

لجنة حصر وتطوير الفرص الاستثمارية
اللجنة الفرعية للتعليم والتدريب

National Deal Flow Committee
Education & Training Subcommittee

Agriculture Focused Training Centers

Investment Opportunity – TVET

April 2022



Agriculture Training Centers

OPPORTUNITY DESCRIPTION: Invest in KSA's education sector by establishing high-quality, Agriculture focused TVET centers

OPPORTUNITY OVERVIEW

Current Landscape

Key Stats

~SAR
68B

Agriculture sector contribution to GDP

~325K

Number of workers engaged in Agriculture

Benefits

Food Security

Economic Growth

Increased Rural Employment

Sustainable development

Govt. Support

Free seeds and fertilizers

Subsidized water, fuel and electricity

Free Land

Soft/Interest-free Loans

Key Challenges

Production Shortfall

Domestic Food Production and Consumption, KSA (2014-19); Million Metric Tonnes

Year	Consumption	Production	Shortfall
2015	29.8	8.9	20.9
2016	29.4	8.5	20.9
2017	29.4	8.5	20.9
2018	24.3	8.8	15.5
2019	24.3	8.8	15.5

Geographic Factors

Loose Soil

Low Rainfall

No perennial river or permanent water bodies

Depleted underground water

Lack of training

4

Dedicated public agriculture training centers in KSA

35%

Agriculture Expansion from formal sources

Sector Outlook

Agricultural Employment Forecast

Agriculture Employment Forecast, KSA (2015-30F); 000s of employed personnel

Year	Employment (000s)
2018	~332
2019	~326
2030F	~382

Modern farming to support production

Satellite and Thermal Imaging of Cropland

Drip Irrigation

Seawater Green Houses

Rainwater Harvesting

Hydroponics

Bio salinity research

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Source: General Authority of Statistics, World Bank, ILOSTAT

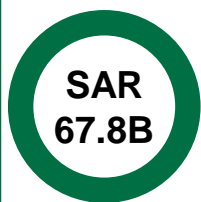


Agriculture Training Centers

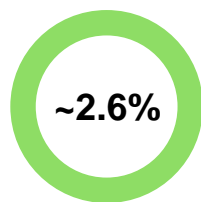
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KSA AGRICULTURE SECTOR OVERVIEW

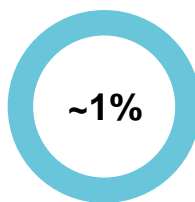
Overview of Agriculture Sector in KSA



Agriculture sector contribution to GDP



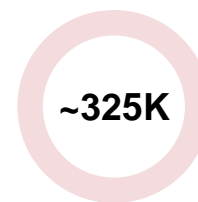
Agriculture as a percentage of Saudi GDP



Growth in Agriculture sector



Self-sufficiency ratio in food supply



Number of workers engaged in Agriculture

Benefits of expansion of agriculture sector in KSA



Food Security

Optimum utilization of scarce resources leads increase in agricultural output and supports food security in the Kingdom



Increased Rural Employment

Expansion of agricultural activities can help increase employment opportunities in rural areas



Economic Growth

Expansion of agriculture sector can help the Kingdom diversify its economy while contributing to economic growth



Sustainable development

Development of the agriculture sector can ensure a sustainable future for the coming generations, in line with the objectives of the Vision 2030

Government support for agriculture in KSA



Free seeds and fertilizers



R&D in Agriculture Technology



Free Land



Soft/Interest-free Loans



Subsidized water, fuel and electricity



Duty free imports of raw materials and machinery



Drainage and irrigation network





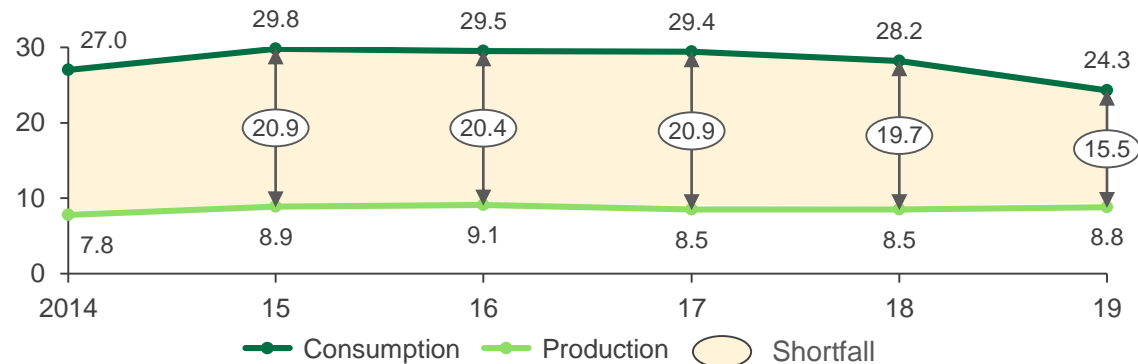
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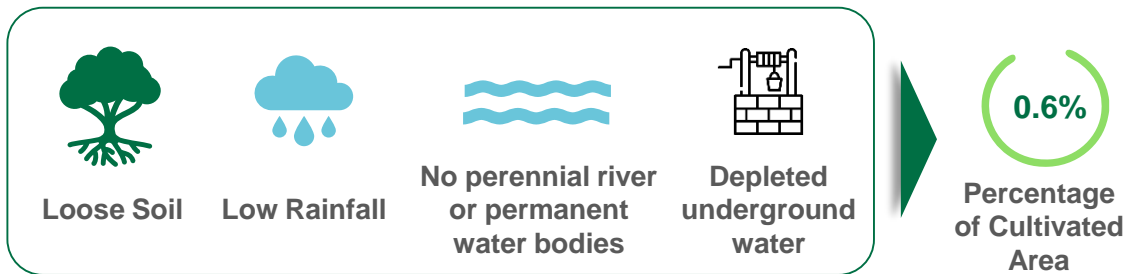
CHALLENGES FACED BY THE AGRICULTURAL SECTOR IN KSA

1 Low domestic food production

Domestic Food Production and Consumption, KSA (2014-19); Million Metric Tonnes

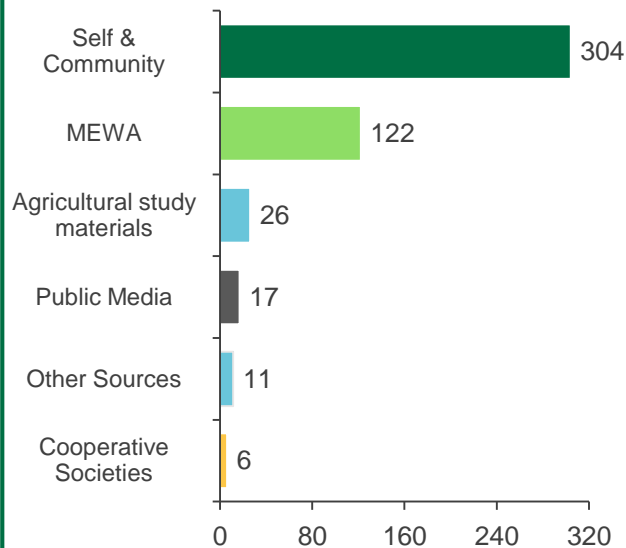


2 Unsuitable geographic make-up / climatic conditions for agriculture in KSA

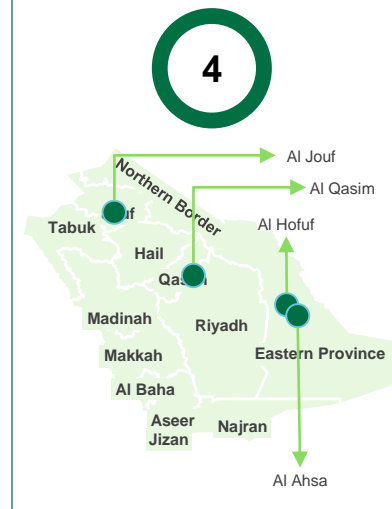


3 Lack of formal agriculture knowledge transfer (extension) programs

No. of Agricultural Holdings, by sources of Agricultural Extension (Knowledge), KSA (2015); Thousands



Dedicated public agriculture training centers in KSA



Licensing entity: Technical and Vocational Training Corporation



The current transfer of agricultural knowledge in KSA is mainly through the informal person-to-person channels and experience leading to scope of knowledge / information and skills gaps. There is a **need to develop formal agricultural training programs**

Note: Agriculture Holding: Refers to an economic unit (farm / land) operating under a single management in which agricultural activities are undertaken
Agriculture Extension Program: Refers to a service offering technical advice and knowledge to farmers to help improve yield etc.

Source: General Authority of Statistics, UN FAO





Agriculture Training Centers

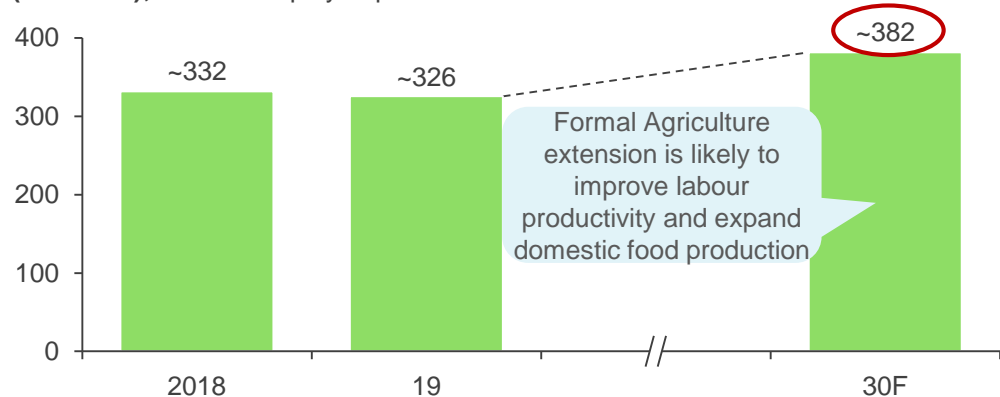
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FORMAL AGRICULTURE TRAINING

Workforce engaged in Agriculture in KSA

There is a need for setting up of formal training institutes to upskill the ~382K persons engaged in agriculture related activities by 2030F

Agriculture Employment Forecast, KSA (2015-30F); 000s of employed personnel



Forecast Assumptions

- 5%** Expected increase in labor productivity due to agricultural training
- ~20%** Expected increase in domestic food production
- 50%** Reduction in food waste by 2030 (from 33% to 17%)
- 30%** Expected reduction in domestic food production-consumption shortfall



New-age Agricultural methods and technologies

Training the labour force in cutting edge, innovative agricultural methods can increase output and reduce wastage of resources



Satellite and Thermal Imaging of Cropland

Can be used to **track the harvest and weather conditions** and improve yield



Drip Irrigation

Can significantly **reduce the usage of scarce water**



Seawater Green Houses

Reduce the use of fresh water and shield the crop against adverse weather conditions



Rainwater Harvesting

Help recharge underground aquifers and **reduce dependence on desalinated water**



Hydroponics

Plants can be **grown in nutrient enriched freshwater** instead of soil



Biomass/Biofuel energy

Food waste can be used to fuel the agriculture value chain in order to establish a **circular economy**



Bio salinity research

Expansion of research in physiological and biochemical traits of plants can help in **genetic engineering** to make plants more tolerant to saline water

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