



SDG2



**Zero
HUNger**

2023-2024

Alexandria University and SDG 2 (Zero Hunger): Integrated Contribution Using Required Keywords

Alexandria University plays a central role in advancing **SDG 2: Zero Hunger**, particularly through research, agricultural innovation, soil studies, food-security projects, and community outreach supporting **smallholder farmers**. The university addresses challenges affecting food systems in Egypt—such as soil degradation, climate stress, and rising population needs—while influencing **environmental politics** and national strategies related to sustainable agriculture.

1. Research on Soil Health, Fertility, and Sustainable Land Management

Several faculties, especially the **Faculty of Agriculture** and the **Institute of Graduate Studies & Research (IGSR)**, conduct advanced studies on **soil properties, soil fertility, and soil degradation**.

This includes:

- Research on salinity, nutrient depletion, and soil-water relations
- Soil-microbiology studies improving nutrient availability for crops
- Assessing the effect of climate change on soil health and productivity
- Developing biofertilizers, composting systems, and precision-agriculture tools

These studies directly support national efforts to protect farmland and enhance food production, particularly important for **smallholder farmers** who rely on fertile soil for livelihoods.

2. Crop Improvement and Climate-Resilient Agriculture

AlexU conducts extensive research on **crops** such as wheat, rice, maize, legumes, and vegetables—critical to Egypt's food system.

The research focuses on:

- Breeding high-yield and drought-tolerant crop varieties
- Developing salt-tolerant crops for agriculture in reclaimed desert soils
- Studying the **effect** of extreme temperatures, water scarcity, and pests on crop productivity
- Improving seed quality and post-harvest practices

These innovations help secure stable **food** supplies and strengthen agricultural resilience.

3. Support to Smallholder Farmers and Rural Communities

Alexandria University engages directly with **smallholder farmers**, who represent the backbone of Egypt's agriculture sector.

Through field schools, agricultural extension services, and community caravans, the university provides:

- Training on soil conservation and sustainable irrigation
- Guidance on pest control, crop selection, and fertilizer use

- Demonstrations of low-cost technologies and improved agricultural practices
- Awareness sessions on climate change and its effect on crop production

These interventions increase the productivity of **smallholders** and improve food security in rural areas.

4. Food Security Programs and Nutrition Support

Alexandria University's healthcare and community-service units support local populations through:

- Nutrition programs for children and low-income mothers
- Community awareness on food safety and healthy diets
- Research on food quality, contamination, and post-harvest losses
- Student-led food-distribution and food-waste-reduction campaigns

These initiatives reduce hunger, improve dietary quality, and expand access to safe, nutritious food.

5. Agricultural Innovation and Sustainable Technologies

Through engineering, agriculture, and environment-focused faculties, the university develops tools and systems that support modern, sustainable **agriculture**, including:

- IoT-based systems for soil moisture and irrigation control
- Solar-powered pumps for small farms
- Greenhouse technologies and hydroponics
- Waste-reuse systems producing organic fertilizers

These innovations reduce costs for farmers—especially **smallholders**—and protect soil and water resources.

6. Influence on Environmental Politics and National Agricultural Policy

Alexandria University contributes to Egypt's agricultural **environmental politics** and food-policy debates through:

- Advisory roles in Ministry of Agriculture committees
- Research contributing to national food-security strategies
- Participation in discussions on climate adaptation, water policy, and sustainable land use
- Hosting conferences and workshops on agricultural transformation and environmental governance

This positions the university as an important actor shaping national responses to food insecurity, soil degradation, and climate impacts on agriculture.

Evidences

Food saving Plan for students and Staff

Catogary	Item	Quantity	Value	Amount L.E	Comments
Freezers	Frozen meat	138 kilo	109.9	15166.2	Knowing that there are supply prices that ended in the month of 5/2023 and the beginning of a new ongoing supply
	Boneless chicken	126 kilo	96.99	12220.74	
	Frozen chicken	60.800 kilo	57.77	3512.416	
	Frozen peas	141 kilo	22.93	3233.13	
	Frozen beans	26 kilo	39	1014	
Grocery	Triangle cheese	21591	1.9	41022.9	
	Red eggs	10451	2195	22939.945	
	sweetness	4971	3100	15410.1	
	White cheese	8820	3.99	35191.8	
	jam	7873	1180	9290.14	
	Sterilized milk	1595	5.47	8724.65	
	juice	6546	4.17	27296.82	
	Sardines	226	11.99	2709.74	
	honey	1314	1.27	1668.78	
	croissant	63	4	252	
	Chipsy	79	1.75	138.25	
	Plain biscuits	1244	1.57	1953.08	
	Bean my grits	4317 kilo	28.98	125106.66	
	sunflower oil	1441kilo	48.98	70580.18	
	lemon	3149 kilo	20	62980	
	green olive	601.77 kilo	31	18654.87	
	White tahini	395 kilo	36.97	14603.15	
	Dry beans	134 kilo	20.37	2729.58	
	Dry beans	266kilo	18.29	4865.14	
	Frying oil	74 kilo	27.77	2054.98	
Fine flour	327 kilo	15500	5068.5		
rice	58 kilo	13.93	807.94		
Vermicelli pasta	30kilo	16.55	496.5		

	Alabaster pasta	45 kilo	16.55	744.75	
	cumin	1.300 kilo	57.47	74.711	
	zaatar	1 kilo	70	70	
	Meat spice	1 kilo	115	115	
	bags	38 kilo	58.58	2226.04	
	vinegar	10 kilo	5.25	52.5	
	Hot sauce	7 kilo	70	490	
	Dry milk	1 kilo	99	99	
	rusk	66 kilo	29	1914	
	black pepper	1750 kilo	84.99	148.732	
	Table salt	216 kilo	5.7	1231.2	
	Yellow lentils	431 kilo	19.7	8490.7	
	Lentil meal	177 kilo	52.75	9336.75	
Foodstuffs	option	125 kilo	6.75	843.75	
	tomatoes	242 kilo	6.77	1638.34	
	onion	101 kilo	4.47	541.47	
	sauce	18 kilo	19.3	347.4	
	zucchini	406 kilo	6.47	2626.82	
	carrot	45 kilo	5	225	
	Bell pepper	644 kilo	7.5	4830	
	garlic	258 kilo	21.95	5663.1	
	potatoes	195 kilo	5.9	1150.5	
Total				552,551.95	·፲.፭

A training in fish farms to reduce food wastes

