

Transforming Egyptian Soybean Farming by Developing Local and Sustainable Soybean Production



The Kheir Ardena project
Since 2015



Solidaridad

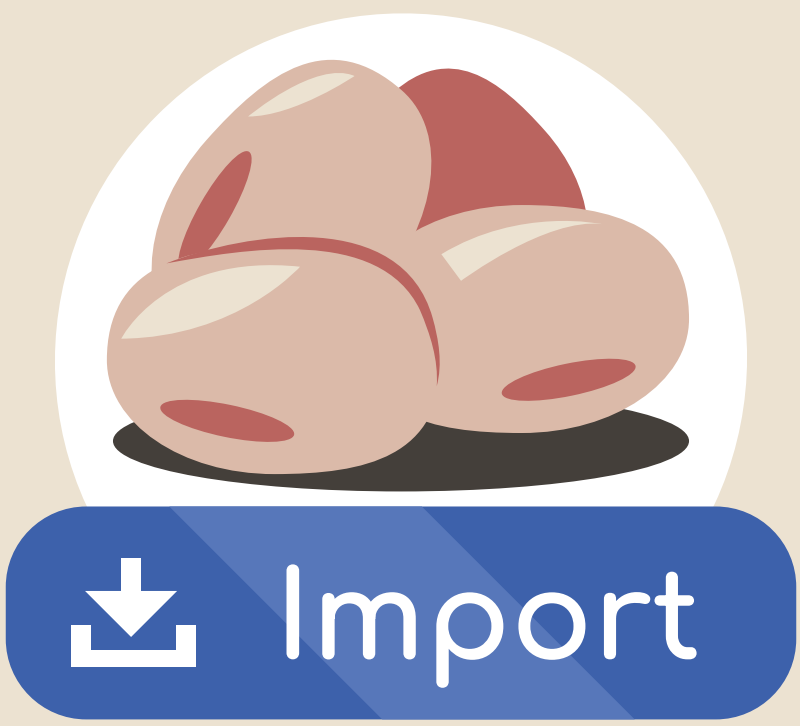


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Egyptian Soy Sourcing



To date, Egypt is **highly dependent on importing soy**

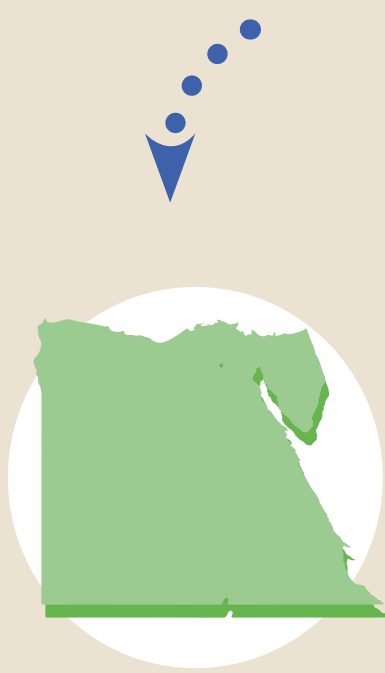
Indeed...



98%

of Egypt’s soybean supply is **imported**, with **most being used for animal feed**

Leading to various challenges...



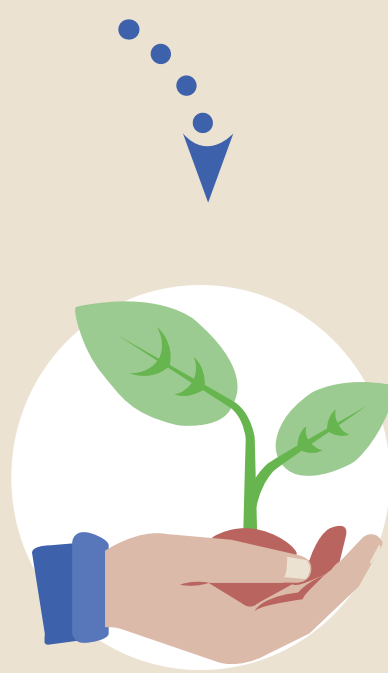
Food Security

- Any disruption in supply can affect the availability of animal feed, which in turn impacts dairy production



Economic vulnerability

- Fluctuations in global soybean prices can directly impact the cost of animal feed
- Heavy reliance on imports can hinder the development of local soybean production



Environmental impacts

- Importations may increase the carbon footprint because of transportation emissions and the deforestation risks associated
- Environmental practices in exporting countries might negatively affect global sustainability efforts





Therefore, Egyptian smallholder farmers producing **soybeans** play a key role when it comes to securing **FOOD AUTONOMY, RURAL LIVELIHOODS** and **contribute reducing global warming**



Yet...



Soybean soybean farmers are faced with a range of **intertwined environmental, economic and social challenges**



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Increasing environmental challenges



Pressure on natural resources

- **Competition:** Agriculture is competing with population growth and industrial demands, putting pressure on land and water resources
- **Water scarcity:** Annual water deficit of around 7 000 000 000 000 cubic metres



Impacts of climate change

- **Rising temperatures and more frequent heat waves:** Average temperatures have increased by 0.34°C per decade since 1960 impacting yields
- **Soil salinity & erosion:** Seawater intrusion due to rising sea-levels is affecting the health of agricultural lands, impacting crop yields and lowering the quality of grasses and plants that dairy cattle forage

Coping with complex social & economic realities



Insufficient training on sustainable practices

- **Knowledge to be reinforced:** Only ~20% of smallholders have received formal training or education in sustainable farming techniques
- **Gender-based barriers:** Women often face stronger difficulties in accessing knowledge impacting their productivity
- **Unsustainable practices:** Low input quality – pesticides and herbicides



Difficult access to needed resources

- **Access to finance:** Difficulties accessing affordable credit limits farmers' ability to invest in their farms
- **Access to inputs:** Difficulty accessing good quality inputs, including seeds, impacts yield quantity and quality



Challenging social realities

- **Difficult livelihoods:** ~30% of the rural population were still below the poverty line in 2019
- **Cultural practices and peer pressure:** Switching to new practices may appear challenging due to peer pressure and cultural backgrounds



Difficult access to higher markets

- **Value chains:** Farmers are the most vulnerable and lowest paid actors within long and complex value chains – sometimes, interventions by middlemen can prevent farmers from receiving a fair price for their soya

To adress some of these challenges...



...a coalition of public and private partners joined forces in 2010 to empower Egyptian smallholder dairy farmers



The **Kheir Ardena** project was born



Key Pillars for Transforming Soybean Farming

To transform Egyptian soybean production, the project:

- (1) Empowers smallholder soybean farmers
- (2) Supports the development of the soybean sector

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Empowering 4,000+ smallholder soybean farmers through:



Adoption of regenerative agriculture practices

- **Mindset switch:** Accompany farmers in overcoming ‘social’ barriers’ and in adopting new practices
- **Collective trainings:** Better water, soil health and fertilization management...
- **Pilots:** Irrigation methods, seed multiplication and experimental plots to determine the optimal methods for soybean production



Technical assistance

- **Field support:** Day-to-day on field support through community leaders, technical experts and field officers
- **New technologies:** Soil testing, seed quality testing...
- **Climate reports:** Climate data, heat wave information, and climate change forecasts to help farmers plan ahead and manage their productivity and strengthen their resilience



Access to needed resources

- **Inputs:** Ensure access to qualitative inputs
- **Financial awareness**

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In the future, the project plans to adopt a landscape approach by collaborating with other stakeholders:



When farmers are not cultivating soy, they grow other types of crops



In the future, the Kheir Ardena project aims to collaborate with other industry players and stakeholder who source those **alternative crops**



This potential collaboration among stakeholders could facilitate a **landscape approach**, enabling the full transition of farmers’ land to regenerative agriculture

Leading to a Positive Impact on the Whole Ecosystem



“We were educated on improved irrigation systems and schedules, which saved our crops from drought. Previously, we would leave soybean plants without irrigation for over 40 days, believing that drought stress would increase the number of flowers and thus the yield. This was a common misconception among farmers. Through training sessions, we learned that the best irrigation strategy is to manage intervals between 15 / 20 days to avoid drought. This approach led to excellent yields. Plus, the costs that used to burden me have greatly decreased, and I was able to increase the quantity of high-quality soybean crops”

–Hoda, Soybean Smallholder, Kheir Ardena Project