Search for a Spanish Partner for a Bilateral R&D Project (this document will be shared with potential Spanish companies)

Organization	
Date of Request:	2/ 18/ 2021
Company name:	Arid Lands Agricultural studies and Research Institute-Ain Shams University
Contact person and title/ designation:	Prof. Dr. AymanF. Abou-Hadid
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SECTION 1: Your Company Profile *(Please give brief / to the point explanations. For more explanation on any point below, you may add a short paragraph as an annexure, with this document.)*	
Business Sector	Agriculture
Company mission or core functions	The Institute provide consultation for farmers aiming at improving agricultural production and saving irrigation water
Date of establishment	1984 as a department in the faculty of Agriculture and 2014 as an independent Institute of Ain Shams University
Ownership (if public and traded, add stock exchange and ticker symbol)	The Institute belongs to Ain Shams University which is a governmental organization
Total number of employees	28 fixed employees and 10 PhD
Number of employees in R&D	All devoted to education and R4D
Key products sold or services provided	Soil and water analysis and plant tissue analysis. Advices for land and water management
Company core technical competences	Soil and water analysis to advise for crop management
Key R&D programs and activities	Several research for development programs including bilateral cooperation with the EU

	and FAO
Examples of accomplishments	Cooperate with other research organizations and private companies. The Institute has been upgraded to obtained ISO/IEC: 2017 17025 since July 3, 2019
Company strategic orientation	Teaching Higher studies and conducting research for Development in Agriculture.

SECTION 2: Partner of Interest *(Please provide a brief summary of the prospective partner company or organization. This summary may address some or all of the points below)*	
Profile of ideal technology partner	A firm or company dealing with the use of climate data to advise farmers about the best agricultural practices.
Core technological competencies and expertise	Providing sensors for water and nutrients in soils. Logging data from the sensors and utilize it to estimate water needs and fertilizers required.
Other essential qualifications (e.g.: ownership, track records etc.)	Capable of modeling and modify the computer model to calculate the amount of fertilizes needed
If you have a list of companies with whom you are in contact or interested in contacting, please provide contact details	
If you are interested in collaboration: please specify details and other important information you want to share with a potential company	I want to apply for a grant Egypt-Spain as per the call: https://stdf.eg/web/grants/open/394
Interested areas of collaboration	
Specific R&D contribution you are seeking/offering	Environmental and economic issues have increased the need to better understand the role of nitrogen (N) in crop production systems. Nitrogen is the nutrient most often deficient/excessive for crop production in Egypt, and its use can result in substantial economic return for farmers and preventing the excessive use is essential for environment, Nitrogen's behavior in the soil system is complex, yet understanding these basic processes is essential for a more efficient N management program. However, when N inputs to the soil system exceed crop needs, there's a possibility that excessive amounts of

	nitrate (NO3--N) may enter either ground or surface water. I am aiming to develop a model to manage not only irrigation (like Aqua Crop) but also N in the soil (present and added during growing season) for efficient N management in the soil also to ensure sustainable development for both soil and water resources. When developing N programs (in the first year), consider nitrogen's mobility factor in different soil types. I choose Bani-Swaif governorate located in middle Egypt to do experiments there as this governorate has a diverse soil types that we can analyze and grow a crop with gradient of nitrogen to help plant growth and test the actual water consumption. Then evaluate the modified Aqua Crop in the second year before launching it. We will need a data logger linked to climate sensors, nitrogen sensor, and a salinity probe. The call indicated above is an industrial call require industry company or governmental organization from Egypt (our Institute) and Spain partner, I suggest the role of the industrial company from Spain would be to provide and develop sensor/probe to indicate N amount in soil constantly, and to develop the model. Egypt side is to run all field experiments and provide the Spain partner with in-situ required data in different soil types and may be under different irrigation systems as well

Signature:
Name: Prof Ayman Abou-Hadid
Date: 2/ 18/ 2021