June 2016

Gira

Consultancy & Research
Prospective et Stratégie

A brochure for a unique multi-client study, completed in May 2016, of

Sub-Saharan African Meat Market Opportunities to 2020

The beef, poultry & pork supply chains to each of the 43 Sub-Saharan markets; description, analysis, benchmarks & medium term forecasts

Essential information for all meat operators and exporters to the region

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Why Buy this Study ?

Because until now no one has linked all of the pieces in S-S Africa's rapidly evolving meat puzzle…

Sub-Saharan Africa's 43 different markets and 950 million consumers form a highly attractive market, filled with potential and unique opportunities. With per capita animal protein consumption still at just 23 kg per capita, but with rising disposable incomes and a population growth rate of 2.6%, supplying to meat these countries is set to take off.

This opportunity is all the more appealing as commercial livestock production and meat processing and retailing are developing fast. The scene is being set for the growth of commercial operators and of import volumes. But this is not to ignore the often poor infrastructure, complex local situations, and erratic supply balance that means any investment must be carefully considered…

The present study is a crystallisation of the large amount of pan-African work Gira has carried out in the meat sector over the last 10 years. Built on this, its detailed and targeted research provide a unique view of all the opportunities and risks.

For the ANSWERS it gives you ... what are the drivers of change & what market opportunities are they creating?

- Which species have been the traditional strongholds of consumption? the importance of regional variations
- Which markets already have commercial livestock supply? is this evolving fast enough to meet demand?
- How important are the informal producers and the traditional supply channels? what role for them in the future?
- Can the commercial broiler industry feed Africa? is Africa ready for it, where best?
- Imports continue to flood into some markets, is this sustainable? how are they used? what are their USPs?
- Where are there opportunities to invest in commercial production today? or are there better alternatives?
- What is driving growth of the integrated model? and how is this evolving across such a diverse range of markets?

For the STRATEGIC CONCLUSIONS & RECOMMENDATIONS you get ... "what does it mean for *me*?"

- Investing in infrastructure or planning to import; this is a complicated region with many lessons that should be heeded
- Understand the opportunities and where best to access them… learn from other African markets…

All the insights, information and forecasts that will allow operators in the meat chain to understand the opportunities and risks of dealing with the S-S. African Market.

Gira's unrivalled expertise in Global meat markets and distribution make it uniquely capable of carrying out this most demanding assignment.

A Unique, Comprehensive and Detailed View

The whole African Meat Opportunity at your finger tips

Three core sections & a Database feeding into a strategic Synthesis of the rapidly evolving situation

The 43 country Market Profiles:

Easy to digest 5 page mini-reports constituting a unique databank for all the countries in Sub-Saharan Africa.

- Major geographic & demographic influences
- Political situation and support to agriculture
- Time frame: 2004-14, 2015, 2020 trend
- Production : Beef, Pigmeat, Poultrymeat
- Trade: Beef, Pigmeat, Poultrymeat
- Consumption: Beef, Pigmeat, Poultrymeat, Sheepmeat (including Goat) and Fish
- Key drivers, brakes and 2020 outlook.

Meat Production benchmarks:

5 detailed Country Reports of the most interesting Sub-Saharan markets: Nigeria, Ethiopia, Kenya, Zambia & South Africa

- Selected to highlight different stages & mechanisms of development of Africa's livestock production
- Explaining the move from traditional to commercial
- Covering the key meat companies in each market.

Major Import market opportunities:

5 detailed Country Reports of the major importers: Nigeria, Ghana, Côte d'Ivoire, Angola & South Africa

- Increased disposable incomes = increased demand throughout Sub-Saharan Africa
- What products, what import channels, from where? How will these markets evolve in the medium term?

Sub-Saharan African Opportunities Synthesis:

Comparing the structure and forecasting the medium-term potential of the 43 markets:

- Which markets have the highest import potential; for what and how to enter them?
- The self-suppliers: developing production to keep pace with internal demand, the how and the why?
- The route to market, for imports to the region and within the markets themselves, as it moves from informal to commercial.

Plus an Excel Database of all the key numbers, by country and sub-region: 2004-14,15e,20f

Production (Beef, Pork, Poultry) – Trade (Beef, Pork, Poultry) – Consumption (Beef, Pork, Poultry, Sheepmeat & Fish)

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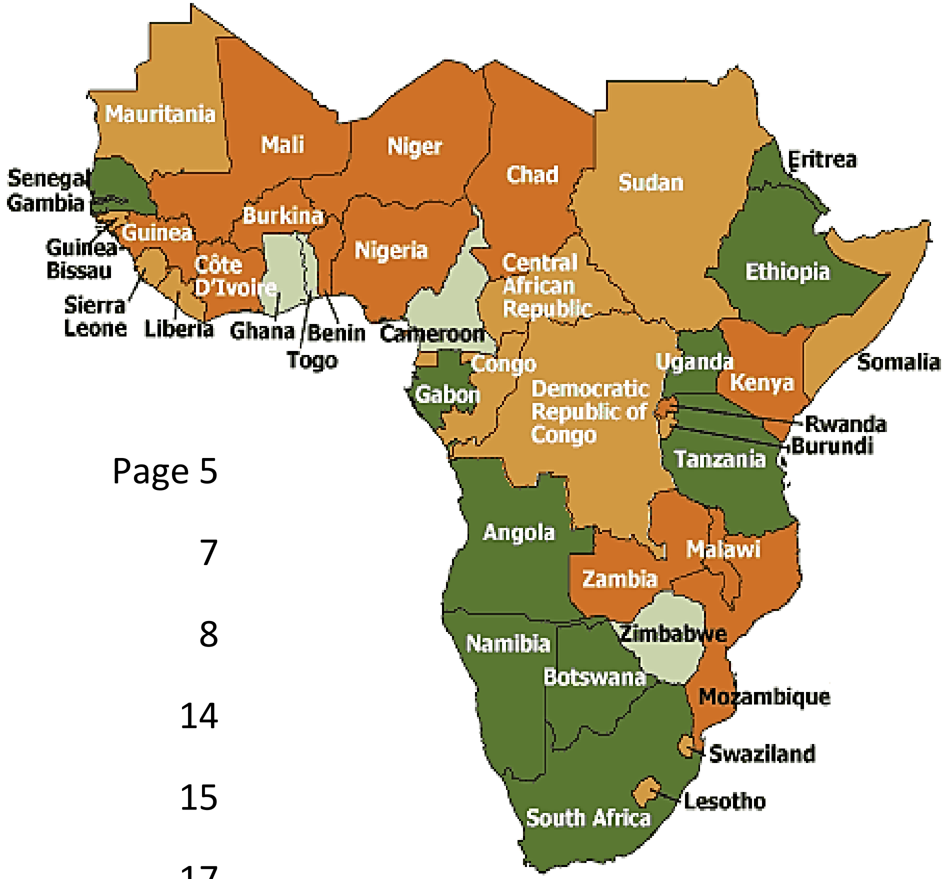
Contents of this Proposal



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1. Introduction

Complex inter and extra regional dynamics mask opportunities

Africa's demand for meat has been steadily growing over the last 10 years. It has been supplied from an increase in domestic production, with a steady shift to commercialisation of the backyard based industry, and from increased imports of low value cuts. Gira has laid out this development in one accessible resource.

This unique research assembles and examines the key meat data and insights from 43 developing markets.
Building on our extensive knowledge and databases with detailed market insight – it pushes our strategic analysis forward in the framework of our medium term, quantitative and qualitative forecasting for the whole Sub-Saharan African supply chain.

The opportunities in SS Africa are real, but not simple, and there are wide regional variations, e.g.:

- 10 years of African growth slowed dramatically in 2015 in a number of countries, with the collapse of oil & commodity prices
- Traditionally strong meat preferences are being overridden by price and availability
- The relationship between the meats and with fish and eggs is key to the growth in meat consumption
    - But consumers (even within countries) are at very different stages in the amount and type of animal protein in their diets
- Import needs continue to develop, but they are far from uniform across the region
    - Different countries have very different government attitudes to the balance between domestic production and imports
- Domestic production is evolving, with increased focus on commercial outlets; but wide variation between species & countries
    - The role out of large scale commercial production is not uniform or easy in many markets
- Global QSR and retail brands are beginning to venture beyond South Africa… the problem for them is sourcing supply
- Regional security is highly variable, with several markets too unstable for major investment at present

Opportunity to invest in the meat chain is present in most countries; but it is complex & high-risk to the ill informed.

Many African consumers still view meat and fish as an occasional product
But as in Asia before it, the rise of the middle class almost everywhere means that this is rapidly changing.
HOW IS THE MEAT SUPPLIED – WHICH MARKETS HAVE BEST POTENTIAL – WHO IS BEST PLACED TO EXPLOIT THIS?
Gira's study shows how the production and demand for meat will evolve to 2020, and who will benefit from it.

African animal protein demand increasing rapidly

But distribution & production are still major limiting factors

African protein demand has grown rapidly in the last 10 years

- Sub-Saharan African consumption was 22 million tonnes of meat (cwe) + fish in 2014, up from under 15 million tonnes in 2004

The study shows how this will develop in the next 5 years and who the winners will be .

Traditional production methods cannot keep pace with booming urban populations & increased demand

- Development of industrial production in most markets is still in its infancy, but the potential is huge… where cost structures and supply chains can compete against the informal market

We show how African meat supply is transitioning, and where the profitable opportunities are to be part of the process.

Import potential is huge, with some markets already attracting significant volumes from major global exporters

These have to fit with the local production and supply chains.

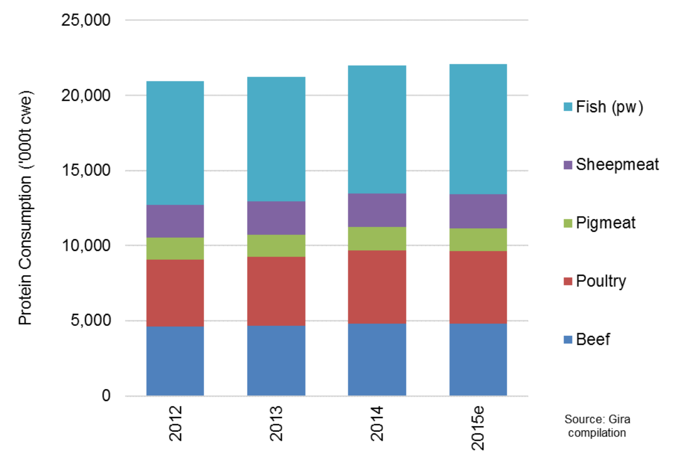
We show where this can be a long term solution for global exporters to valorise secondary cuts & by-products. And there is new demand for high quality meat.

Sub-Saharan African consumers still have among the lowest per capita meat consumption, on average just 14.2 kg cwe/year

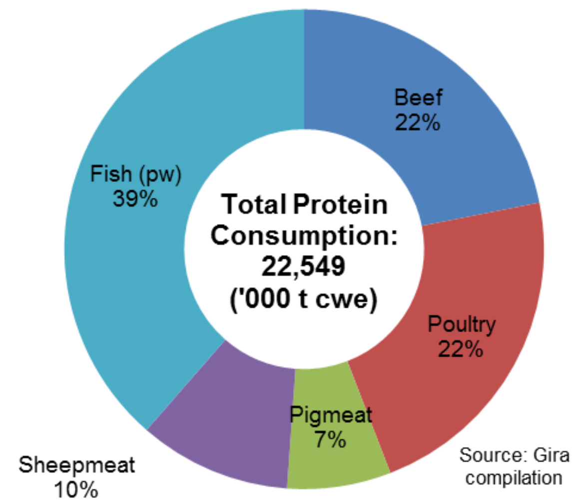
Demand growth through 2020 will differ widely between countries a meats.

We show where the increase in consumption will be met by imports, where domestic production will grow to meet it, and where both will happen.

SSA animal protein consumption volumes, 2012-2015(e)



SSA animal protein share, 2014



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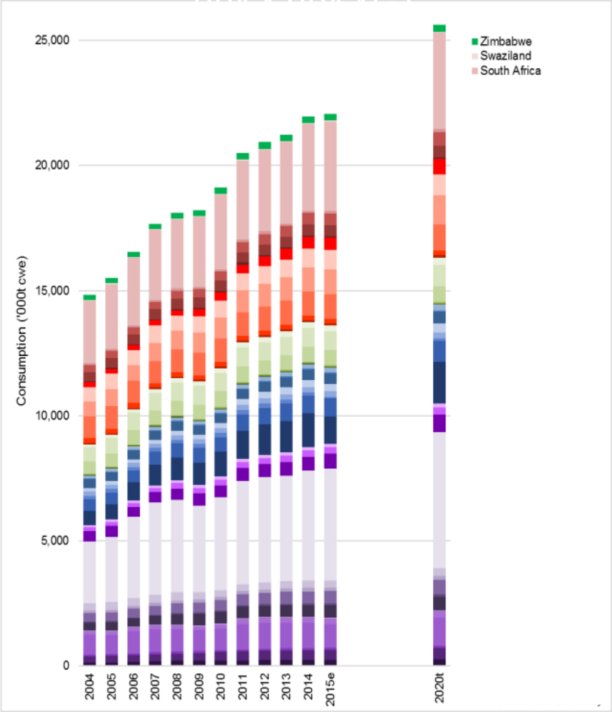
2. Study objectives

The objective of this study has been to analyse and forecast the developing SSA Meat Markets and associated opportunities – comparing and contrasting countries and species as never before, and uncovering the opportunities – drawing realistic and clear conclusions at species and national level to inform and guide all those who have an interest in the meat chain in SSA.

This has entailed providing the following analyses, both for the current situation (in its historical context) and for the medium term to 2020:

- **Detailed description of the structure of meat production**, through:
  - **5 detailed Producer Country reports on those markets** that are most important to development across Africa; their systems, evolution and interaction between species
  - **38 Market Profiles for all the other countries:** trends, data & background on all meats
  - **Synthesis level analyses and comparisons** of key drivers and breaks to uncover underlying production opportunities and the key issues throughout the region.
- **Import structures & volumes from outside SSA** – their importance in the supply balance, species preferences and evolution over the last 10 years, supported by:
  - **5 detailed Importer Country reports**, looking in depth at the major SSA import markets, the volumes involved and how these imported meats are traded into the local market… and with what future potential
  - **38 Market Profiles:** trends, data & background on all imports
  - **Synthesis level analysis of import volumes** and the importance of these SSA markets in the global export valorisation process.
- **Consumption trends** – plotting the rapid development by country and species over the last 10 years as well as the mid-term outlook. With fish and egg consumption factored in at country level in order to understand developments;
  - Detailed analysis in both the Producer and Importer reports to show the routs to market that will satisfy evolving consumer demand.
  - Synthesis level comparison of consumption change of and transfers between species.

SSA protein consumption 2004-20f



3. Scope of the Study

A qualitative & quantitative basis for operational decision-making

Comparable data, commercial insight and forecasts to aid decision makers in African meat markets.

The 5 aspects of the Sub-Saharan African Meat Market Opportunities Study:

1. **African Market Profiles:** the complete set of 43 Sub-Saharan African country profiles, profiling the meat market and its 2020f outlook in the context of key drivers & brakes.
2. **Producer Country case studies – Livestock production development:** 5 countries selected to analyse the most positive & proactive developments, and to understand the catalysts to growth at different stags in the process.
3. **Importer Country case studies – The major import opportunities:** the 5 countries that are the key importers in Africa today… what has driven this and how is it fitting into the existing supply chain structure.
4. **The Synthesis – Sub-Saharan Africa market opportunities:** pulling together the key findings and forecasts, and prioritising the exploitable similarities between markets, whilst identifying the risks.
5. **The Excel Database** – An Excel data set for all 43 markets; volumes for production, trade and national and per-capita consumption; for 2004-15 and our forecasts to 2020.

3.1 The 43 SSA Market Profiles

A user-friendly data-bank & exec. summary, covering every country in SSA

Each of the 43 Sub-Saharan African countries is covered in its own individual mini report.
Focused on Beef, Pigmeat and Poultrymeat, and covering:

Key Political, Geographic & Demographic drivers:
- Socioeconomic, political, climatic & religious influences on market development

Brief background and description of breeding and commercial structures per species:
- Historic, current developments and medium-term trends and potential

Total meat production and trade – Beef, Pigmeat and Poultrymeat
- Total production, trade, and consumption volumes
- Evolution of average import price & key trade partners (where relevant)
- Basic balance tables 2004-2015f, 2020t

Total meat consumption – Beef, Pigmeat, Poultrymeat, Sheep + Goat and Fish
- Total volume and per capita
- Expected developments and trends through 2020

Major drivers and brakes on the market
- Where is the country's meat industry heading
- Import penetration and the role of imports
- Winners and losers…

Delivered as: 5-6 page mini profiles per country – in a PowerPoint based document
- Key national and regional data in graphs and tables
- Short and clear explanations of key market developments.

5 detailed reports on the most dynamic Sub-Saharan producer countries – at their different evolutionary stages

Key Political, Geographic & Demographic drivers:

- Historic & potential - socioeconomic, political, climatic & religious influences on market development

Detail per species for 2004-14e, 2015f, 2020 trends:

- Historic reference with current thinking and an understanding of potential

Current state of production: Beef, Pigmeat and Poultrymeat

- Feed supply
- Herd / Flock developments, breeds, farm structure and evolution
- Who's investing, what species, integrated or modular model, how and why
- The whole chain: Feed supply → Farming → Slaughter → Local market
- Key meat company insights

Market evolution – Beef, Pigmeat, Poultrymeat, Sheep + Goat and Fish +Eggs

- Traditional vs modern – how and why is this evolving; opportunity and threats
- Imports vs. domestic origin
- Consumer perception of meats and relative market outlook

Major drivers and brakes on the market

- How is in-country production evolving? Import threats
- What the next steps are and who will be taking them

Delivered as 5 detailed reports – one each for Nigeria, Ethiopia, Kenya, Zambia & South Africa

In PDF documents of 54-70 pages each

- Key data presented both graphically and in table form
- With its own Executive Summary, bringing together the overview, forecasts & country-specific conclusions & recommendations.

3.3 The Major Import Opportunities

Country case-studies where SSA is increasingly important in global trade

5 detailed reports on each of the largest and most dynamic Sub-Saharan importer countries:

Key Political, Geographic & Demographic drivers:

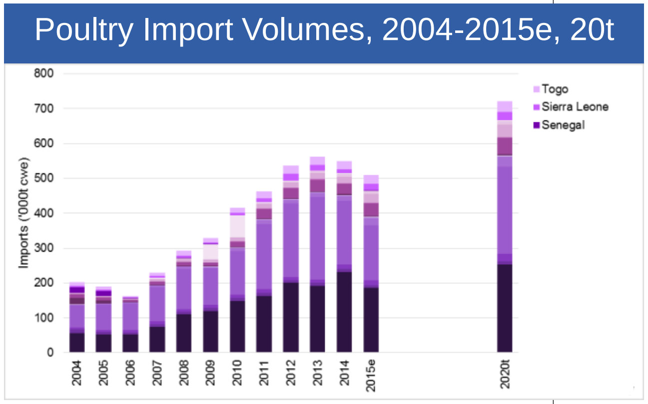
- Historic & potential - socioeconomic, political, climatic & religious influences on meat market development

Detail per species 2004-14e, 2015f, 2020 trends:

- Historic reference with current thinking and an understanding of potential

Current state of production

- For each of Beef, Pigmeat and Poultrymeat



Import Opportunities – Beef, Pigmeat and Poultrymeat

- Import volumes: key origins, species and cuts, with select pricing
- Route to market: Exporter → Trader → Wholesale/distribution → Local market
- How the import supply chain interacts with the local market
- Offal products in the system, prices and sensitivities
- Legislation on imports – market access & trade barriers, packaging, labelling, shelf life…

Market evolution – Imports as an integral part of the future of many countries' affordable meat supply

- Political will and industry evolution, with some concrete importer perspective
- Consumer and retailer perception of meats and relative market outlook
- Exporter motivation: opportunistic offloading of secondary cuts & by-products, or creating sustainable demand?

Major drivers and breaks on the market

- How import supply is evolving; cuts, prices, supply channels… Can SSA compete in today's world markets?

Delivered as 5 stand-alone reports – one each for Nigeria, Ghana, Côte d'Ivoire, Angola & South Africa.

In PDF documents of 43 to 70 pages each

- Key data presented both graphically and in table form
- With its own Executive Summary bringing together the overview, forecasts & country-specific conclusions & recommendations.

3.4 Synthesis: prioritising SS African opportunities

Comparing & contrasting the markets

Key Geographic & Demographic drivers: grouping the countries by their key meat characteristics

- Compared across Sub Saharan Africa's 43 markets; identifying regional differences and their implications
- Main trends and evolving drivers for development

Underlying issues and their importance for the meat chain.

Detailed trends in production, trade and consumption: per species, for 2004-14, 2015e, 2020f

- With each of the 43 countries compared side by side
- Beef, Pork, Poultrymeat, Sheepmeat (including Goat), Fish and Eggs

Who's growing fastest? What implication could this have for your export and investment strategy?

Production lessons from the 5 Country case studies – for Beef, Pigmeat and Poultrymeat

- The key lessons from the 5 markets – Species preference, barriers to expansion, the supply chain by species.
- The extent to which these are transferable to the wider African market

What investors in the SS African industry must be aware of.

Importing lessons from the 5 Country case studies – for Beef, Pigmeat and Poultrymeat

- Comparison of cuts, prices and routes to market
- Which suppliers are making the running, for what meats and why
- Market access and barriers to trade
- Are the trends seen here transferable elsewhere, as part of a wider African opportunity?
- The major trends we see in the developing import market; cuts, prices, distribution packaging

What are the channels which allows imports to fit into both the traditional and the developing supply and distribution structures.

2020 outlook; what will Sub-Saharan Africa mean to the global meat industry operators?

- What volumes will Africa need – can it afford to buy from the global market – or will it remain a low value region in which primarily to offload otherwise less profitable cuts?

Delivered as an easy to use report – in a PDF of 100 pages

- All 43 markets compared, and lessons drawn from the 10 Country case studies
- Easily accessible overviews of the key drivers and brakes on imports and domestic production.

3.5 Excel Database: 43 markets - all the key 2004-20 metrics

In an easy-to-use Excel Dataset that you can continue to build on

Data on all 43 markets, organised by region and topic, with basic charts pre-drawn

Key Geographic & Demographic statistics: by country and grouping the countries by region

- Point data on land area, use, urbanisation and main religions
- 2004-2015, 2020f data on Population, GDP, and PPP GDP Inflation

Production volumes : Beef, Pigmeat, Poultrymeat, Sheepmeat and Fish - 2004-14, 2015e, 2020f

- Individual dataset for each species, broken down by country, region and total SSA
- Total meat production (Beef, Pigmeat, Poultry) by country, region and total SSA
- Embedded CAGR calculations and basic charts.

Import volumes : Beef, Pigmeat and Poultrymeat - 2004-14, 15e, 2020f

- Individual dataset for each species, broken down by country, region and total SSA
- Embedded CAGR calculations and basic charts.

Consumption volumes: Beef, Pigmeat, Poultrymeat, Sheepmeat, Fish and Eggs - 2004-14, 15e, 2020f

- Individual dataset for each species, broken down by country, region and total SSA
- Total meat and Total meat + fish consumption by country, region and total SSA
- Embedded CAGR calculations and basic charts.

Per Capita Consumption volumes: Beef, Pigmeat, Poultrymeat, Sheepmeat, Fish and Eggs - 2004-14, 15e, 2020f

- Individual datasets for each species, broken down by country and
- Total meat and Total meat + fish consumption by country
- Embedded CAGR calculations and basic charts.

Delivered as a live and editable Excel work book

- All 43 markets lined up together, with totals for SSA and the 4 main sub-regions
- Calculated CAGR and basic graphs to help users evaluate and utilise the data and which can be adapted to your immediate needs.

4. Methodology

Gira has used its 3 tried and tested approaches to this multifaceted and highly opaque region:

1. **Comprehensive documentary research on all publicly available sources**: public databases and statistics, published studies, company and association websites, trade press etc.

2. **An extensive programme of over 100 interviews across the main countries:** with local operators, and global exporters, traders, and investors. Substantiating facts and adding depth to the numbers; the "why" behind the numbers is as important as the numbers themselves.

3. **Visits to selected SS African countries:** in-depth research for the "Case study" Countries for import & production scenarios. To meet and speak to local traders, producers, industry insiders and the distribution chain.
   - **Building up a coherent picture** of the markets in the benchmark countries, driving our conclusions and recommendations.
   - Gira therefore used its experienced interviewers and its widespread contacts in SS Africa and worldwide in order to:
     - **Put "flesh on the bone"** of the quantitative data for these countries
     - **Detect the main trends** and reality-check our qualitative and quantitative forecasts (the people talked to are the people are making it happen…)
     - **Obtain national and international opinions** from informed and respected sources
     - **Draw up our competitive advantage analyses**
     - **Obtain information on large exporters' and producers' strategies and their views of the future**
     - **Determine end-users' expectations from suppliers.**

This information was then compiled, analysed, consolidated where relevant, and conclusions drawn explaining the current situation and justifying our forecasts and recommendations for the future.

5. Structure & contents of the Reports

Delivered electronically in printable & searchable PDF & Excel format

Three core sections feeding into a dynamic Synthesis of the rapidly evolving situation

The 43 African Market Profiles:

- **West Africa** – 107 pages
- **East Africa** – 82 pages
- **Central Africa** – 64 pages
- **Southern Africa** – 51 pages

Meat production development:

- **Nigeria** – 66 pages (one report for production + trade)
- **South Africa** – 70 pages (one report for production + trade)
- **Ethiopia** – 67pages
- **Kenya** – 54 pages
- **Zambia** – 56 pages

Major import market opportunities:

- **Nigeria** – 66 pages (one report for production + trade)
- **South Africa** – 70 pages (one report for production + trade)
- **Ghana** – 47 pages
- **Côte d'Ivoire** – 43 pages
- **Angola** – 43 pages

Sub-Saharan African Opportunities Synthesis

- **100 pages.**

Excel Database of key numbers, by country, and region for 2004-14,15e,20f

- **1 detailed Excel workbook**

The complete SSA Meat industry Study - 845 pages

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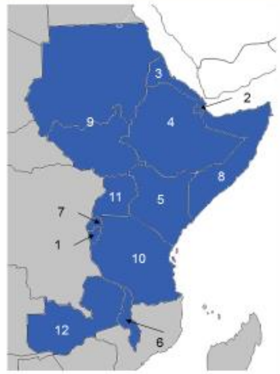
Examples of Contents Pages from the Reports

43 x Market Profiles in 4 regional Chapters

Gira — West Africa

West Africa

Gira — East Africa



SSA 2016 – Market Profiles © Gira 2016 4

Gira — Central Africa

SSA 2016 – Market Profiles

Gira — Southern Africa

SSA 2016 – Market Profiles © Gira 2016 4

8 x detailed Country Reports

Gira — Table of Contents

Zambia © Gira 2016 5

The Synthesis

Gira — Synthesis Report: Table of Contents

Synthesis © Gira 2016 6

The Study was completed in May 2016.

SUBSCRIPTION

The subscription price for the complete Study is € 23,000 (before any relevant tax).
The full subscription includes:

- The Sub-Saharan Africa Synthesis, the 43 Market Profiles, the 8 Detailed Country Reports and the Excel Database
- A tailored presentation of results and recommendations at the Client's office (see below).

For Clients interested only in parts of the Study:

- The Synthesis volume is available separately at €12,000
- The whole report without the database is available for €21,000
- The Individual Country reports €5,000 each

Other options are available upon request.

Purchasers of the full subscription are entitled to a half-day presentation of results & recommendations at their offices.
This will be tailored to their particular requirements and is at no cost other than travel expenses of the presenter to the Client's office (providing the presentation takes place in Europe).

7. Gira's Clients in the Meat Sector

Client	Country
Abbott Laboratories	US
ABF	UK
ABP	IE/UK
Agri Ranch	US
AHDB	UK
Alic	JP
ALMA	CA
AMIC	AU
Asopocicultores	CO
Aviagen	Intl.
Bain	Intl.
Bemis	Intl.
BRF	BR
Bunge	Intl.
Canada Beef	CA
Canada Pork	CA
Canadaian Cattleman's Assoc	CA
Cargill Inc	US
Cargill Meats Europe	EU
Cobb	Intl.
COV	NL
Danish Crown	DK
Danish Farmer's Association	DK
Dawn Meats	IE
DSM Nutritional Products	Intl.
Elanco	EU/Intl.
European Commission	EU
Fedegan	CO
H.K. Scan	SF (Finland)
HCC	UK (Wales)

Client	Country
Hilton Food Group	UK/EU
I.M.S.	Intl.
INAC	UY
Inalca/Cremonini	IT
Inaporc	FR
Interbev	FR
Irish Food Board	IE
JAPFA	SG
JBS	BR
Kemin	Intl.
Landbrug & Fødevarer	DK
LMC	UK
McDonald's	EU
Meat & Livestock Australia	AU
Meat Industry Association NZ	NZ
Minerva	BR
Multivac	Intl.
National Pork Board	US
Nutreco	NL
O.E.C.D.	Intl.
Rabobank	Intl.
Sealed Air	Intl.
Smithfield (CFG)	EU/US
UECBV	EU
Unic	IT
Unigrains	FR
VION	NL/DE
VLAM	BE
Westbridge Foods	UK