

ISM AGRIFARMS

Slaughterhouse Solutions



www.ismagrifarms.com

ABOUT US

ISM AGRIFARMS, boasts specialized expertise in the meat processing industry. Our core strengths lie in delivering world-class solutions, encompassing turnkey design, equipment supply, installation, project management, and comprehensive training services. Through our strategic partnership with TEKNOTES, a renowned market leader based in Turkey, we collaborate on the manufacture and installation of complete solutions for the installation of slaughterhouse equipment and meat processing facilities.



**TEKNOTES
TASARIM**



AGRICULTURE INDUSTRY FACTS AND FIGURES

Agriculture is expected to maintain its consistent proportion of 4% of global GDP and agricultural output, both of which are expected to expand. However, is derived from agriculture. From \$170 billion in 2000 to \$404 billion in 2019, agriculture added \$404 billion to the global economy. Africa's agricultural output increased from 8% to 12% of the total throughout that time. Africa exported agricultural goods totaling \$15.7 billion in 2001. The amount rose to \$61.2 billion in 2020. The export curve and the GDP curve in Africa have a strong correlation.

Kenya's main industry, agriculture, contributes

approximately 25% of the country's GDP and accounts for 17% of all formal employment. FAO estimates that 40% of the population works in agriculture, with 70% of those jobs located in rural regions and taking into account the informal labor. Tea, coffee, corn, wheat, sugarcane, cut flowers, fruit, vegetables, dairy products, meat, and fish are among Kenya's top agricultural exports. Kenya's imports are primarily from Asia Pacific and the Africa/Middle East region, while its exports are primarily to Europe and the Africa/Middle East region. In 2019, just 8% of Kenya's exports and 3% of its imports went to or came from North America.

15% OF THE GDP IN SUB-SAHARAN AFRICA

4%
OF GLOBAL
GDP

AGRICULTURE'S GLOBAL VS SUB-SAHARAN



MEAT INDUSTRY FACTS AND FIGURES

The Kenyan meat market is anticipated to have significant expansion, over the projection period of 2023–2028, at a compound annual growth rate 10.59% (CAGR 2023-2028). Worth noting is in 2022, the number of animals slaughtered for meat production in Kenya picked up by 9.2% against 2021. This expansion creates multiple chances for firms in the private

sector to strengthen their position in the market and boost in the market and boosts their income revenues. Factors including rising disposable income, shifting consumer tastes toward foods high in protein, plus an expanding population. Based on product type, the market is segmented into beef, poultry, pork, sheep and goats.



INCREASE IN MEAT PRODUCTION, KENYA (2022)

9.2%
MORE ANIMALS
SLAUGHTERED IN
2022 vs. 2021

10.59%

Kenyan meat market
compound annual
growth rate

EXPORT MARKET

Africa

Kenya exported \$243k worth of poultry meat in 2021, ranking 98th among all poultry meat exporters. Poultry Meat ranked as Kenya's 519th most exported good in the same year. Rwanda (\$133k), Somalia (\$27k), the Democratic Republic of the Congo (\$23.2k), Uganda (\$17.9k), and South Sudan (\$17.5k) are Kenya's top export destinations for poultry meat.

In terms of exports of poultry meat from Kenya, the Democratic Republic of the Congo (\$22.8k), Uganda (\$12k), and Somalia (\$9.82k) experienced the biggest growth between 2020 and 2021.

243 ^{USD} **K**

Kenya's poultry export across Africa in 2021

133 ^{USD} **K**

Leading exports made to Rwanda

U.A.E.

The United Arab Emirates (U.A.E.) relies on imports from other regions of the world for 80% of its total food supply to meet rising food demand and a lack of arable land and water. Red meat is a particularly popular food among Muslims and is especially popular at festive times. In addition to domestic consumption, the United Arab Emirates ranks among the top tourist destinations in the world, bringing in over 10 million visitors annually who drive up demand for red meat in the hospitality sector. The main destination for meat exports of Kenya accounting for 46% of total exports is United Arab Emirates. The estimated value of imported goods in UAE is US\$ 424.23billion. The value of imports to UAE in 2021 is worth US\$ 2.03billion according to UNCOMTRADE while the imports of meat and edible meat offal from Kenya to UAE was worth US\$ 39.32million.

Saudi Arabia

Beef in Saudi Arabia is predicted to be the fastest-growing edible meat to be consumed. It is projected to witness a CAGR of 2.94% between 2022-2028. The majority of Saudi Arabian consumers favor premium-tasting slow-cooked meat, like beef. The demand for beef expanded along with the ex-pat population growth; over one-third of the population is made up of ex-pats. Saudi Arabia has an import value of meat and edible meat offal at US\$ 2billion in 2021. According to projections, the Saudi Arabian red meat market will grow at a CAGR of 2.28%. The most common type is Beef: In the area, fresh beef products are the most popular form of meat. The popularity of Fresh meat is partially a result of its accessibility at nearby supermarkets or butcher shops. Also, because fresh or chilled meat is thought to be of superior quality. The fastest-growing form is processed thanks to the rising demand for ready-to-eat and ready-to-cook meat.

EXPORT MARKET

Vietnam

Aided by strong growth in both income and population, Vietnam's livestock consumption has risen significantly over the last decade from 3.5 million tonnes in 2013 and is forecasted to grow beyond 4.5 million tonnes post 2019. In addition, because local businesses don't engage in certain subsectors, such as feed production and animal breeding, they are heavily dependent on foreign investment. Small farms in Vietnam raise more than 85% of the country's cattle. Due to this structure, breeder quality varies widely and production volumes and pricing are not scalable. In just four years, the value of meat imported into Vietnam has doubled. The biggest rise in imports was bovine meat, which made up 45% of all imports. Imports of meat of

sheep or goats, fresh, chilled or frozen reached 0.291% of total imports in 2021, totaling to \$1.38 billion whereas the total value of imports to Vietnam amount to \$ 330 billion. Sales of meat of sheep or goats, fresh, chilled or frozen to Vietnam went up by 0.398% compared to 2020. The value of imported beef increased fourfold, from US\$25 million to US\$92.5 million. While the value of imported frozen bovine meat increased significantly overall, the value of fresh/chilled bovine meat increased more slowly, by roughly 1.2% annually. Vietnam's meat market has become more price-competitive, with foreign manufacturers taking advantage of cheap feed and economies of scale.



45%

Bovine meat share
of total imports

2X

Meat imports
in last 4 years

EXPORT MARKET

Indonesia

According to the Agriculture Ministry of Indonesia the demand for bovine meat reached 696,956 tons in 2021. In the approaching years, Indonesia's imports of bovines will rise if domestic cattle trade doesn't improve because domestic supply could not catch up with the soaring demand. The Indonesian Beef Cattle Farmers Association (Gapuspindo) reports that annual beef demand growth is 8.1% while domestic supply growth is only 5%. During 2021, Indonesia imported US\$965.34 million worth of meat and edible meat offal, according to the United Nations' COMTRADE database on global commerce.

As of May 2023, The government of Kenya signed a deal with Indonesian government to export 700,000 heads of cattle yearly. This opens up the new opportunities for the Kenyan market to export to Indonesia.

696,956

TONNES

Demand for Bovine meat in Indonesia, 2021

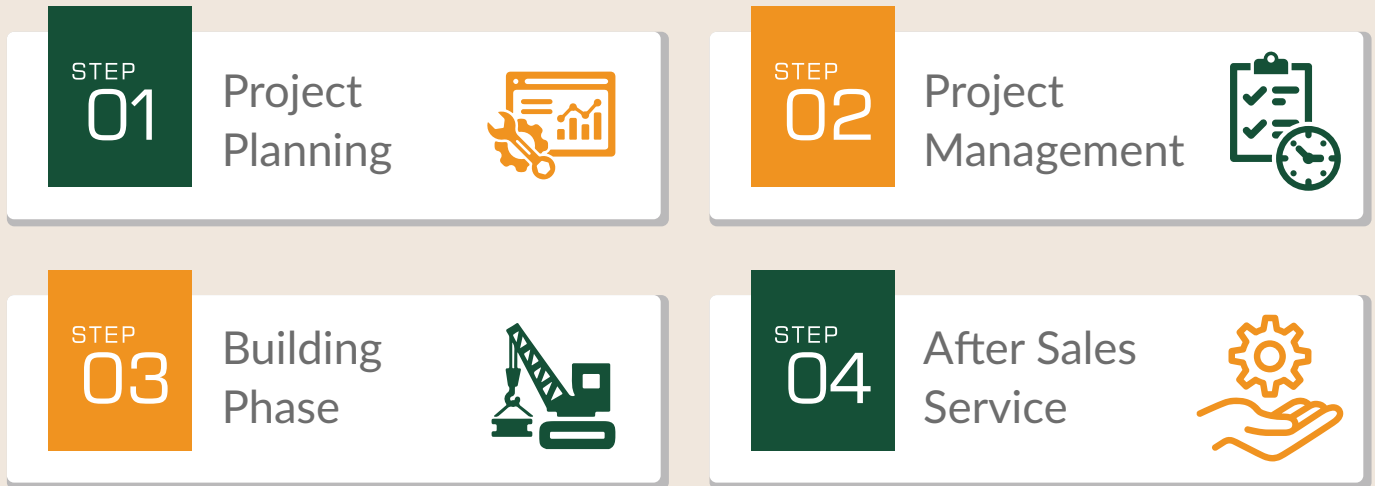
700,000

Heads of cattle to be exported annually to Indonesia after Govt. deal in May 2021



SCOPE OF SERVICE

ISM AGRIFARMS delivers world-class solutions, encompassing turnkey design, equipment supply, installation, project management, and comprehensive training services.



PROJECT CYCLE



PROJECT ROAD MAP

STEP

01

Concept

- Market analysis
- Business Plan
- Location Analysis
- Structural works & MEPs

STEP

02

Project Handover

- Machine delivery
- Installation Process
- Project Commissioning

STEP

03

Aftersales

- Management
- Training
- Service and Maintenance

OUR TEAM

We comprise of a dedicate team of experts providing valuable insights and excellence required to build all our projects.



Omri Cohen

CHIEF EXECUTIVE
OFFICER (CEO)

Born in Israel, Omri has 25 years' experience building and managing companies, including 15 in East Africa. Omri is a co-founder of ISM Africa, and brings exceptional experience in cleantech and renewable energy. He earned a BA degree (cum laude) in Government, Diplomacy Management and Strategy from the Herziliya University.



Paul Williamson

CHIEF OPERATING
OFFICER (COO)

Born in Kenya, Paul has 15 years' experience building companies both in the United Kingdom and in East Africa. Paul is one of the cofounders of ISM Africa. and brings exceptional experience in supply chain management, entrepreneurship and organization strategy. He holds a Business Law Degree from the London Met University

SLAUGHTERHOUSE SYSTEMS AND EQUIPMENT

The slaughter process of animals involves a series of steps that are designed to ensure the humane treatment of the animals and the production of safe and wholesome meat products. The main steps in the slaughter process are as follows:

STEP 01 Rendering and bleeding

This is the first step in the slaughter process, and it involves the killing of the animal and the draining of its blood. There are a number of different methods of stunning and killing animals, but the most common method is to use a captive bolt or electric shock to render the animal unconscious before severing its jugular vein.

STEP 02 Scalding and/or skinning

Once the animal has bled out, it is scalded in hot water to loosen the hair or feathers, and then skinned to remove the hide or pelt.

STEP 03 Evisceration of internal organs

The next step is to eviscerate the animal, which involves removing the internal organs, such as the stomach, intestines, and heart.

STEP 04 Washing

After evisceration, the carcass is washed thoroughly to remove any blood, dirt, or debris.

STEP 05 Chilling and cooling

The carcass is then chilled or cooled to a temperature of around 32 degrees Fahrenheit (0 degrees Celsius) to prevent the growth of bacteria. This can be done by spraying the carcass with cold water, immersing it in a cold water bath, or hanging it in a refrigerated room.

STEP 06 Packaging

Once the carcass is chilled, it is cut into smaller pieces and packaged for sale. The packaging can be vacuum-sealed, shrink-wrapped, or placed in a tray with a lid.

STEP 07 Washing

The final step in the slaughter process is to clean up the slaughter area and dispose of any waste products. This includes washing down the equipment, removing any blood or debris, and properly disposing of the hide or pelt.

PROJECT DESIGNS

Rendering and bleeding, scalding and/or skinning, evisceration of internal organs, washing, chilling, and cooling, packaging, and cleanup are the main procedures in processing animals. The meat is then held at a cold room before it is transported to the consumer or processes further.

**ISM Agrifarms
Custom designs,
manufactures and
installs animal
Slaughtering
systems**

Slaughterhouse Systems and Equipment



BLEEDING
HOIST



LINE
CONVEYOR



CARCASS LOADING
ARM



MEAT LOWERING
QUARTERING ELEVATOR



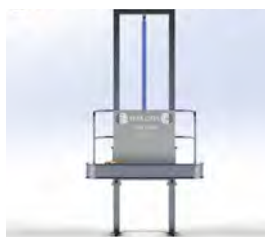
TRANSFER
UNIT



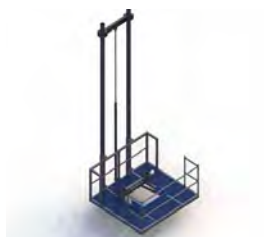
HOOK LOWERING
HELIX



BAND
CONVEYOR



BUTCHER
PLATFORM



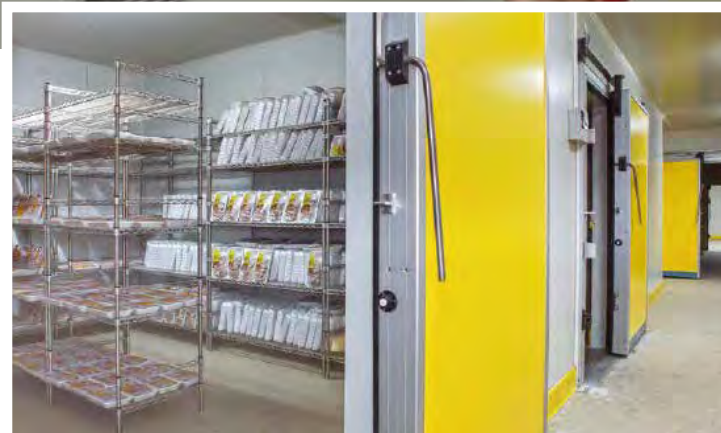
SKIN DEHIDER
MACHINE



EXTRACTION
PLATFORM

COLD ROOM/ COOLING SYSTEMS

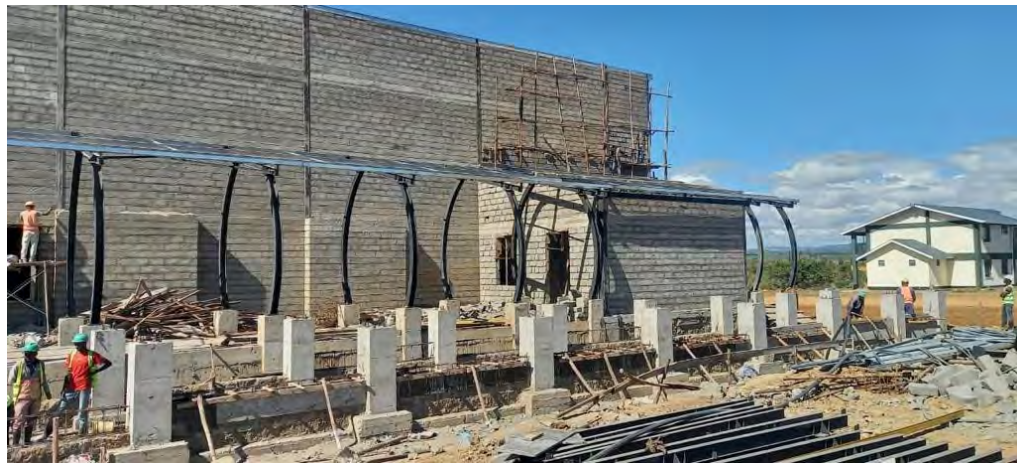
- Cold Room Panels
- Cold Room Evaporators
- Cold Room Doors
- Ammonia Coolers
- Air Cooled Condensers
- Dry Coolers
- Heat Exchangers
- Humidification and Ethylene Removal Devices
- Digital Dashboard – Remote Monitoring/Management
- Accessory



PAST PROJECT PICTURES

50% COMPLETE

RUMURUTI
SLAUGHTER HOUSE



PAST PROJECT PICTURES

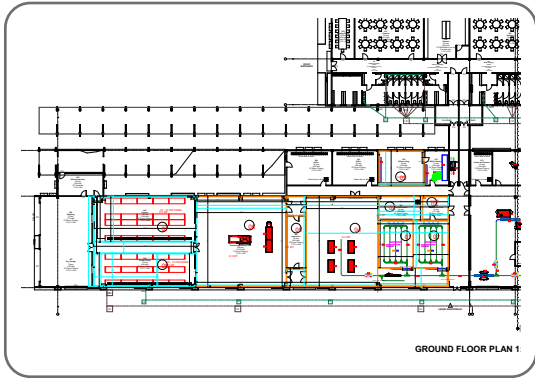
90% COMPLETE

RUMURUTI
SLAUGHTER HOUSE

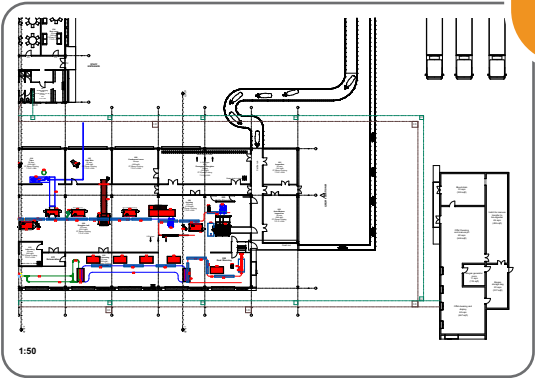


PAST PROJECT TECHNICAL DRAWING

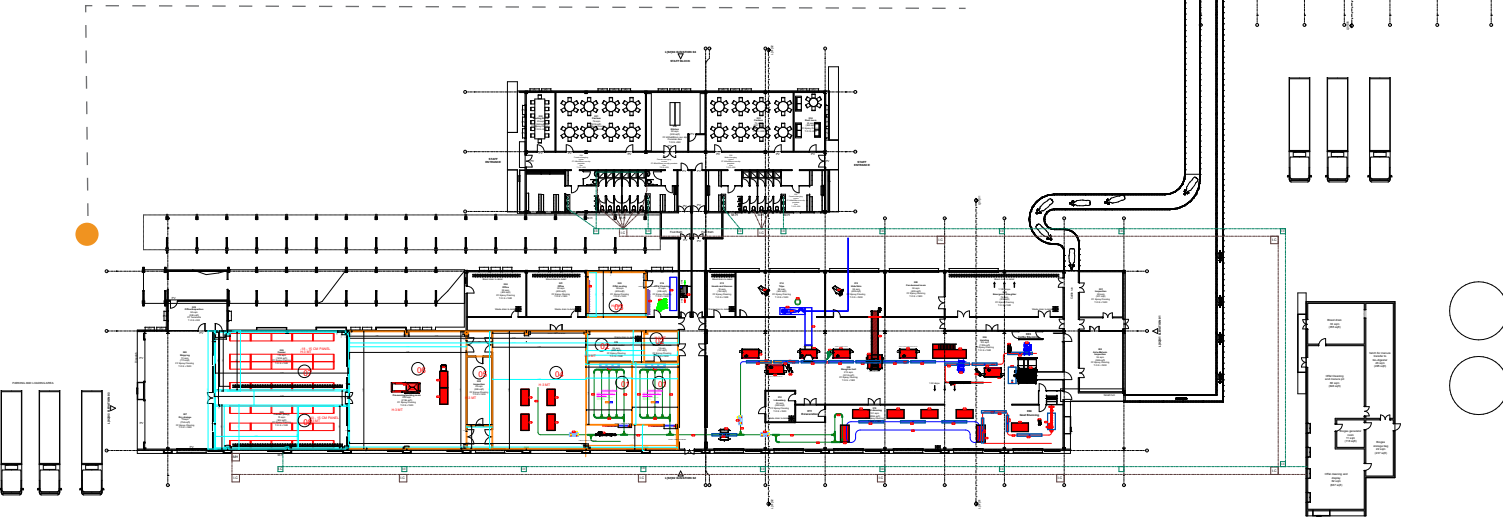
TECHNICAL
DRAWINGS



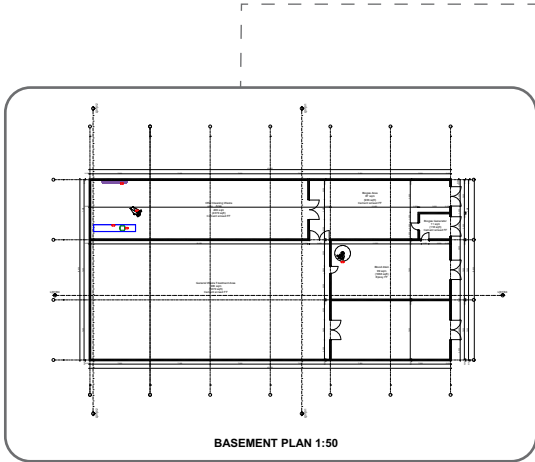
ZOOM 1



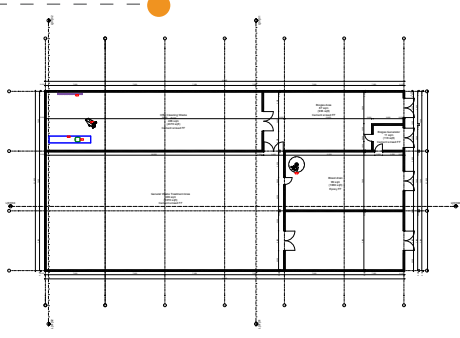
ZOOM 2



GROUND FLOOR PLAN 1:50



ZOOM 3



BASEMENT PLAN 1:50





CONSIDERING ONE OF OUR SOLUTIONS?

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