THE GLOBAL GROWTH OF POULTRY

A VISION FOR INDIA 2020

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Market Solutions LLC is a leading global food and agriculture market research, strategy consulting and evaluation firm.

Market Solutions LLC has conducted assignments in poultry in China, Taiwan, Southeast Asia and the Middle East and in meat and seafood industries, related feed industries and feed ingredient suppliers worldwide.

Market Solutions LLC has more than 15 years experience on projects in India examining market potential, market access and market development programs. Market Solutions LLC provides considered experience, perspective and a realistic view of the possibilities and challenges in the Indian market.

Market Solutions LLC works with experienced partners having broad capability skills including tracking commodity market developments, consumer research and experience to support market access and investment.
POULTRY IN GLOBAL MEAT CONSUMPTION

FAO OVERVIEW OF THE WORLD MEAT MARKET IN 2012 (mmt)

<table>
<thead>
<tr>
<th>MEAT TYPE</th>
<th>PRODUCTION</th>
<th>TRADE</th>
<th>SHARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOVINE MEAT</td>
<td>66.8</td>
<td>8.0</td>
<td>12.0%</td>
</tr>
<tr>
<td>POULTRY MEAT</td>
<td>104.5</td>
<td>13.0</td>
<td>12.5%</td>
</tr>
<tr>
<td>PIGMEAT</td>
<td>110.8</td>
<td>7.4</td>
<td>6.7%</td>
</tr>
<tr>
<td>OVINE MEAT</td>
<td>13.9</td>
<td>0.8</td>
<td>5.8%</td>
</tr>
<tr>
<td>TOTAL MEAT</td>
<td>301.8</td>
<td>29.4</td>
<td>9.7%</td>
</tr>
</tbody>
</table>

MAJOR PRODUCER COUNTRIES & THEIR EXPORTS IN 2012 ('000mt)

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>PRODUCTION</th>
<th>EXPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>19,642</td>
<td>3,900</td>
</tr>
<tr>
<td>CHINA</td>
<td>18,510</td>
<td>(569)</td>
</tr>
<tr>
<td>EU</td>
<td>12,510</td>
<td>570</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>11,526</td>
<td>4,062</td>
</tr>
<tr>
<td>RUSSIA</td>
<td>3,110</td>
<td>(513)</td>
</tr>
<tr>
<td>INDIA</td>
<td>3,074</td>
<td>12</td>
</tr>
<tr>
<td>MEXICO</td>
<td>2,840</td>
<td>(756)</td>
</tr>
</tbody>
</table>

Source: FAO Nov 2012
Global Demand of Poultry is expected to grow 30% in the next decade

Source: USAPEEC May 2012
US MEAT PRODUCTION

Source: USAPEEC May 2012
US EXPORTS OF POULTRY MEAT

Source: USAPEEC May 2012
GROWTH OF BRAZILIAN POULTRY

Exports (1,000 MT)  Domestic Market (1,000 MT)

2000: 5,977  5,061  916
2001: 5,061
2002: 3,918
2003: 8,727
2004: 12,645

Source: UBABEF Feb 2013
TRADE IN POULTRY PRODUCTS

EXPORT TRADE IS ALMOST ENTIRELY AS FROZEN POULTRY

FROZEN STORAGE HELPS EVEN OUT SUPPLY SIDE HOLD-UPS

POULTRY CONSUMPTION STYLES VARY QUITE SIGNIFICANTLY

89% CONSUMPTION IN THE UNITED STATES IS AS PARTS
70% OF Poultry leg meat is consumed as parts

55% OF BRAZIL’S POULTRY EXPORTS ARE AS CUTS
36 % OF BRAZIL’S EXPORTS ARE FROZEN WHOLE BIRDS

BALANCING THE BIRD
AVIAN INFLUENZA & FOOD SAFETY

AVIAN INFLUENZA IS AN EVER PRESENT GLOBAL THREAT
(WILD BIRD MIGRATIONS, POOR FARM HYGIENE & INADEQUATE SUPERVISION)

OIE NOTIFIABLE AI OUTBREAKS SINCE 2011:

CAMBODIA, BHUTAN, CHINA, EGYPT, TAIWAN, INDIA, ISRAEL, MYANMAR, NEPAL,
INDONESIA, IRAN, MONGOLIA, PALESTINE, SOUTH AFRICA, MEXICO, AUSTRALIA

TRADE DISAGREEMENT OVER RISK ASSESSMENTS OF HPAI & LPAI

USA & BRAZIL HAVE NOT EXPERIENCED ANY H5N1 HPAI OUTBREAKS

TECHNOLOGY, EDUCATION & PARTNERING ARE KEY TO THE FUTURE
FOOD SAFETY IN THE SUPPLY CHAIN

THIS IS GHAZIPUR MANDI

CENSORED
**POULTRY PRODUCTION IN INDIA**

<table>
<thead>
<tr>
<th>BREED</th>
<th>FEED</th>
<th>SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>BREED: ALMOST A TOTAL DEPENDANCE ON VENCOBB</td>
<td>'COMPOUND' FEEDS ARE HIGHLY UNREGULATED</td>
<td>FROM OX-CART TO WAL-MART</td>
</tr>
<tr>
<td>STATE R&amp;D IS FOCUSED ON BACKYARD BREEDS</td>
<td>MAIZE &amp; SOYBEAN CAN MAKE THE DIFFERENCE</td>
<td>MULTIPLE TIERS FROM MANDI TO STREET-SLAUGHTER</td>
</tr>
<tr>
<td>HIGHER GROWTH MEANS INCREASED VULNERABILITY</td>
<td>FREE-RANGE IS A PRACTICE NOT A PREMIUM</td>
<td>FOOD SAFETY GETS SEVERELY COMPROMISED</td>
</tr>
</tbody>
</table>

OPTIONS FOR THE CONSUMER: ‘WET’ or ‘CHILLED’ or FROZEN
ESTIMATING POULTRY GROWTH

IS PROBLEMATIC DUE TO MANY OVERLAPPING GROWTH-DRIVERS

INDIA'S RURAL TO URBAN MIGRATION WILL DRIVE POULTRY GROWTH
BY 2025, 215 MILLION MORE WILL BECOME URBAN CONSUMERS
BY 2025 ONLY 15% INDIANS WILL BE ABOVE 55 YEARS
NEW JOBS, SOCIAL IDENTITIES WILL DRIVE MORE FOOD ON IMPULSE

QSR & RETAIL WILL REFLECT THE MOST VISIBLE CHANGE
YUM – FROM 230 STORES TO 500 BY 2015 (CHINA HAS 4,000 KFC STORES)
MCDONALDS – FROM 250+ TO 600+ BY 2015 & TO 1,000 BY 2020
SUBWAY – TO DOUBLE THEIR 315 STORES BY 2015
DOMINOS PIZZA – FROM 552 TO 800+ BY 2015
PIZZA HUT – 200 TO 500+ BY 2015

BUT PRICE & GROWTH?
Whole chicken: Rs 240 per kg New Delhi versus Rs 104 per kg New York
POULTRY DEMAND & SUPPLY

BROILER DEMAND IS GROWING BY 12-15%

PRODUCTION OF POULTRY ON CONTRACT IS WELL ESTABLISHED

HIGHER CHILLED RETAIL SALES DUE TO FOOD SAFETY CONCERNS

QSR POULTRY DEMAND IS EXPECTED TO GROW TO 130,000 +mt by 2016

RETAIL OF PARTIALLY PROCESSED PRODUCTS IS ON THE RISE

A FOOD-SAFE SLOGAN, ‘FROZEN IS FRESH’ IS CATCHING ON

BUT FOOD-SAFE INFRASTRUCTURE REMAINS A KEY GAP

SLAUGHTERHOUSE CAPACITY EXISTS FOR JUST 5% OF PRODUCTION
THE POULTRY OPPORTUNITY - 2020

DEMAND FOR BROILER MEAT IN 2020 ~ 5.5+ mmt (up from 3.2 mmt)

DEMAND FOR EGGS IN 2020 ~ 100+ bn (up from 69 bn)

DEMAND FOR BROILER PROCESSING ~330,000 mt (up from 175,000mt)

FRANCHISE RETAIL OF CHILLED CHICKEN CAN COUNTER WET MARKET

MODERN RETAIL TO DRIVE SALES OF FROZEN & PROCESSED POULTRY

FOREIGN INVESTMENT IN SETTING UP INTEGRATED POULTRY FIRMS

POULTRY GROWTH CAN BE SUPPLEMENTED BY INTERIM IMPORTS

INDIA SHOULD ACTIVELY INTEGRATE WITH GLOBAL POULTRY ACTIVITY