



Dry Ageing – Introduction and Market Insights

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- History
- The market - domestic and International
- Consumer benefits
- Market trends

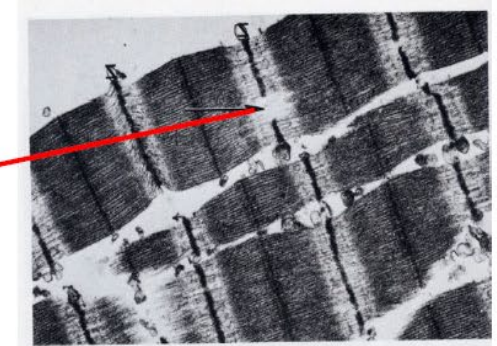
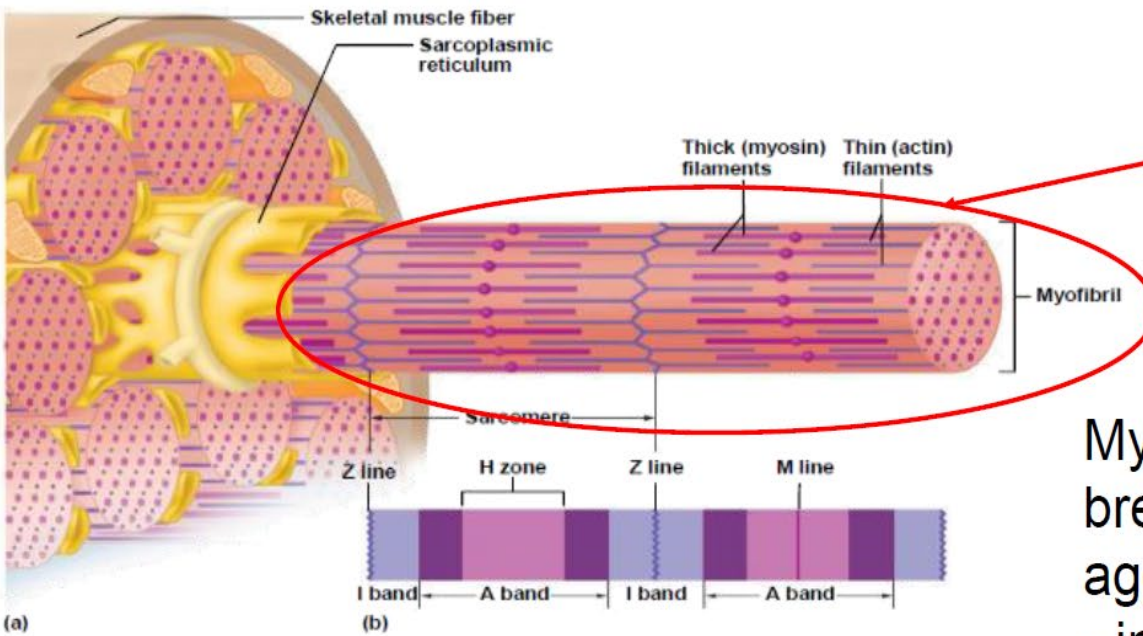




- A traditional method of preserving meat
- Dry ageing is the process of ageing without vacuum bags
- Claims to improve tenderness and flavour improvement



What happens during dry ageing ?



Myofibril proteins do breakdown post-mortem with ageing and result in;

- increase in tenderness
- Increase in 'good' flavour

PLUS loss of moisture



Market: International Follows HNWI

U.S. Dry Aging Beef Market \$10,446 million in 2015, expected to reach \$11,176 million by 2020, CAGR of 1.3% from 2016 to 2020

Typically Dry aging < 10% of overall beef consumption

Price is 2-4x retail meat

Market Movement: Germany- USA- Europe- Asia- Middle East

Germany, USA investing to be large exporters

Consumers:

10-25% of population are potential consumers

Key consumer groups are LOHAS (Lifestyle of Health and Sustainability), Meat Lovers, Selective Foodies, Premium Players

Channel:

High end retail differentiate from discounted meat
For restaurant provides an “attention getter/ loss leader”

E- commerce focuses on meat lovers needs

Occasion:

Premium Celebratory Experience

Christmas

Moves to Luxury with High End Chef and Restaurant Experience

Not Everyday

Benefits:

Affordable Luxury

unique sensory experience in flavours and tenderness

Old World Craftsmanship

Goes with other luxury/ premium products (alcohol, cigars, etc)

Trends:

Fits with artisan, crafted, slow foods movements

Extreme Aging

Specialty Breeds, Older Animals, Specific feeds

Dry aging in carbonated water, whiskey, Grass fed (USA)

Home dry aging with UMAi bag

Key Tech trends from Germany

Culinary trends Globally



Market -Overview

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Home dry aging with UMAi bag
Key Tech trends from Germany
Culinary trends Globally

What might the market in Australia look like?

If we dry aged only 5% of what we consume

- For beef 638,220 tonnes cwt
- For lamb 169,394 tonnes cwt
- For mutton 8,566 tonnes cwt

restaurant

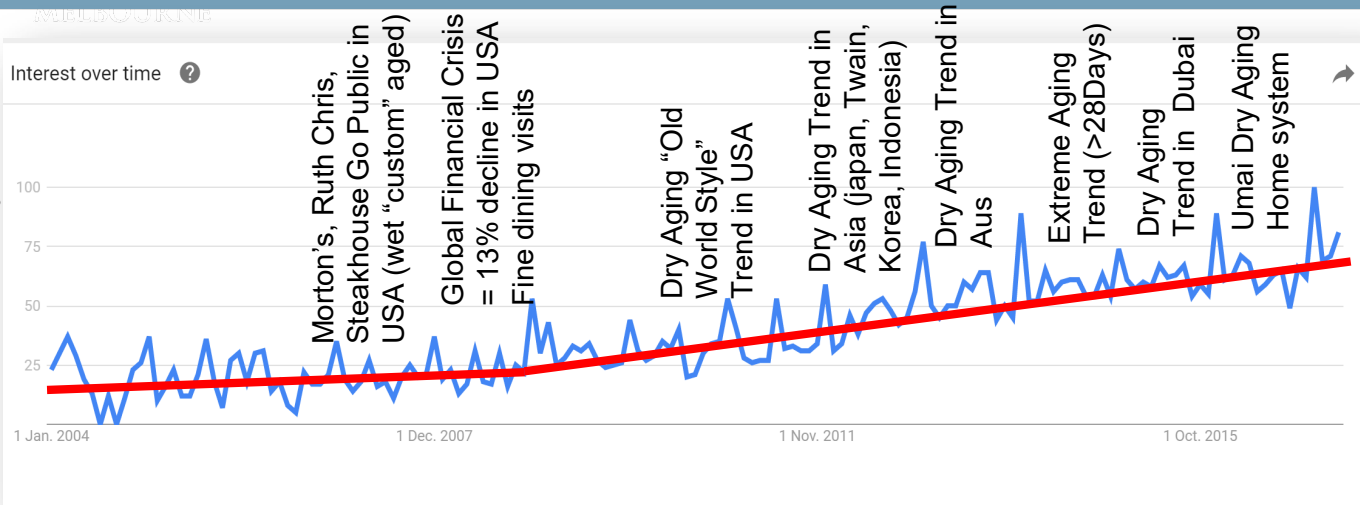
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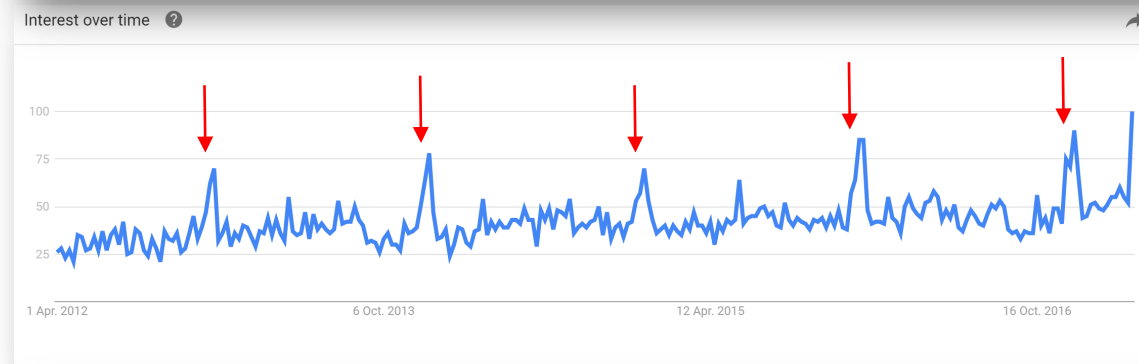


Google Trends: Dry Aged Beef

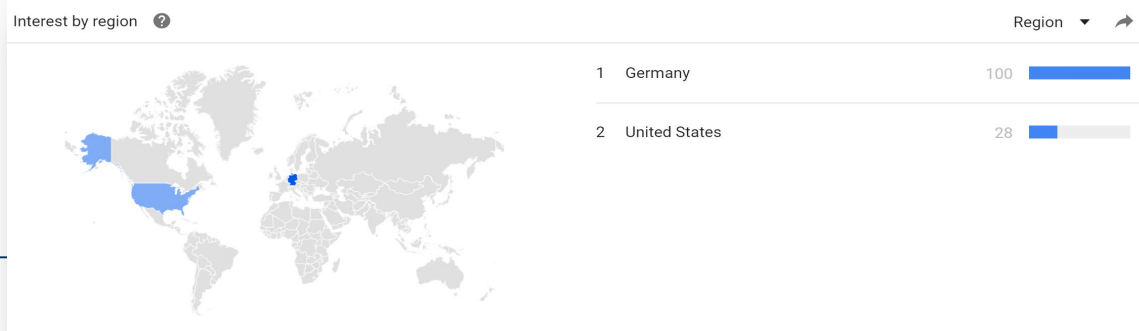
Dry Aging Trend in Germany



Increasing interest in Dry Aged Beef from 2004 to 2015 (similar growth rate to ancient grains, much slower than most food trends)



Peak interest is cyclical, December 21-28



Countries of Peak interest are Germany, USA

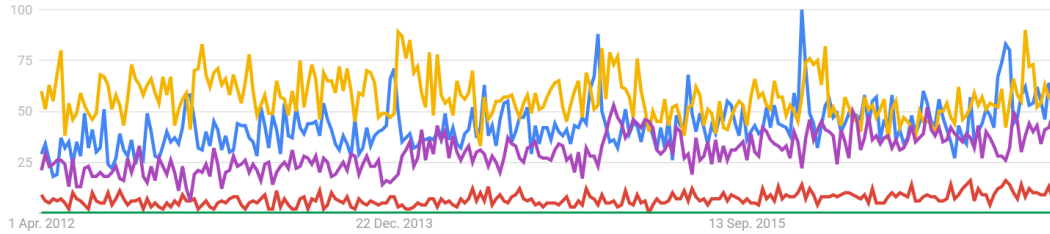


How does it compare to other trends

dry aged beef Search term waygu beef Search term slow foods Search term dry aged sheep Search term ancient grains Search term

Worldwide Past 5 years All categories Web Search

Interest over time

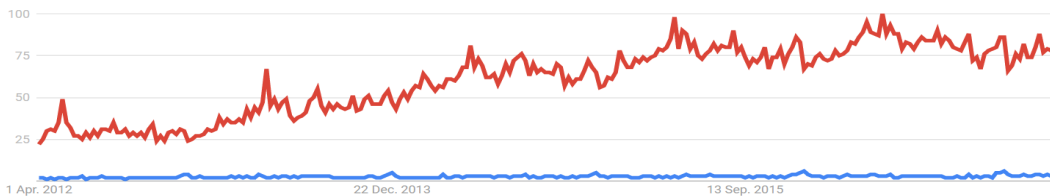


- Dry aged beef is a slow up and coming trend that fits with the slow food movement.
- It is not a trend on the level of a “hot” trend like craft beer.

dry aged beef Search term craft beer Search term + Add comparison

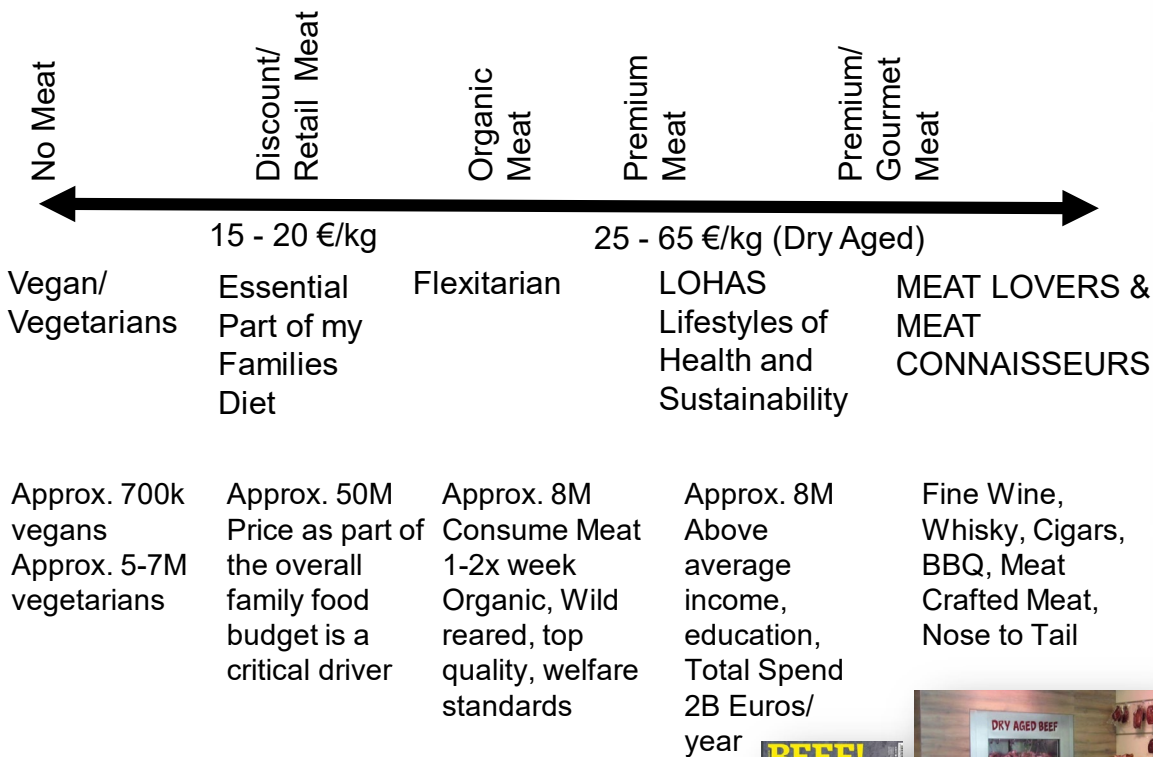
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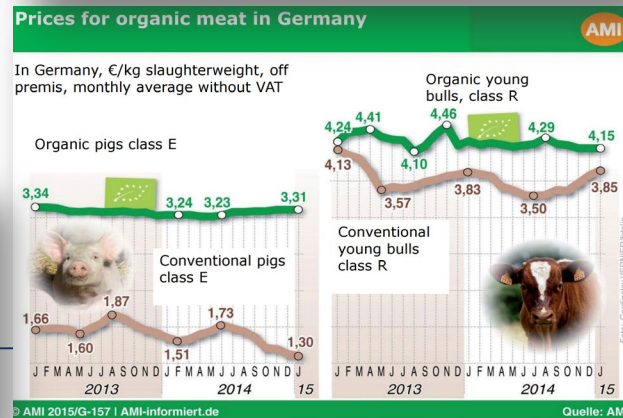
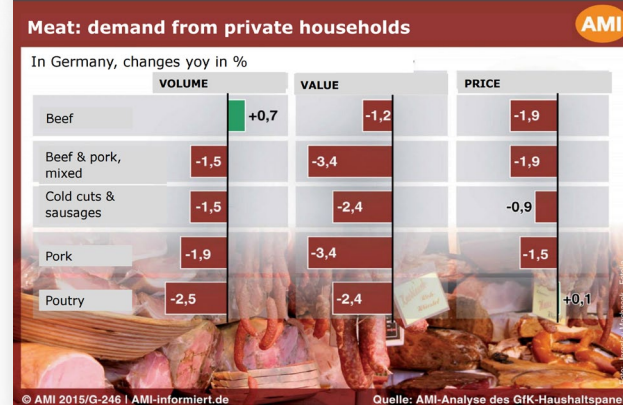
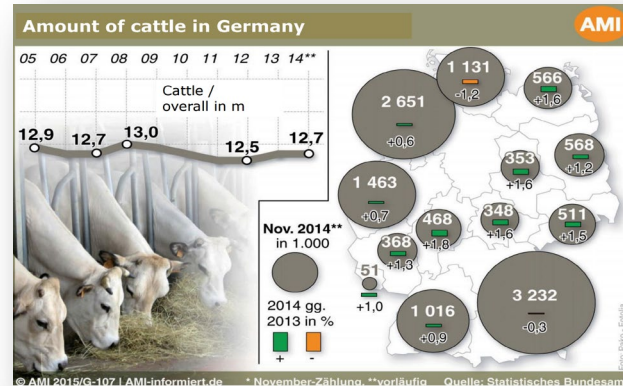


Germany: Key Market Factors

- Production of Cattle is flat
- Declining red meat sales (approx. – 1.8 % per year) over past 4 years. Retailers use meat pricing as a competitive weapon
- Meat consumption is changing



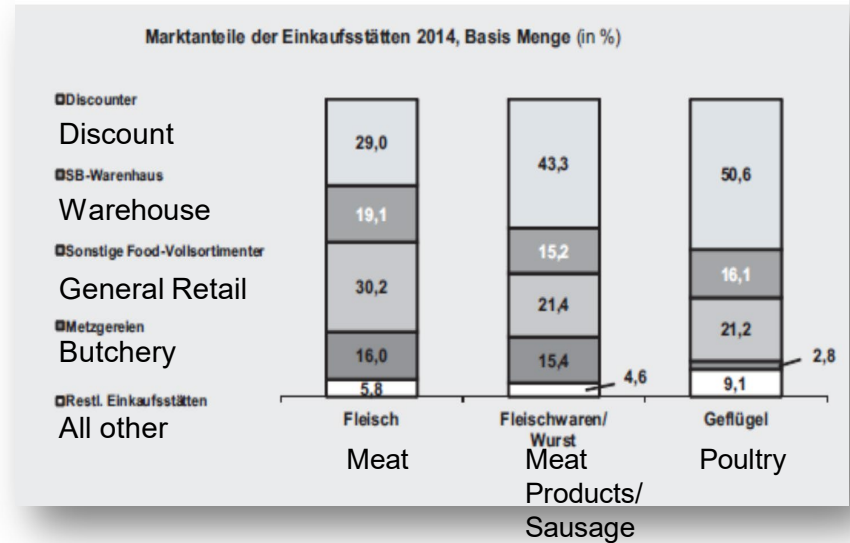
2016 German Population 82M



Germany: Channels

WIRTSCHAFTSRECHNUNG

- **Discount/ Classic Retail:**
- Most meat sales are generated by discounters and classic retail. Meat is sold at a discount to drive shoppers in.
- **Specialty Retail:** Specialty Retailers differentiate via:
 - Top quality meats in so called dry-age “safe chambers”, which can also contain “personalised” preselected and -bought meat which is tagged with the consumer’s name.
 - The ageing of the meat can be followed by the consumer by the help of an internet camera.
 - Main trend in this segment is still dry aged with “molded meat” and meat aged in sparkling water to follow
- **E Commerce:** Online meat trader “Otto Gourmet’s” online shop for specialty meats, has driven more and more online gourmet shops.
 - These are always in need of new suppliers which can help them to differentiate themselves from the competition.
 - Many of the meat connoisseurs and meat lovers buy online.



- **Key Drivers:**

- **Restaurant Sales:** Increase in number of restaurants and investments overseas by chain restaurants. Dry Aged Beef provides an 8% less profit margin vs wet aged. As an “attention getter” it drives higher sales in side dishes with lower food costs (ie potatoes, vegetables, sauces) along with alcohol sales and so drives 2x high overall per seat profit margins. However, requirement of large storage space for beef and refrigerators is expected to hamper the growth of the dry aging beef market in the U.S.
- **Premium Experience:** Rich flavor of dry aged beef as a unique premium limited availability experience, along with changes in consumer preference towards uniquely flavored products, and rise in disposable income are expected to drive the market.
- **Protein Eating Focus:** Demand for dry aging beef is expected to increase owing to the increase in demand for protein-rich food products
- **Key Cuts:** Primal (large distinct sections) or subprimal cuts, such as strip loins, sirloin, and rib eyes



USA: Meat Consumer Segments (not Specific to Dry Aged)

Six Meat Consumer Segments

Premium Players

Meat is a vital part of their lifestyle and they will pay more for the meats they want. They enjoy ethnic meals that include meat, and they use pre-prepared meats because they are convenient. They believe non-meat proteins are acceptable substitutes for meat proteins.



Aging Idealists

Meat eaters who are interested in health and sustainability. They look for specific types of meat like USA-sourced, grass-fed or humanely raised. They try to avoid additives. They are less motivated by promotions, despite lower income.



Wavering Budgeteers

Meat eaters but constrained by income and budgets. When shopping and eating, they look for the cheapest possible options. They use coupons and look for promotions in circulars and at the point of sale.



Selective Foodies

Cooking gives them a sense of accomplishment, so they spend the most time preparing meals to please their family, using national brands and known products that they trust. They choose nutrition over convenience, and quality over price. They are less concerned with environmental issues.



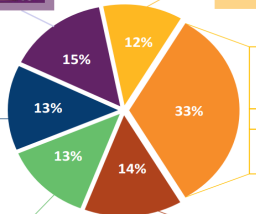
Urban Eclectics

Millennials and Gen-Xers looking for convenience, protein shortcuts, streamlined shopping and cooking. They value the certainty provided by national brands. They tend to eat meats, especially chicken and beef, based on cultural traditions and across multiple dayparts.



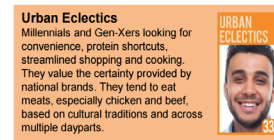
Voracious Carnivores

Love meat and consider it to be the essential main dish of their meals. Appreciate the taste, energy, nutrient and filling aspects of meat and enjoy sharing meat with their family.

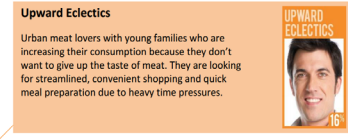


- While this segmentation is more detailed than the German one, We can map them on the same continuum of meat usage. The overall premium plus size of this market is larger than Germany.

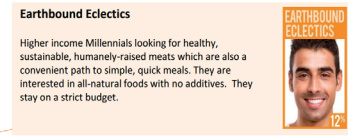
Three Meat Consumer Sub-Segments of Urban Eclectics



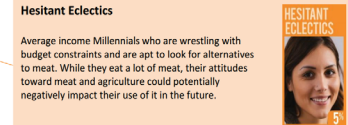
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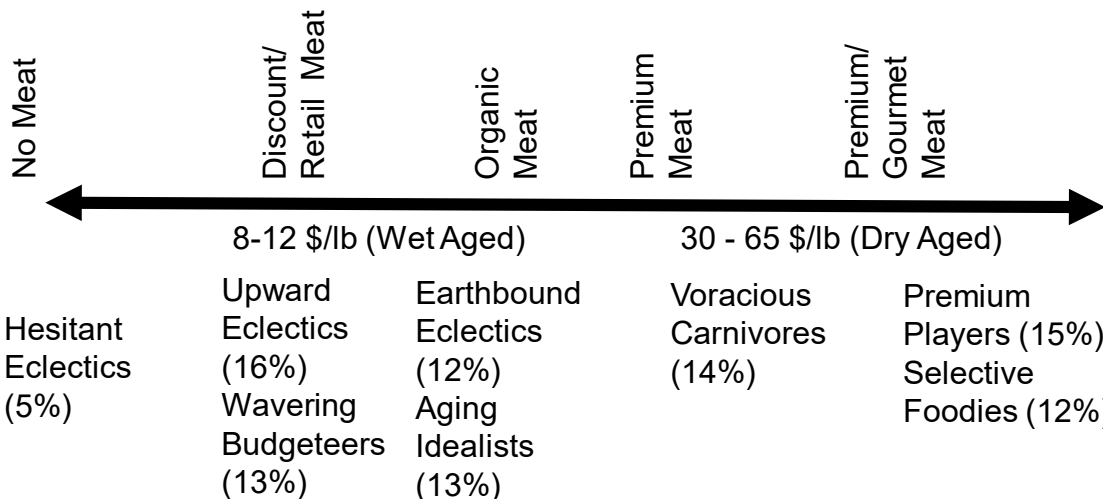
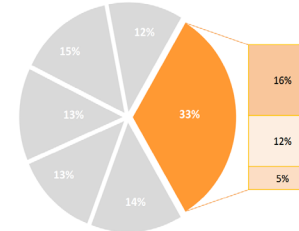
Upward Eclectics
Urban meat lovers with young families who are increasing their consumption because they don't want to give up the taste of meat. They are looking for streamlined, convenient shopping and quick meal preparation due to heavy time pressures.



Earthbound Eclectics
Higher income Millennials looking for healthy, sustainable, humanely-raised meats which are also a convenient path to simple, quick meals. They are interested in all-natural foods with no additives. They stay on a strict budget.



Hesitant Eclectics
Average income Millennials who are wrestling with budget constraints and are apt to look for alternatives to meat. While they eat a lot of meat, their attitudes toward meat and agriculture could potentially negatively impact their use of it in the future.





USA: Channels

WORLDWIDE

- **Discount/ Classic Retail:**
- Most meat sales are generated by discounters and classic retail. Meat is sold at a discount to drive shoppers in.
- **Specialty Retail:** Specialty Retailers differentiate via:
 - Top quality meats as defined by USDA prime (2% of the meat produced with evenly distributed fat content.) Dry aged Beef is available in a limited number of butcher shops and high end groceries. These have dry aging “boxes”
 - Angus Prime dry aged carries a premium over USDA prime at 2x or 3x the cost of a similar cut of meat.
- **E Commerce:** Lots of online stores are selling dry aged meats. They differentiate by **grass feed and number of days** dry aged beef. Meat arrives in a dry ice package.
- **Foodservice/ Restaurant:** until 2013, this was the primary channel for dry aged meat. High end chain restaurants have shifted from wet aged to dry aged as a means of differentiation after the GFC.
- Main trends are longer time frame dry aged meat with dry aged in whisky to follow



Wegmans, Ontario, Columbia VA



Whole Foods Washington DC



Both Germany and USA are looking to build dry aged markets

WORLDWIDE



U.S. Meat Export Federation

1. Chilled Importer Dry-Aged Beef	Wet age during export (7-28 days)	Dry age in international market (14-35 days)	Fabricate in international market
2. Frozen Exporter Dry-Aged Beef	Dry age in U.S. (14-35 days)	Fabricate in U.S.	Freeze and export
3. Frozen Importer Dry-Aged Beef	Freeze and export	Dry age in international market (14-35 days)	Fabricate in international market

Final Report

Creating Dry-Aged Traditional and Value-Added Beef Cut Programs for Domestic and International Markets

Submitted to:
U.S. Meat Export Federation
1855 Blake Street, Suite 200
Denver, CO 80202

Conducted by:
Oklahoma State University
Department of Animal Science
Stillwater, OK 74078



Safe and qualitative dry ageing

Excerpt from project outputs;

A reduction of the surface germs can be achieved by applying a thin layer of beef tallow. The application of hydrocolloids as protection against strong microbiological contamination was found to be unsuitable, while germ-inhibiting substances without barrier function such as vinegar appear promising. However, in this case the legal situation has to be clarified.

Storage or rather packaging after dry aging is recommended in vacuum or modified atmosphere for less than eight days. However, shock freezing is the best option for "preserving" optimal maturity status.

<https://www.usmef.org/guidelines-for-u-s-dry-aged-beef-for-international-markets/>

<https://www.dil-ev.de/en/news/detailsliste/news/optidrybeef-1.html>



Key Consumer Benefits: Affordable Luxury

- Affordable Luxury: Luxury goods are differentiated from premium goods in terms of “craftsmanship and the unique process of production”
- Provides an unique sensory experience in both flavours and tenderness.
- Key Luxury Attributes
 - History and Rarity
 - ✓ Limited availability
 - Craftsmanship (Product and Package)
 - ✓ Extreme Quality and Unique Processes
 - Concept of Unique Achievement
 - ✓ Provides the Journey for the Brand
 - Focus
 - ✓ Goes with other Luxury Products
 - Provides meaningful social exchange
 - Connection
 - Targeted Marketing to high income

“In a mass produced commercial environment where all attention is given to the profit margin, dry aging is being done only for a few discriminating customers.”

*“Dry aging beef is a time honored technique”
This quality aging method makes the beef you buy not only more tender, but concentrates flavor and produces meat that is superb in taste and texture.*

Though rare in today’s mass corporate produced and profit driven markets, the art of producing dry aged beef is still in demand for gourmet customers who know its unsurpassed quality.

The most important part of the process, however, is not science or facility. It is the butcher, who brings to the process his art, founded in years of experience. It is this experience and watchful attention to detail that allows an average cut of beef to be transformed into a sensory sensation.

Dry aged is “buttery and rich,” “superb in taste and texture,” “superior in taste and tenderness,” “mellow and intense,” and “earthy and nutty” to describe the advantages for dry-aged compared to wet aged beef.

Dry aged beef is a strong flavor so needs a “big” wine flavour to go with the meatiness of the steak.

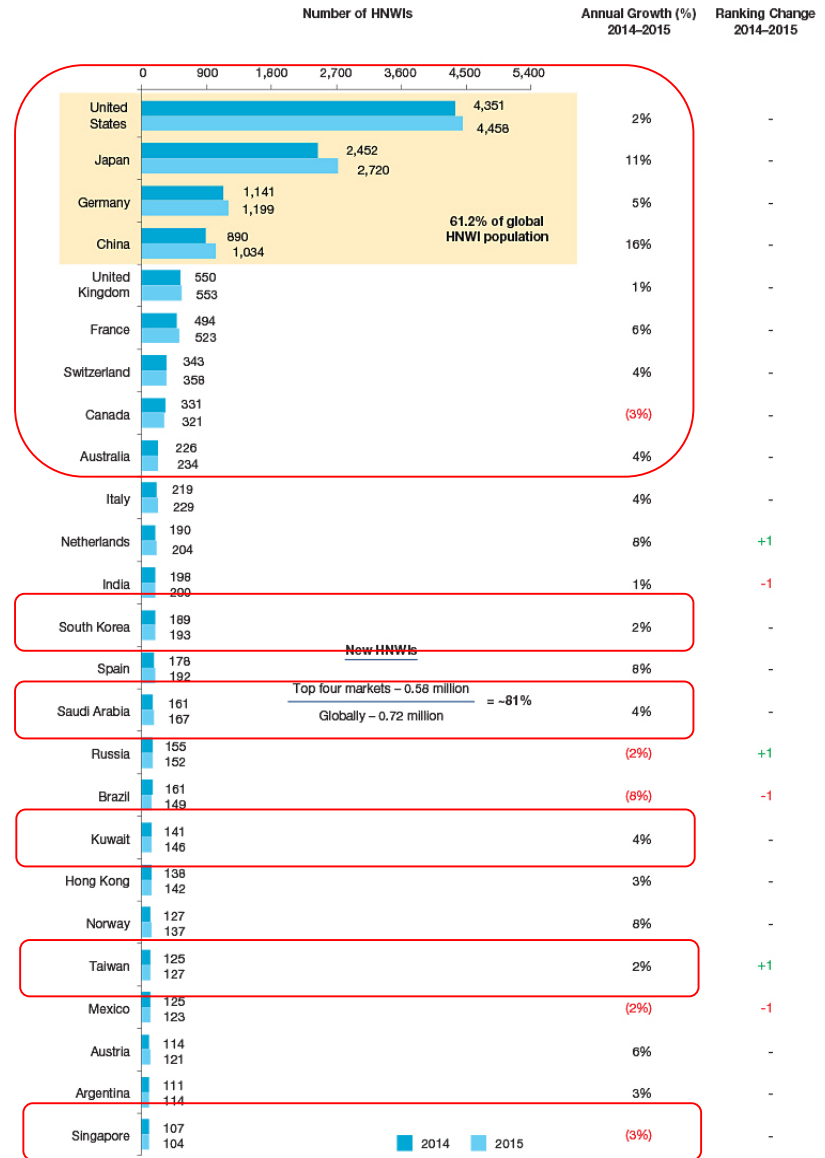


High Net Wealth Individuals-

- HNWI's are separated into three distinct wealth bands: Those with US\$1 million to US\$5 million in investable wealth (millionaires next door); those with US\$5 million to US\$30 million (mid-tier millionaires); and those with US\$30 million or more (ultra-HNWI's).
- Luxury Foods tend to start at HNWI then trickle down to upper and middle class consumers.

Largest HNWI Populations, 2015 (by Market)

(Thousands)



Note: Chart numbers and quoted percentages may not add up due to rounding

Source: Capgemini Financial Services Analysis, 2016; World Wealth Report 2016, Capgemini

¹ HNWI's are defined as those having investable assets of US\$1 million or more, excluding primary residence, collectibles, consumables, and consumer durables.

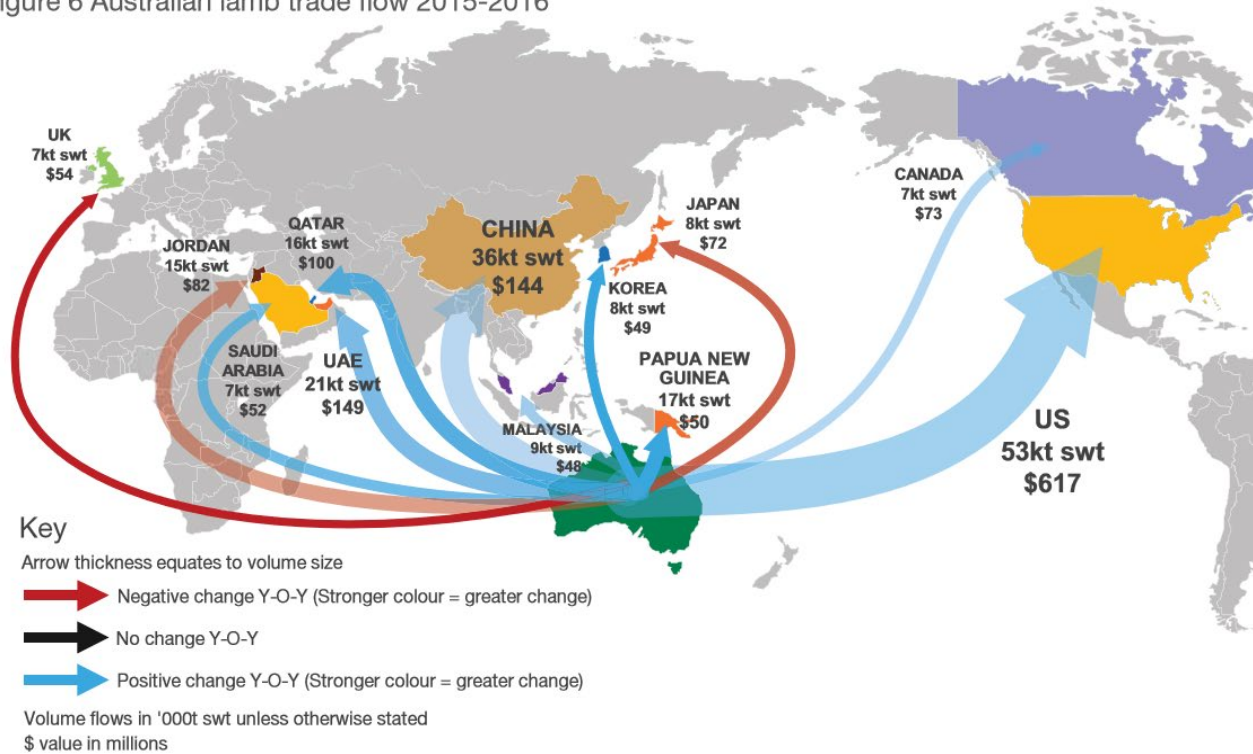
² For the purpose of our analysis, we separate HNWI's into three distinct wealth bands: Those with US\$1 million to US\$5 million in investable wealth (millionaires next door); those with US\$5 million to US\$30 million (mid-tier millionaires); and those with US\$30 million or more (ultra-HNWI's)



Sheepmeat Opportunity

Key export
markets/
channels

Figure 6 Australian lamb trade flow 2015-2016



Dry aged sheepmeat market selection (criteria TBD)

- Centre of the plate vs Part of a Coherent Recipe
- Good prices achieved for sheepmeat in market aligns with high levels of disposable income
- Low tariffs
- Culturally relevant product
- Some channels already established for premium meat products
- Established route to market for Australian sheepmeat (including food service channels)

Dry aged sheepmeat channels

Australia	export market
Foodservice	foodservice
Butchers	Butchers (e.g Singapore)
E-commerce	E-commerce
	high end retail



Japan, Singapore



Japan – 127 million

- Genghis khan mutton (Jingisukan)
- Lamb curry

Singapore – 5.6 million

lots of steak houses and grills
Reference to chops, racks and ribs. Prepared Indian, middle eastern and Asian style





Saudi Arabia / UAE, Korea



Arabian cuisine- meat is often ground with some regional variations . Mutton or Lamb often the hero ingredient



Korea- 25. 5 million population. Lamb is a new trendy ingredient especially on skewers and has been associated with some health benefits



Shawarma

