and private-machinery service providers in enhancing food security through equitable innovation systems" project led by the International Center for Agricultural Research in the Dry Areas (ICARDA) and funded by the Arab Fund for Economic and Social Development (AFESD).

<u>Impact:</u> Based on the achieved results, promoting the adoption of wheat cultivation on raised beds requires formulating a set of policies and alternative instruments that aim to activate the role of agricultural extension in providing farmers with information and updates on appropriate new farming systems and technology packages to increase their knowledge about the introduced technology package and associated benefits

<u>Study title & source:</u> Adaptation Technologies in Agriculture: Adoption and Impact Assessment of Raised Bed Farming System Technology (RFST) in Egypt.2019. (<u>MEL Link</u>)

Assessing the Impacts of Agricultural Water Management on Ecosystem Services in the Nile Delta

<u>Intervention:</u> The objective of this study is to test and identify appropriate water and land management strategies that will increase water and land productivity, reduce the demand for chemical fertilizers, increase farmers' income, and minimize the negative impacts of agriculture on the ecosystem.

Impact: The project has addressed these objectives through working with district engineers in the study area to raise their capacity and to introduce state of the art computational tools that would allow them to respond to and manage a dynamic water system. Geographic Information Systems has been introduced for data standardization, manipulation, geo-referencing, storage and retrieval.

<u>Study title & source:</u> Assessing the Impacts of Agricultural Water Management on Ecosystem Services in the Nile Delta. 2016. (MEL Link)

Innovations

There is one innovation reported for Egypt in the CGIAR Program Results Dashboard.

Recommendations to implement policy reforms that encourage women's participation in irrigation management in Egypt (2019)

<u>Innovation</u>: Socioeconomic and political norms affect the Participation of rural communities in irrigation management. In Egypt, women's participation in water governance remains low and their involvement in irrigation practices is undervalued. Institutional support and policy reforms – such as introducing gender-based quotas in Water User Associations and implementing awareness campaigns to promote gender equality – are key to ensuring that women share in the benefits of irrigation.

<u>Stage of innovation:</u> Stage 3: available/ ready for uptake (AV); The results of the studies have been shared through a journal article, a working paper, a policy brief and a blog Source:

 $\underline{\text{https://marlo.cgiar.org/summaries/PIM/projectInnovationSummary.do?innovationID=1359\&phaseID} = \underline{102}$



Policy Contributions

There were no policy contributions reported for ICARDA in Egypt reported in the CGIAR Results Dashboard.

Suggested actions in contribution to agricultural livelihoods, food security and resilience of farming communities in Egypt

Currently, the agricultural challenges in Egypt can be summarized with:

- Climate change and associated impacts of drought and desertification
- Lack of physical and social infrastructures
- Scarcity of fresh water and rising costs of energy
- Malfunctioning market mechanisms result in mismanagement and inefficient utilization of natural resources and environmental degradation, including land ¹⁰.

Based on ICARDA's expertise and strong experience in the country, the following concrete actions through which it can contribute to the achievement of SDG 2: Zero Hunger, SDG 13: Climate Action and SDG 14: Life Below Water have been identified:

- The farming with Alternative Pollinators (FAP) approach could be scaled up in Egypt to achieve not only SDG 1: No Poverty and SDG 2: Zero Hunger, but also SDG 15: Life on Land.
- The policy implications should favor investments in the research for adapting Raised Bed technologies to increase mechanization and soil salinity management¹¹.
- More tools could be developed in addition to "Map Egypt: An online database for improving food and nutrition security in Egypt" to complement monitoring agricultural development projects concerning the subnational socioeconomic context in Egypt which can lead to improvement of the planning of agricultural projects, coordination and effectiveness.
- ICARDA could take part in activities for policy contributions in Egypt

¹⁰ Egypt: Country Programming Framework (CPF) Government of Egypt 2012-2017 (fao.org)

¹¹ Y. Yigezu, E. Abbas, A. Swelam, S.Sabry, M. Moustafa, H. Halila "Socioeconomic, biophysical, and environmental impacts of raised beds in irrigated wheat: A case study from Egypt", Agricultural Water Management (2021)



Annex 1: Summary of ongoing projects in Egypt (Source: MEL)

Project Name	Project Manager	Main Donor	Total Budget (USD)	Start Date	End Date	Status
Conservation of pollinator diversity	Stefanie	Federal Ministry for the	7,824,348	2017-06-01	2022-05-31	Ongoing
for enhanced climate change resilience	Christmann	Environment, Nature				
		Conservation, Building and Nuclear Safety				
CRP WHEAT Phase II	Michael Baum	CGIAR System Organization -	2,800,000	2017-01-01	2022-12-31	Ongoing
CRI WIEITI Hase II	Whender Baum	CGIAR	2,000,000	2017 01 01	2022 12 31	Oligonia
Support for Enhancement of Food	Habib Halila	Arab Fund for Economic and	2,400,000	2018-10-01	2022-12-31	Ongoing
Security in Arab Countries (Phase III)		Social Development -				
		AFESD,OPEC Fund for				
		International Development	100 111			
CGIAR Research Program on Policies,	Girma	CGIAR System Organization -	489,144	2017-01-01	2021-12-31	Ongoing
Institutions, and Markets (PIM) - Phase II	Tesfahun Kassie	CGIAR				
Establishing and Operating a Regional	Vinay Nangia	Food and Agriculture	716,610	2018-12-23	2021-11-30	Ongoing
Network for Field Measurement of	Villay Maligia	Organization of the United	710,010	2010-12-23	2021-11-30	Oligonig
Actual Crop Water Consumption		Nations State Chites				
(Evapotranspiration)						
Supporting National Programs of	Charles	Arab Fund for Economic and	975,000	2019-01-01	2021-12-31	Ongoing
Agricultural Research in the Arab	Kleinermann	Social Development - AFESD				
Countries through Training						
Wastewater Reuse in the MENA	Bezaiet	International Water Management	300,000	2019-01-24	2021-07-31	Ongoing
Region: Addressing the Challenges	Dessalegn	Institute				
(ReWater MENA)	G : 1 A1 1	A 1 D 16 D	2.250.000	2010 01 01	2021 06 20	
Strengthening Innovation and	Seid Ahmed	Arab Fund for Economic and	3,250,000	2019-01-01	2021-06-30	Ongoing
Technology Adoption towards	Kemal	Social Development - AFESD				
Sustainable Agricultural Productivity in Arab Countries						
Innovative Agriculture for	Bezaiet	Deutsche Gesellschaft für	1,337,565	2020-01-01	2022-12-31	Ongoing
Smallholder Resilience - iNASHR	Dessalegn	Internationale Zusammenarbeit	1,337,303	2020-01-01	2022-12-31	Oligonia



Egypt Bilateral Program 2019-2020	Aladdin	Government of Egypt	250,000	2019-10-01	2022-09-30	Ongoing
Season	Hamwieh					
Modernization Crop Breeding	Miguel	Arab Fund for Economic and	3,270,000	2020-04-01	2022-12-31	Ongoing
Programs Arab Countries	Sanchez-Garcia	Social Development - AFESD				
AFESD Grant in Support of ICARDA	Charles	Arab Fund for Economic and	1,634,695	2020-01-05	2021-06-30	Ongoing
Capacity Building Activities	Kleinermann	Social Development - AFESD				
CGIAR Research Program: GENDER	Dina Najjar	CGIAR System Organization -	100,000	2020-01-01	2021-12-31	Ongoing
Platform		CGIAR				
CDCMCT-Mapping Dairy Value	Chandrashekhar	The French Agricultural Research	14,195	2021-04-20	2021-12-31	Ongoing
Chain in Egypt	Biradar	Center for International				
		Development - CIRAD				
Assessment of water-harvesting	Chandrashekhar	Food and Agriculture	250,000	2021-06-02	2022-05-30	Ongoing
scaling-up potential for the NENA	Biradar	Organization of the United				
Region		Nations				