



1st ALFALFA SYMPOSIUM

8 February 2017
Châlons-en-Champagne



By : Khalid M. Alaqeel
NADEC
Saudi Arabia



Khalid M. Alaqeel

General Manager Dairy Farms at NADEC
Saudi Arabia

- Bsc Agriculture – Animal Production - King Saud University – Saudi Arabia
- General Manager - Dairy Farms, NADEC (75,000 Head of Cows)
- 25 Years Managing Experience in large Dairy Farms – Saudi Arabia.
- Member of Agricultural Development Fund (ADF) –Saudi Arabia.

Saudi Arabia

General Information



- **Location** : Saudi Arabia is located in the West of Asia, in the Heart of the Middle East.
- **Total Area** : 2,149,690 km²
- **Population**: 31,742,308
- **Weather** : Summer Average +45 °C High +55 °C & Winter Average+29 °C Low 0 °C
- **Resources** : Oil and Petroleum products is main revenue source (90%).

Saudi Arabia

Agriculture Information

ANIMAL HERDS

- Cows : 500,000 Head.
- Sheep & Goats : 17,500,000 Head.
- Camel : 918,000 Head
- Forage Requirement : 7,000,000 Tons (50% Alfalfa).

AGRICULTURE

- Total Agr Area : 822,460 Ha
- Alfalfa Area : 236,800 Ha (28.8%) of total Area
- Wells Numbers : 164,324
- Agri Water Consumption : 20 Billion M3 (13.4 Billion M3 for Alfalfa).



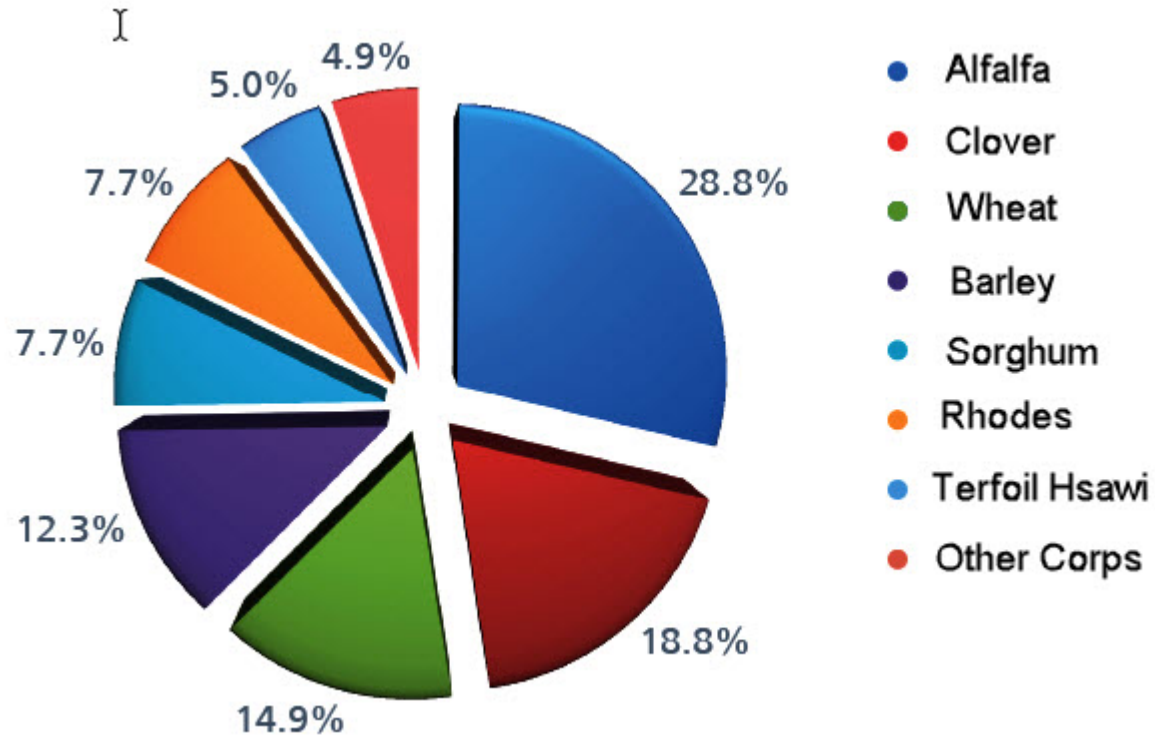
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Saudi Arabia

Agriculture Information



Source :

www.stats.gov.sa

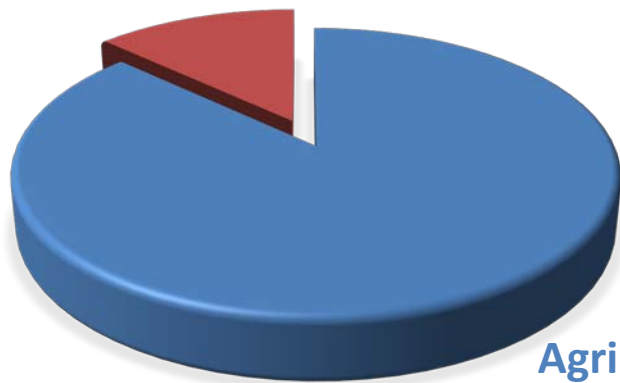
Fodder cultivation banned

The Saudi Arabia Gov announced to ban cultivation of green fodder (forages) and replace it with imported sources Start by 1/1/2019.

This move is aimed at rationalizing water consumption and streamlining its use to other agricultural areas due to limited water sources in the Saudi Arabia.

WATER CONSUMPTION

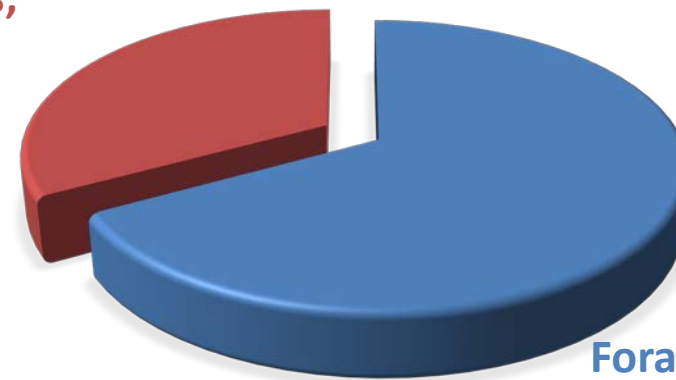
Other Sectors;
13%



Agri Sector;
87%

FORAGE WATER CONSUMPTION

Other Corps;
33%

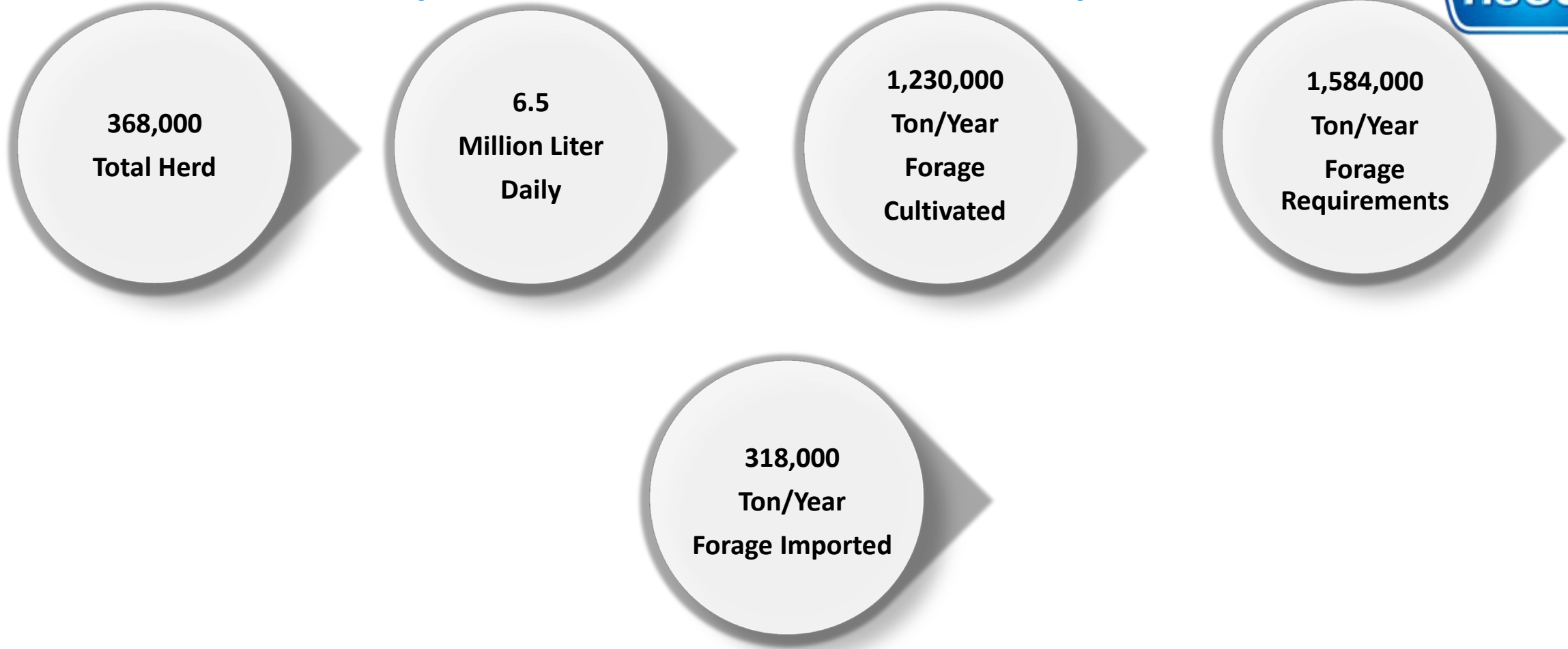


Forage Corps;
67%



Dairy Business In Saudi Arabia

Dairy Sector in Saudi Arabia (Specialized Companies) (Before Fodder cultivation ban)





NADEC's Dairy Farms & Feeding Sources



NADEC in Points

- Established in 1981 with Herd of 500 Cows and 6,000 liters/Day.
- Currently Total Herd **75,189** (Milking cows **35,000**).
- Cow Yield **36** Liter/Cow/Day.
- Herd Growth is mostly internal.
- Milk Production **401** Million liters/year .
- 16,000 Beef Animals/year.
- Feeding consumption **480,000** Tons/yea .
- Alfalfa Production **280,000** Tons/Year.
- Corn Silage Production **100,000** Tons/Year.
- Rhodes Production **80,000** Tons/Year.
- Fruits Production (Potato, Corn, Onion & olive oil)
- Total land Size **100,000** Hectares.
- Total Planted Area **30,000** Hectares.
- Dairy Plants (Dairy Products and Juices) **1.5 Million** liters/day.
- Marketing Products in Saudi Arabia and 12 Arab Countries.
- Employees More than **7,000** from **30** Nationalities.
- Nadec is considered in TOP largest integrated dairy farm in the world.











NADEC's Dairy Farms & Feeding Alternatives Sources



Alfalfa Consumption 185,000 Tons/Year

- **Investments outside Kingdom (SUDAN) in forages cultivation (currently in 1st Phase).**
- **Import Forages requirements (Long Term Contract).**
- **Now we are in Stage of building enough stock (3 Years) to cover beyond 2018.**

NADEC's Dairy Farms

Required Specifications of Dehydrated Alfalfa



- Our requirement is generally for high quality legume forages with high protein % like for Milking Cows.
- Our preference is first for sun-cured alfalfa and second for dehydrated alfalfa.
- Dehydrated is not our first choice of alfalfa because:
 - During the dehydration process, leaves are shattered, and some of the protein is lost.
 - Although the dehydration is consistent, suppliers cannot provide large quantities of high quality dehydrated alfalfa
 - Dehydrated alfalfa is characterized with high NDF, which decreases intake and subsequently production of high milking cows
- The origin & Suppliers of the feed is important to have high quality product with strict quality control and ranked according to their performance and abundance to the quality contracted.

NADEC's Dairy Farms

Required Specifications



Type:

Alfalfa Hay or Lucerne Hay only.

No alfalfa mixed with other types of hay. No Berseem Hay or Clover Hay. The crop must not be grown on land that has been used for livestock for a minimum of 24 months. The crop must not be grown on land that has been fertilized or treated with animal waste for a minimum of 24 months.

Bale Type:

Large rectangular bales.

Size approximately 240 cm x 130 cm x 70 cm.

Tied with baling twine only. No metal or wires of any kind will be accepted.

Double compressed preferred.

Pre-chopped at the time of baling preferred.

Physical Appearance & Qualities:

Intact leaves attached to the stems.

Stems of medium thickness.

Stems must break when held tightly by hand and twisted not more than 360 degrees.

Green in color.

Fresh smell.



NADEC's Dairy Farms

Required Specifications



Moisture:

Maximum 15% moisture as measured with a Delmhorst or similar hay probe. Lab analysis for moisture at 15% is not acceptable due to drying before analysis.

Reasons: Hay shipped in cargo bays or across hot seas will heat and spoil more easily than hay simply transported and stored on land.

NDF % (Neutral Detergent Fiber):

Target Standard: LESS THAN 39.00% NDF. Penalty of 5% NET COST (inclusive of shipping) for every 1.00% or part thereof above the Target Standard NDF%. Maximum acceptable level of NDF% = 41%.

CP % (Crude Protein):

Target Standard: MORE THAN 20.00% CP. Penalty of 5% NET COST (inclusive of shipping) for every 0.50% or part thereof below the Target Standard CP%. Minimum acceptable level of NDF% = 18.5%.

NADEC's Dairy Farms

Required Specifications



Mold & Fungus:

Aflatoxin LESS THAN 20 ppb. Zero tolerance for appearance or smell of any mold or fungus on any hay in any container or hay transport grouping. Appearance of any mold or fungus in any hay in a container or transport grouping will automatically disqualify all hay in that container or transport grouping. as we cannot determine without opening each bale the extent of the mold or fungus contained in the shipment.

Trash:

Any visible trash such as plastic bags, metal, wood, ropes, or other foreign material is unacceptable. Appearance of any trash in any hay in a container or transport grouping will automatically disqualify all hay in that container or transport grouping. as we cannot determine without opening each bale the amount of trash contained in the shipment.



Thank You

