NEW ZEALAND MEAT INDUSTRY 2013

January 2014

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The Food and Beverage Information Project

The Food & Beverage Information Project is the first comprehensive overview of the state of New Zealand's Food & Beverage (F&B) industry. Part of the Government's Business Growth Agenda (BGA), it is an integrated programme of work focusing on the six key inputs businesses need to succeed, grow and add jobs; export markets, capital markets, innovation, skilled and safe workplaces, natural resources and infrastructure.

Essentially, the BGA Export Markets goal will require lifting the ratio of exports from today's rate of 30% of GDP to 40% by 2025. This equates to doubling exports in real terms (or tripling exports in nominal non-inflation adjusted terms). This in turn equates to achieving a 7% per annum growth rate over the next twelve years.

This five-year project analyses the main sectors in F&B, including dairy, meat, seafood, produce, processed foods, and beverages, as well as providing an overview of how the industry is fairing in our major markets. It also conducts in-depth sector reviews on a rotating basis. The information is updated annually and feedback from users shows the project is acting as a vital tool for companies looking to expand and grow exports.

Why Food & Beverage?

The Food & Beverage industry is vitally important to the New Zealand economy. Food & Beverage accounts for 56% of our merchandise trade exports and one in five jobs across the wider value chain. In addition, F&B acts as a vital ambassador for the country, being in most cases the first exposure global consumers get to "Brand New Zealand."

New Zealand's F&B exports are growing strongly and the country's export performance is strong and improving relative to peers. In the 15 years leading up to 2010, New Zealand's food and beverage exports grew at a compound annual rate of 7% per annum. So one way to look at the challenge is to ask – can we continue to grow our food & beverage exports at the same rate? To understand if this is possible we need to know what has been driving our success.

What is the purpose of the food and beverage information project?

The project pulls together the available information on the food and beverage industry into one place, in a form which is familiar and useful to business. The reports contain analysis and interpretation of trends and opportunities to materially assist with business strategy and government policy.

The information will be of vital use to businesses, investors, government, and research institutions as the industry expands and diversifies. This industry view will be very useful to government, enabling better dialogue and the opportunity to address issues collectively.

What benefit will this bring to businesses?

The Project will have many uses for businesses. These include:

- As a base of market intelligence to enable business to be much more targeted in their own market research
- Reviewing and informing offshore market development (including export and investment) strategies
- Assisting in identifying areas of innovation and R&D for the future
- Identifying strategic partners and collaborators
- Enabling a company to benchmark performance with that of its competitors
- Monitoring industry activity
- Gaining a better understanding of their own industry sector
- Identifying internal capability needs or external inputs

How will government use the reports?

This information will provide much greater insight into the industry, which is useful for a range of policy development, from regulatory frameworks to investment in science and skills and facilitating access to international markets. In particular, a single source of factual information will enable government agencies to better coordinate their efforts across the system and be more responsive to addressing industry issues.

Ministry of Business, Innovation & Employment
Ministry for Primary Industries
Manatū Ahu Matua
New Zealand TRADE & ENTERPRISE
NEW ZEALAND
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OTHER RELATED **iFAB** REPORTS

This analysis of the New Zealand Meat sector forms a part of the wider Food & Beverage Information Project

Other reports, including those from previous years, are available on the MBIE or Coriolis website…

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI
Economic Development Information

http://www.med.govt.nz/sectors-industries/food-beverage/information-project/
www.foodandeverage.govt.nz

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SUMMARY

Meat

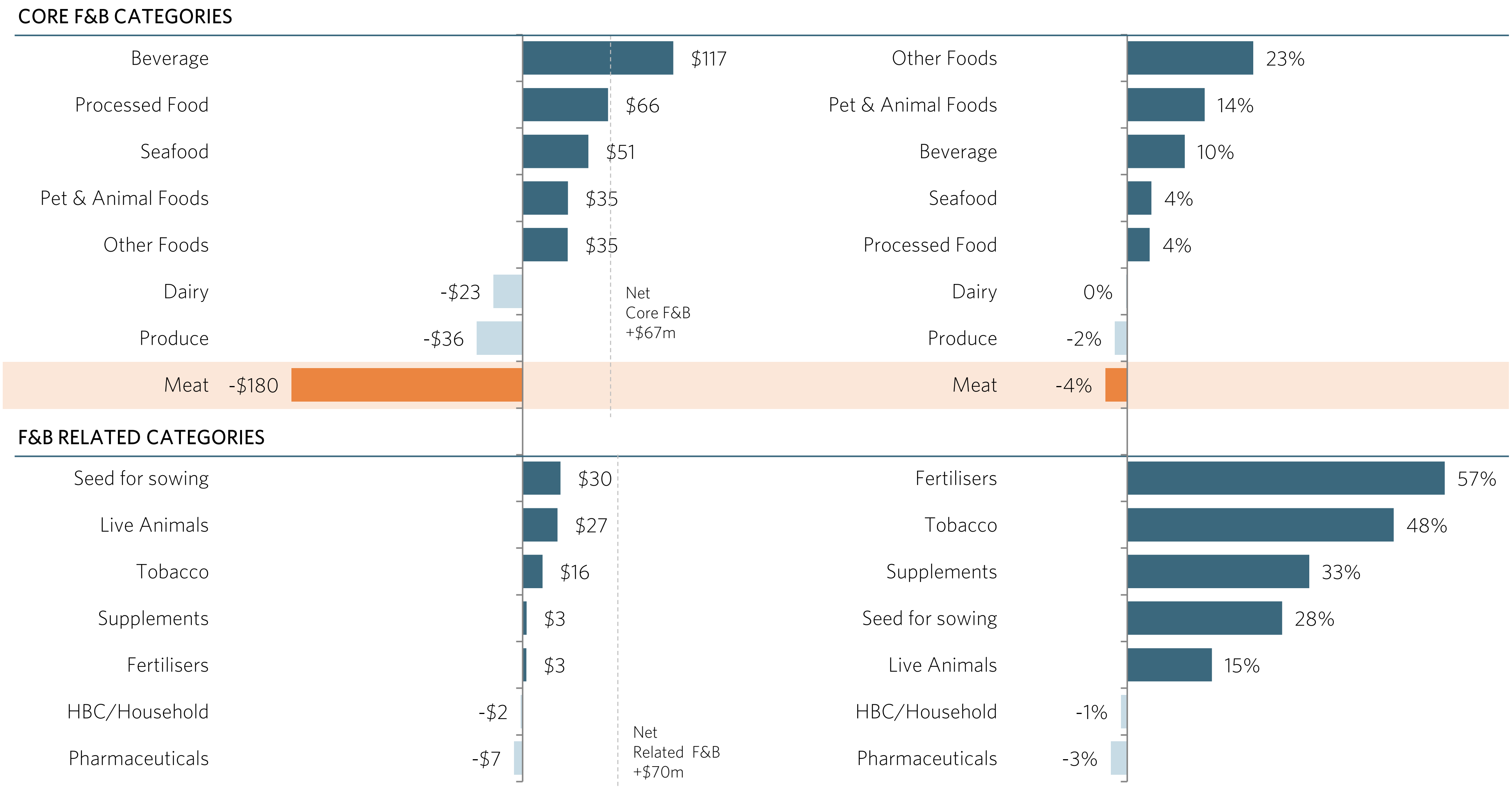
iFAB 2013

BENCHMARK – EXPORT GROWTH BY SECTOR

Relative to the other sectors of the New Zealand food & beverage industry, meat had challenging year in 2012

ANNUAL CHANGE IN EXPORT VALUE BY TYPE
US$; million; 2012 vs. 2011

PERCENT CHANGE IN EXPORT VALUE BY TYPE
%; US$; 2012 vs. 2011



Source: UN Comtrade database; Coriolis classification and analysis

MEAT – SITUATION

New Zealand is the global leader in lamb and deer meat exports and is a secondary player in beef exports; remaining key species are primarily for domestic consumption, though chicken has started growing exports

Lamb

Both New Zealand and Australian lamb production has been flat for forty years. Falling domestic consumption at home has made more meat available for export. New Zealand & Australia together account for more than seventy percent of global lamb exports.

Top four New Zealand lamb meat processors account for 70% of NZ volume. The Australian industry is more fragmented. NZ lamb exporters primarily compete with each other and Australian firms.

The major lamb consuming countries are effectively the major lamb producing countries. In other words, the regions that grow lamb eat lamb (and those that don't, don't). However most major lamb consuming countries are too poor to afford NZ lamb in quantity.

The key markets for New Zealand and Australian lamb are a handful of rich Western countries. Supply is primarily counter-seasonal lamb for consumption around the time of traditional religious holidays (e.g. Christmas, Easter and the end of Ramadan). Lamb production flat to falling in these key markets and lamb consumption per capita falling due to an increasing price gap with other more efficient meats (e.g. chicken).

China is a rapidly emerging market for New Zealand's lamb exports, but also a strongly growing producer. China has gone from producing a fifth as much lamb as New Zealand 40 years ago to more than four times as much today. However China is currently a growing customer and is unlikely to be a threat in key markets within the medium term.

Beef

NZ is a minor global producer of beef (~1%). NZ beef breeds (e.g. Angus) have declining numbers and are not generally finished on grain, as is preferred by key premium markets. In addition, a growing proportion of beef production is a secondary product of the dairy industry, not optimal for meat quality.

Grassfed beef has achieved minimum consumer cut-through and sells at a discount to grain fed overall, despite healthy attributes. This low fat beef is however valued for patties in foodservice (e.g. supplying McDonalds).

Brazil and Australia are both major producers and exporters of beef into key NZ markets; USA is increasing beef exports driven by the weak USD, leading to increased imports of manufacturing beef.

Deer

NZ pioneered deer farming in the 1960's. The industry has two income streams (venison and deer velvet). The number of animals is in decline and long term economic viability unclear without major long-term breeding program to improve relative animal productivity.

Chicken

NZ has a modern chicken industry with four processors (Tegel, Inghams, Brinks & Turks). NZ chickens have a very low FCR[1] due to lack of key poultry diseases. Bio-security prevents imports due to threat posed to iconic native birdlife (e.g. kiwi, kea, etc.). Exports have recently started growing strongly off a small base.

Pork

NZ pork production has been flat for 40+ years and growing consumption of bacon, ham & smallgoods (B,H&SG) being filled by frozen imports. The domestic industry now predominantly supplies fresh pork. Recent moves to remove bio-security from fresh will challenge the industry to improve productivity to global best practice.

1. FCR = feed conversion ratio (a measure of conversion of food input into meat output)

MEAT – SWOT ANALYSIS

The global meat industry is undergoing fundamental shifts and consolidation; New Zealand's competitive position is changing as a result

STRENGTHS

- Natural environment favourable to pastoral agriculture
- Low cost, grass fed beef and sheep production systems
- Biosecurity high in New Zealand and presence of key diseases low
- High standards of food safety and animal welfare
- Regulatory credibility allowing exporters flexibility
- 130 years experience exporting meat long distances
- Strong position in global lamb trade in counter-seasonal window to Northern Hemisphere
- Successful dairy industry generating large numbers of surplus stock
- Preferential access into Europe for some products for historical reasons

WEAKNESSES

- High tariff barriers into key markets limits access to Japan, Europe, and Korea (e.g. Korean beef tariff is 40%)
- Limited experience with branded and high value processed meats or meal solutions
- Labour shortages both on farm and in processing
- Limited in-market knowledge, few firms close to customer/consumer, especially in growth markets of Asia
- Inefficient use of meat plants (declining stock numbers) and inefficient procurement of stock (competitive, not coordinated)
- Lack of in-market co-ordination
- Pork and beef farm prices all decreasing
- Playing catch up with other countries with onfarm tracking technology; beef and venison proposed, no lamb

OPPORTUNITIES

- Negotiating Free Trade Agreements with key markets and on-going improvements in access to markets via WTO Doha Development Round
- Scientific research showing superior health properties of free range, grass fed animals
- Genomics research for lamb and beef to optimise output quality, growth rates etc.
- Ability to extend shelf life of chilled product (extend season window)
- Increased demand for protein globally
- Move from frozen with chilled; position/develop brands and case-ready, convenience foods products for retail and hospitality and for the younger convenience focused consumers
- Removal of EU/UK farm subsidies in the medium term
- Livestock identification extended to farm management and consumer market (use of smart phone apps etc.)
- Encourage innovative on-farm practices to minimise green house gases

ISSUES/THREATS/RISKS

- Continued conversion of beef and sheep land into dairy
- Market access reduced due to import restrictions (e.g. Indonesia)
- Continued decline in consumption of lamb in Europe
- Disease outbreak affecting stock numbers and or trade access
- ETS, climate change legislation affecting cost of business
- Increasing pork imports threatening the viability of New Zealand pork industry
- Southern South America adopting the AU/NZ pasture system (e.g. Argentina, Uruguay, S. Brazil)

Source: various company annual reports; various company websites; Interviews; Coriolis

MEAT – POTENTIAL AREAS FOR INVESTMENT

Potential areas for new and/or external investment in the New Zealand meat industry is primarily in transforming ingredients rather than producing more ingredients

Lamb, Beef & Deer

The New Zealand meat industry appears to have significant excess capacity, particularly in lamb. This appears to periodically lead to bidding wars among processors for supply and large losses, as happened in 2012. As a example, in FY12 Silver Fern Farms (NZ#1) had a -$44m EBIT and Alliance (NZ #2) had a -$68m EBIT. Returns have been historically poor for processors resulting in numerous exits over the years from the industry (particularly by listed players). In addition, falling total lamb and beef animal numbers suggests that this problem will continue, if not accelerate, going forward.

Ownership of top 4 processors, who account for ~75% of both lamb and beef production, is locked up with limited opportunity for new outside capital to participate: the two largest firms – Silver Fern Farms & Alliance - are farmer-owned co-ops; the third largest firm ANZCO has two cornerstone Japanese shareholders (Itoham & Nissui); and the last, AFFCO, is owned by the Talley's family following a decade long gradual takeover of a poorly performing listed firm.

That said, there is some opportunity for further consolidation among second tier beef & lamb processors (particularly in North Island), where there are a number of small regional players each with one plant. Global experience shows single plant operators need to be above average size to achieve economies necessary for success.

Chicken

The New Zealand chicken industry performs well and has achieved reasonable sales and profit growth for the past two decades. In the past decade chicken exports have grown from almost nothing to US$41m in 2012, primarily through success in the Australian market.

Unfortunately for investors wanting to participate in this success, both major firms have changed hands in the past few years and are owned by foreign Private Equity (#1 Tegel by Affinity and #2 Ingham by Texas Pacific). Brinks (#3) was for sale in 2009 and acquisition by Tegel rejected by NZCC*; no other bidders emerged.

Pork and pork products

Domestic production has been flat for the last 40 years and the industry is sub-scale by global standards (e.g. Canada, USA, Denmark). International investors with global best practice capabilities in pork farming could find opportunities.

There are some opportunities for further consolidation among bacon, ham and smallgoods producers (B,H&SG). However, Hellers (#1) is 50% owned by Rangatira (PE) and Premier Beehive (#3) was acquired by Affinity (PE) owned Primo in May 2012. Goodman Fielder's Hutton's Kiwi business (#2) proposed sale to Heller's (#1) currently underway.

Meat-based processed foods

New Zealand exports significant quantities of manufacturing beef as raw material ingredients for processors in other countries. There are opportunities to make more value-added products in New Zealand.

There are significant further opportunities for growth across a range of sectors, including canned meats & meals, frozen meals, soups, jerky, pet food, formed hamburgers for chain fast-food. These are reviewed in more detail in the "Processed Food" report.

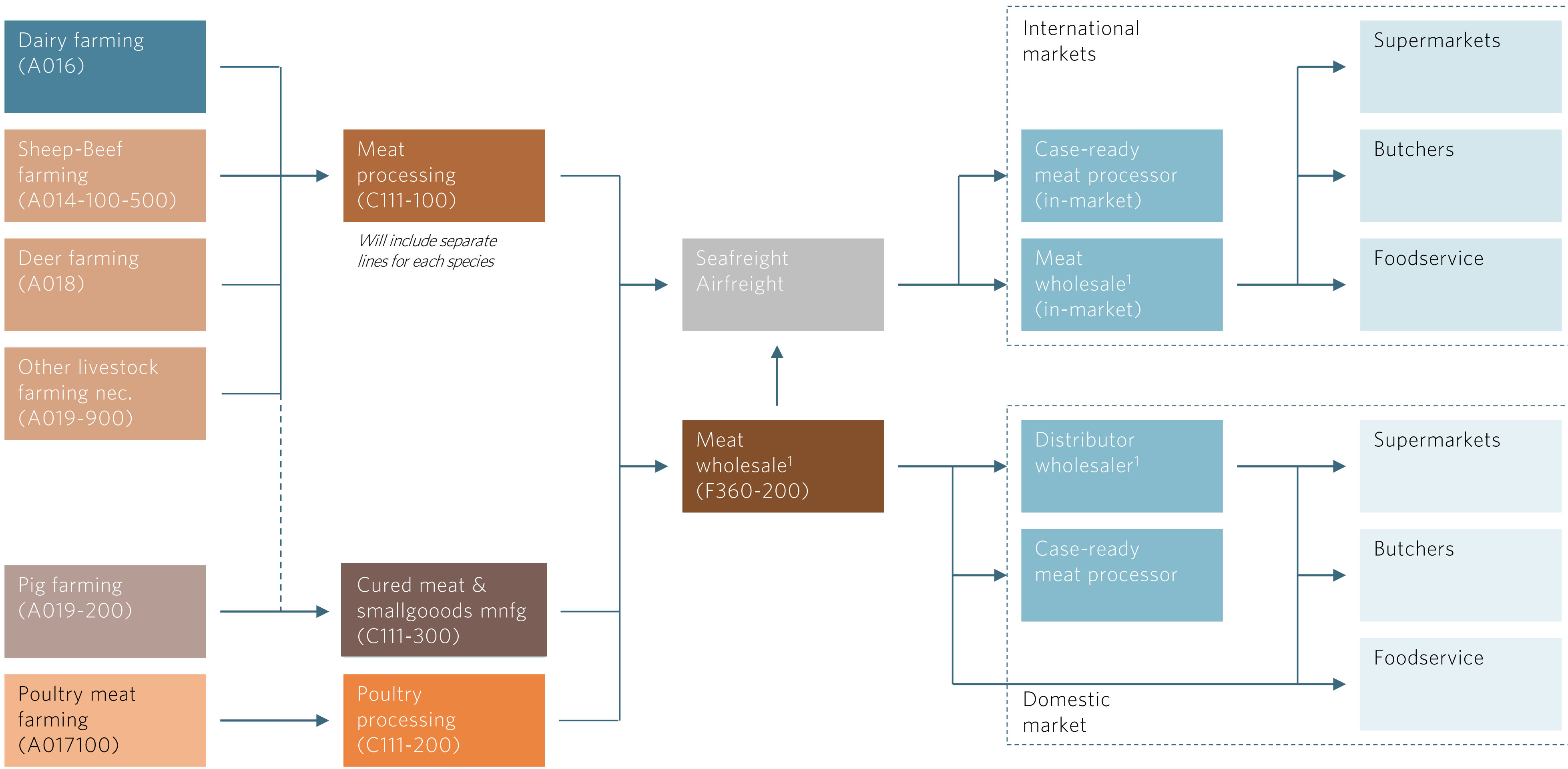
* NZCC = New Zealand Commerce Commission

MEAT – SUPPLY CHAIN

The New Zealand meat industry supply chain is effectively segregated by species

SIMPLIFIED MODEL OF NEW ZEALAND MEAT SUPPLY CHAIN

Model; ANZSIC codes as available; 2013



1. There may be one or more layers of wholesaling, depending on product or market; some wholesale functions may be captive inside retailers or foodservice operators; Source: Coriolis

GLOBAL

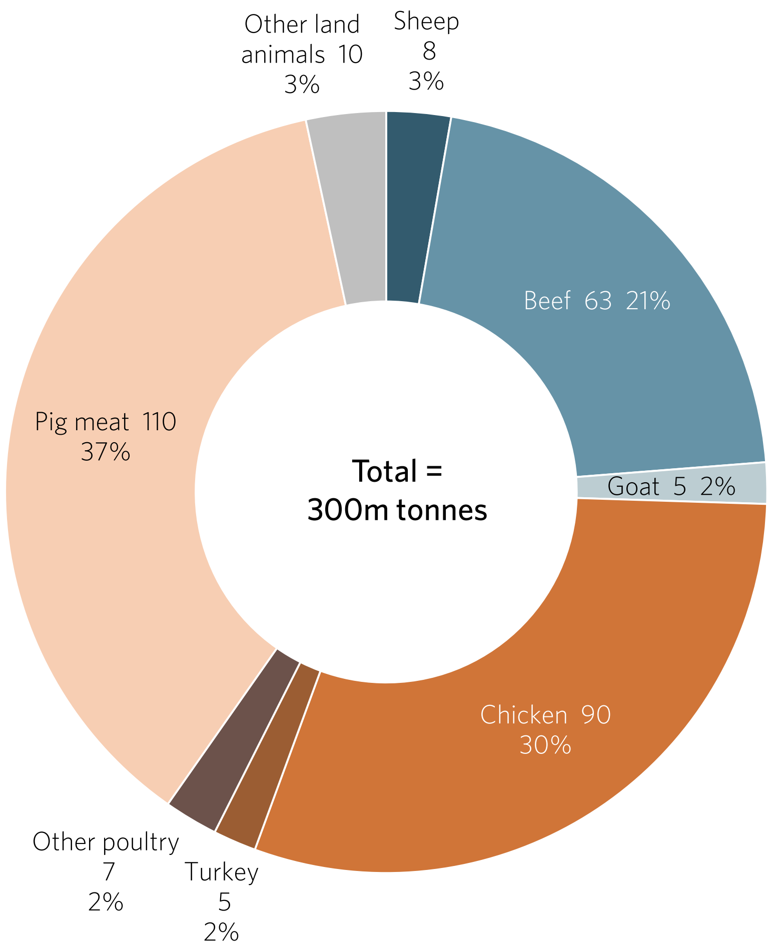
Meat

GLOBAL MEAT PRODUCTION BY SPECIES

Global meat production - made up of a handful of key species - is growing driven by high FCR[1] poultry and pigs; ruminants not keeping pace

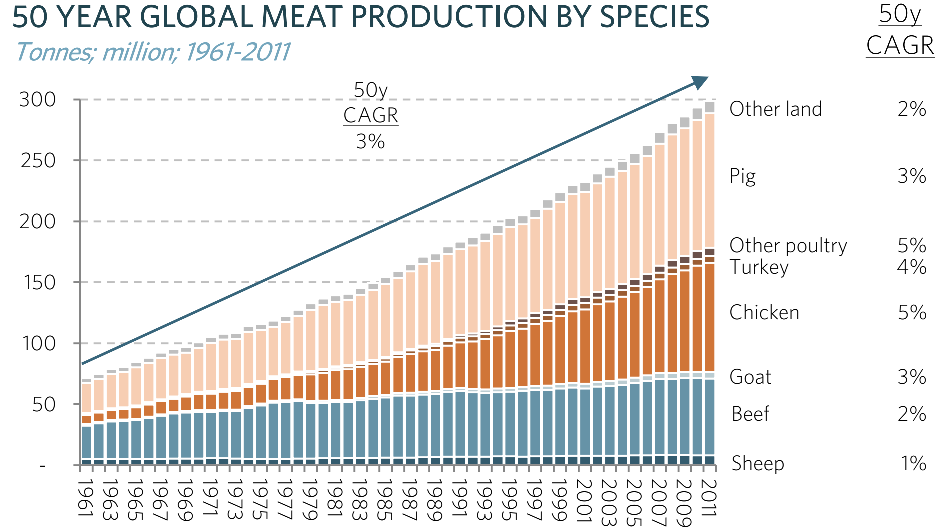
GLOBAL MEAT PRODUCTION BY SPECIES

Tonnes; million; 2011



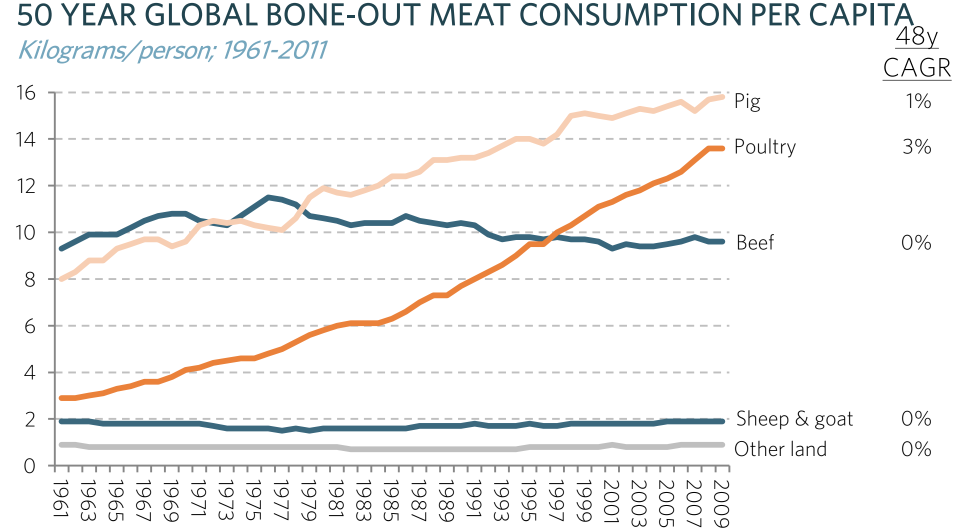
50 YEAR GLOBAL MEAT PRODUCTION BY SPECIES

Tonnes; million; 1961-2011



50 YEAR GLOBAL BONE-OUT MEAT CONSUMPTION PER CAPITA

Kilograms/person; 1961-2011



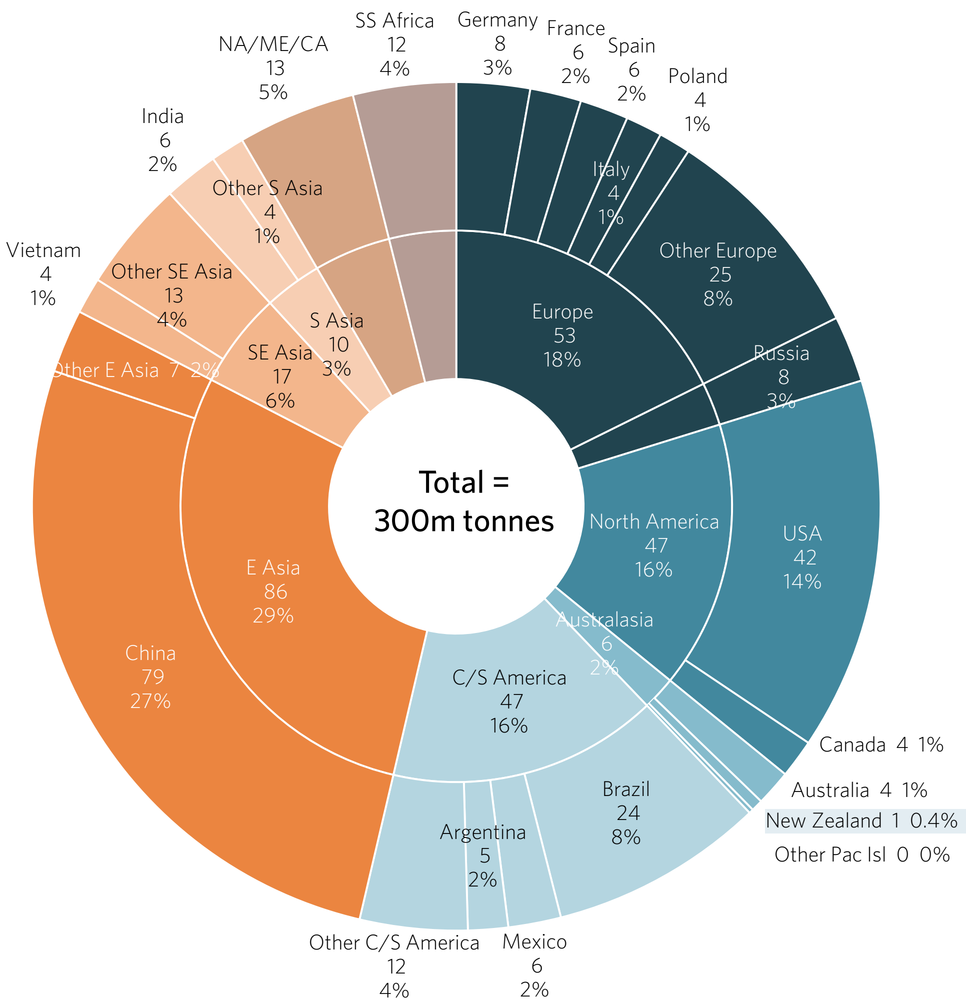
1. FCR=feed conversion ration; Note: 2011 is latest data available for all countries globally in FAO Agstat for production and 2009 for per capita as of October 2013; Source: UN FAO AgStat database; Coriolis analysis

GLOBAL MEAT PRODUCTION BY REGION

Global meat production growing, driven by Asia, particularly China, and Central/South America; New Zealand produces 0.4% of global meat

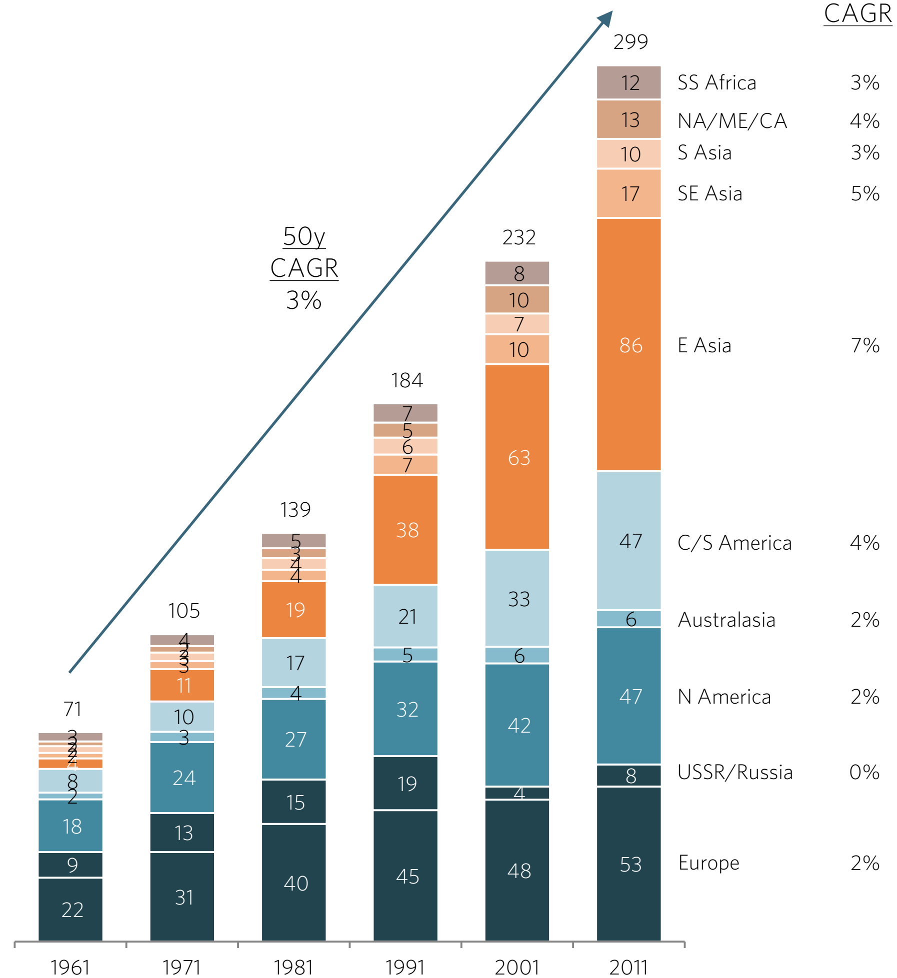
GLOBAL MEAT PRODUCTION BY KEY COUNTRIES & REGION

Tonnes; million; 2011



50 YEAR MEAT PRODUCTION BY REGION

Tonnes; million; 1961-2011



Note: 2011 is latest data available for all countries globally in FAO Agstat as of October 2013; Source: UN FAO AgStat database; Coriolis analysis

TOP 30 MEAT PRODUCING COUNTRIES

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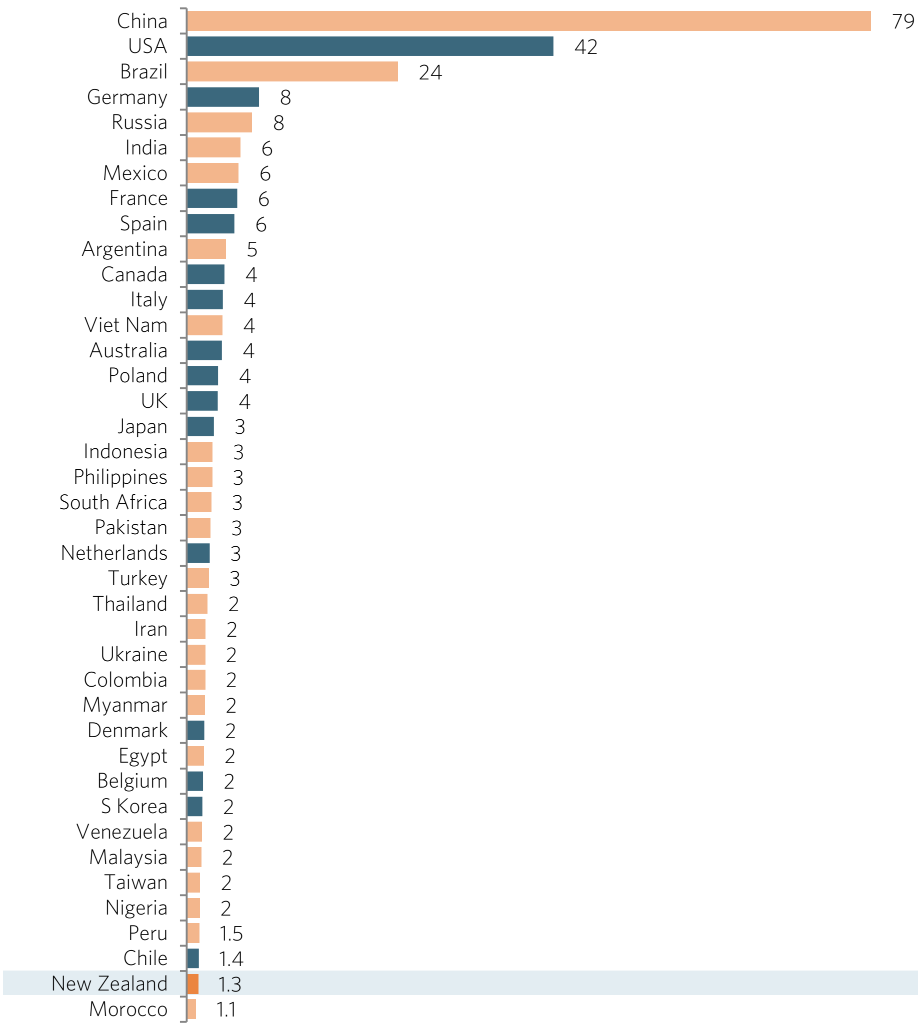
Over the past decade, global meat production growth being driven by BRIC* and other developing countries; New Zealand a niche player with shrinking production (due to dairy conversions)

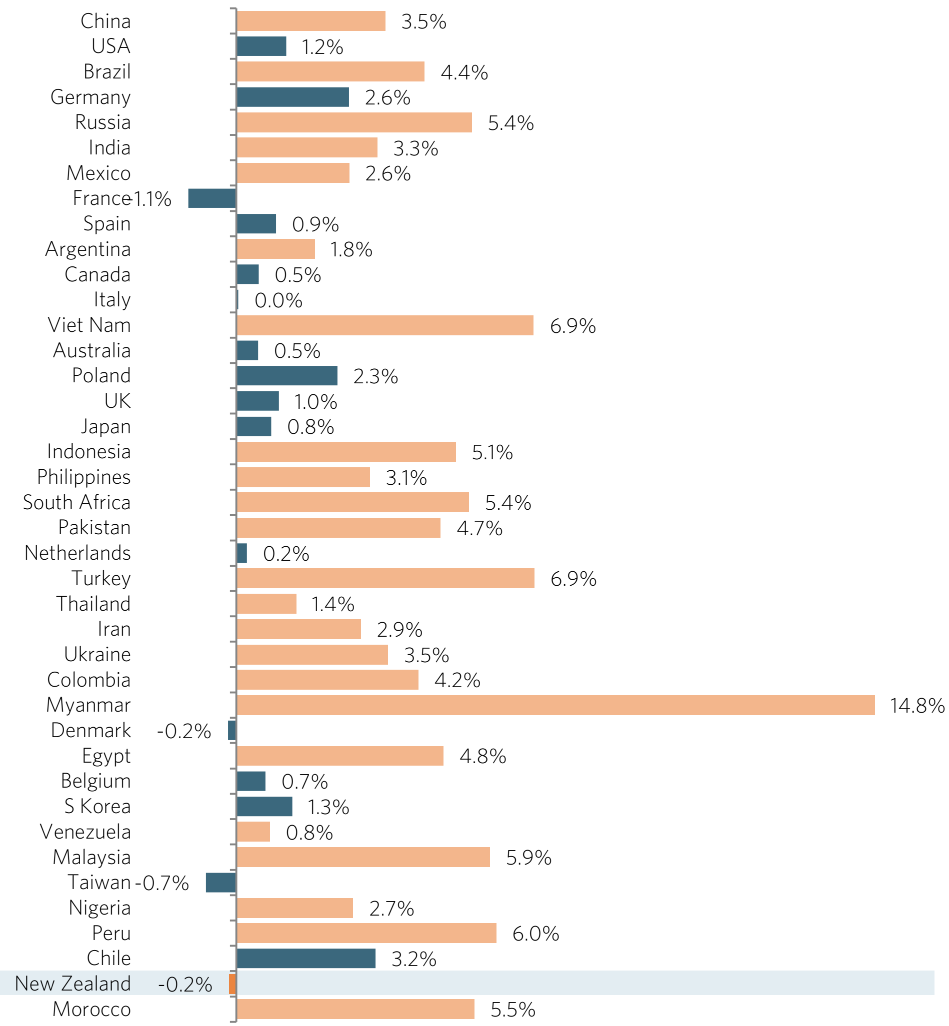
TOP 30 PRODUCERS OF MEAT FROM ALL SPECIES

Tonnes; million; 2011



10 YEAR MEAT PRODUCTION GROWTH RATE CAGR

%; tonnes; 2001-2011



* BRIC = Brazil, Russia, India & China; Note: 2011 is latest data available for all countries globally in FAO Agstat as of October 2013; Source: UN FAO AgStat database; Coriolis analysis

INPUTS

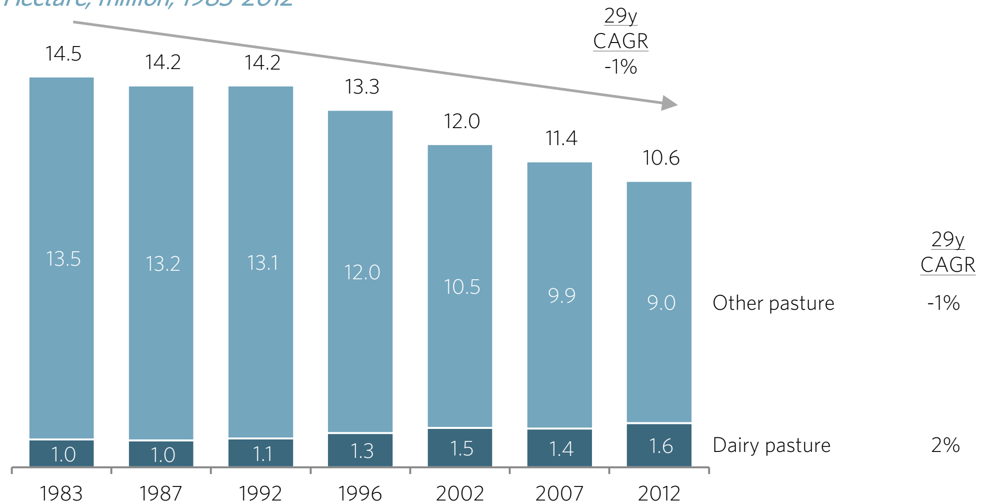
Meat

KEY PRODUCTION METRICS

New Zealand has had flat meat production over the past decade, though with less land and fewer animals; there is significant variation by species

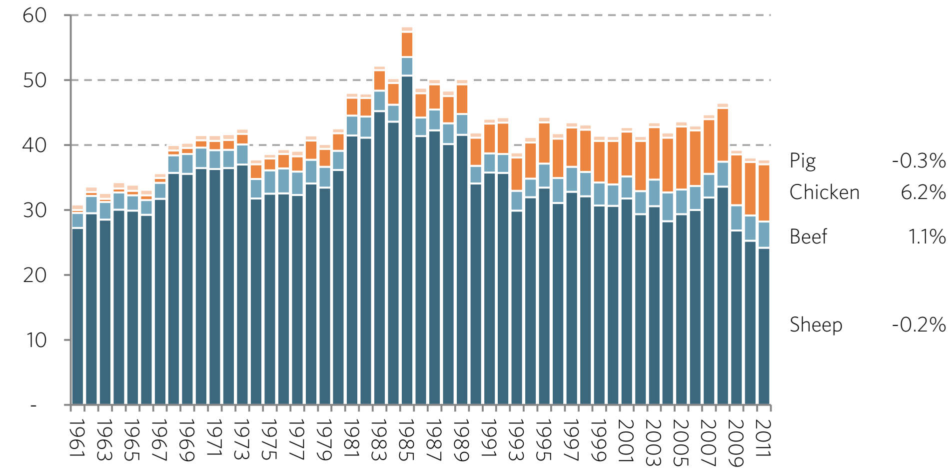
TOTAL EFFECTIVE HECTARES IN MEAT VS. % OF NZ AREA

Hectare; million; 1983-2012[2]



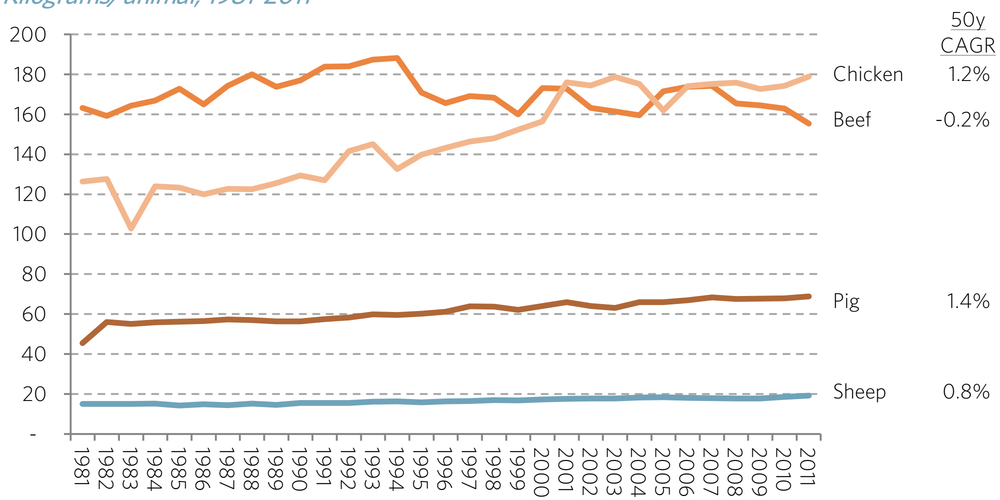
50 YEAR ANIMALS SLAUGHTERED PER YEAR IN M/CHICKEN 10M

Head; million; 81/82-10/11



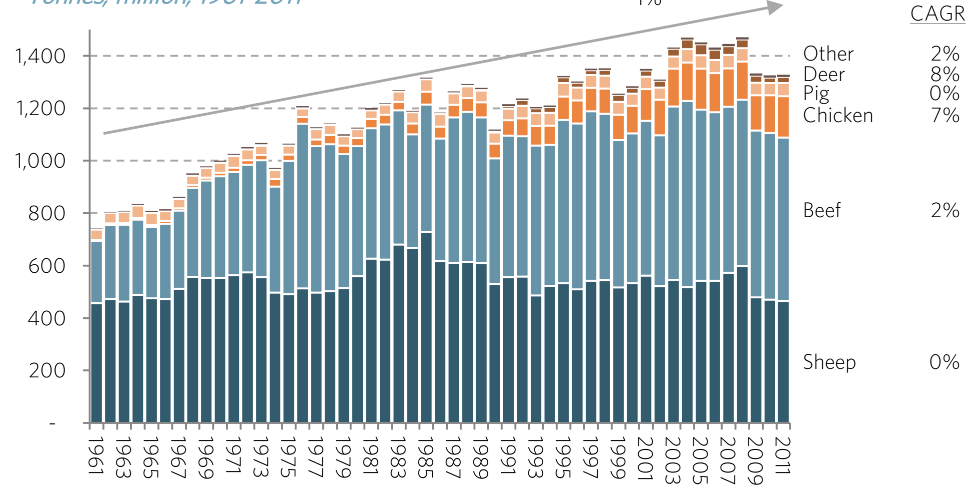
30 YEAR AVERAGE MEAT PER ANIMAL/CHICKEN 100 HEAD[1]

Kilograms/animal; 1981-2011



50 YEAR TOTAL MEAT PRODUCTION

Tonnes; million; 1961-2011



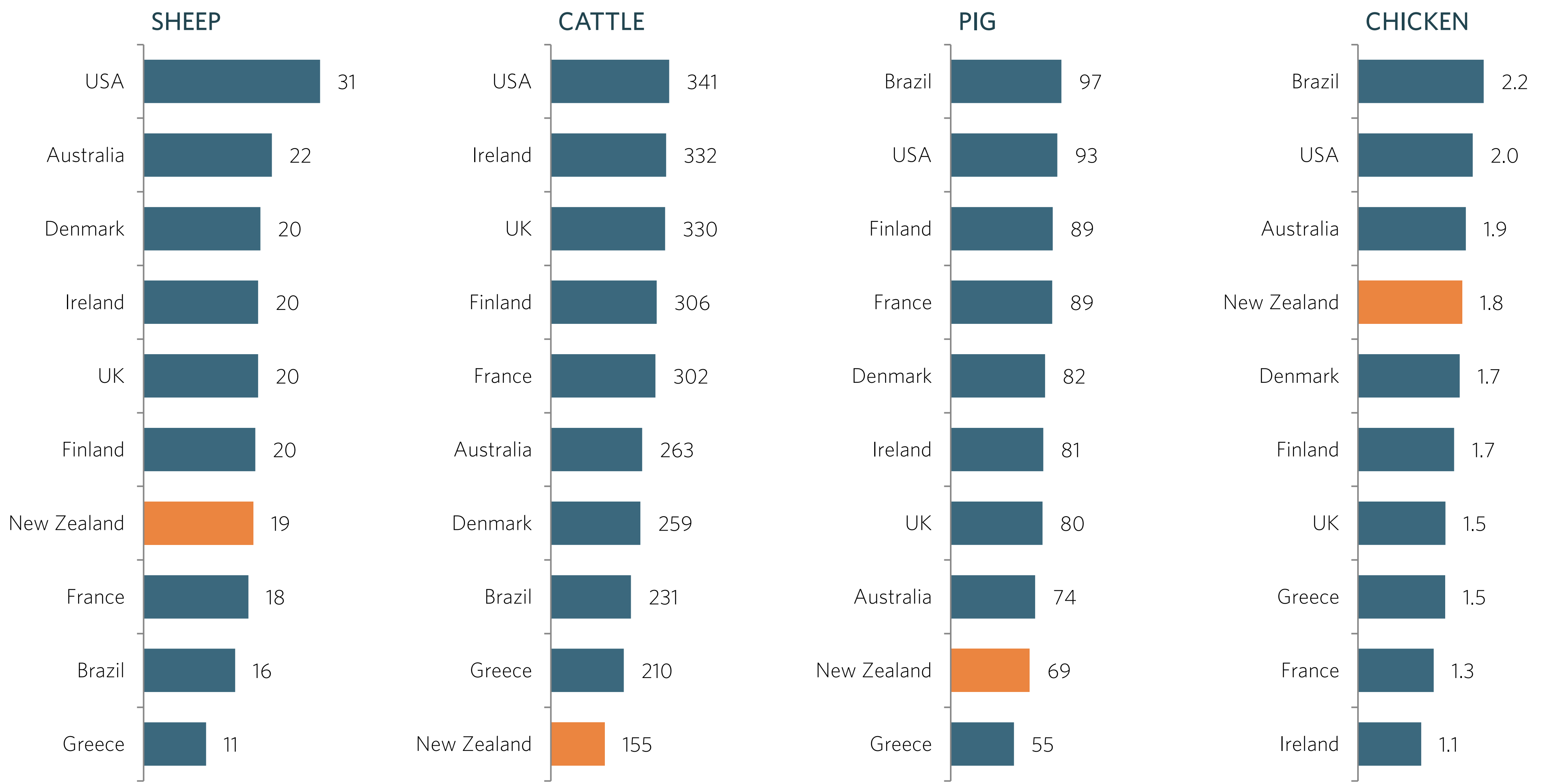
1. Except chicken which is per 100 animals; 2. Dairy uses 2010/11 season effective hectare; Source: UN FAO AgStat database; MAF/MPI; DairyNZ; Coriolis analysis

YIELD VS. PEERS

New Zealand yields per animal vary, with room for improvement across all species

MEAT PER ANIMAL: NZ VS. SELECT PEERS

kg/head; 2011



Note: 2011 is latest data available for all countries globally in FAO Agstat as of October 2013; Note: meat per animal is obviously only one variable in total competitiveness (albeit a very important one);
Source: UN FAO AgStats; Coriolis analysis

FIRMS

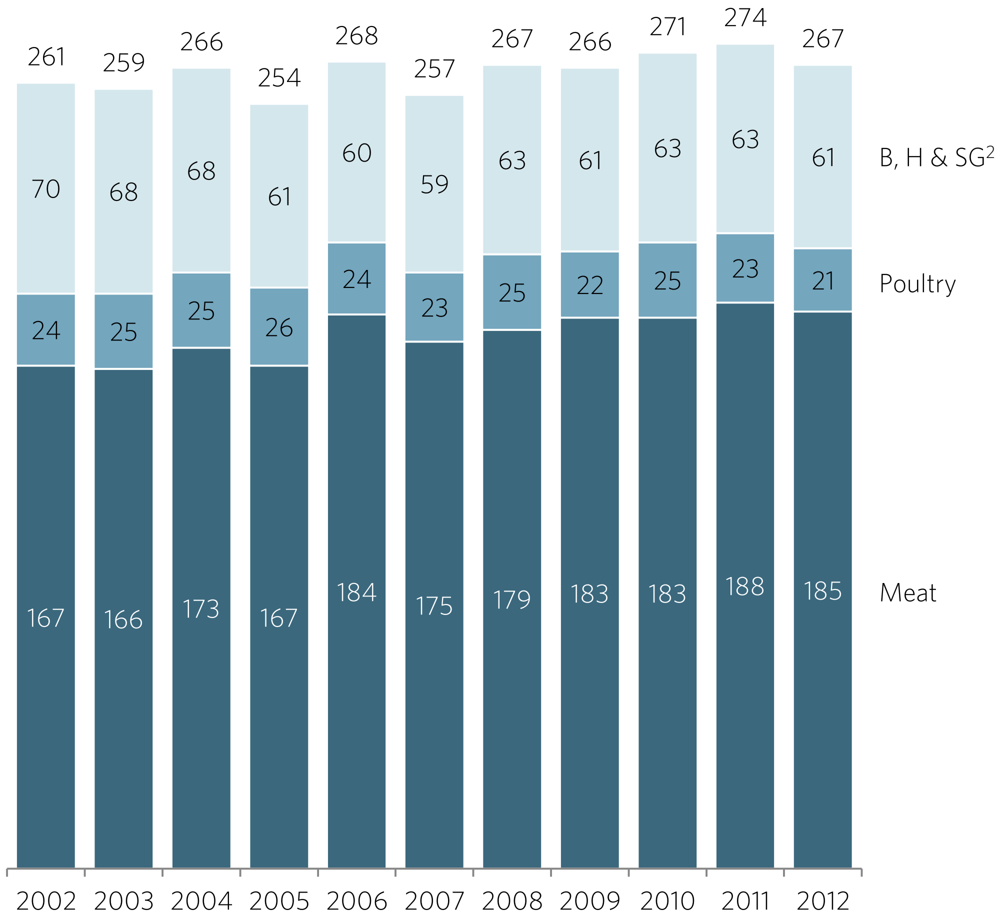
Meat

NUMBER OF FIRMS

The number of meat processing firms declined across all sectors in 2012

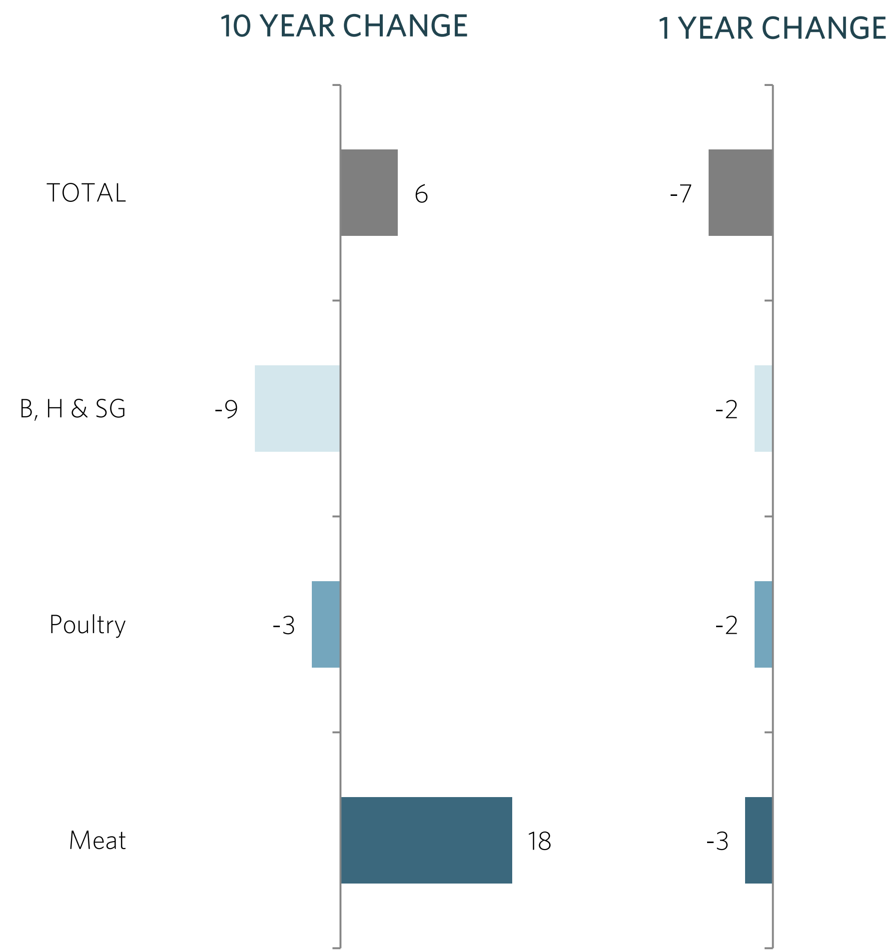
NUMBER OF MEAT PROCESSING ENTERPRISES[1]

Enterprises; 2002-2012



CHANGE IN NUMBER OF MEAT PROCESSING ENTERPRISES

Enterprises; absolute change; periods as given



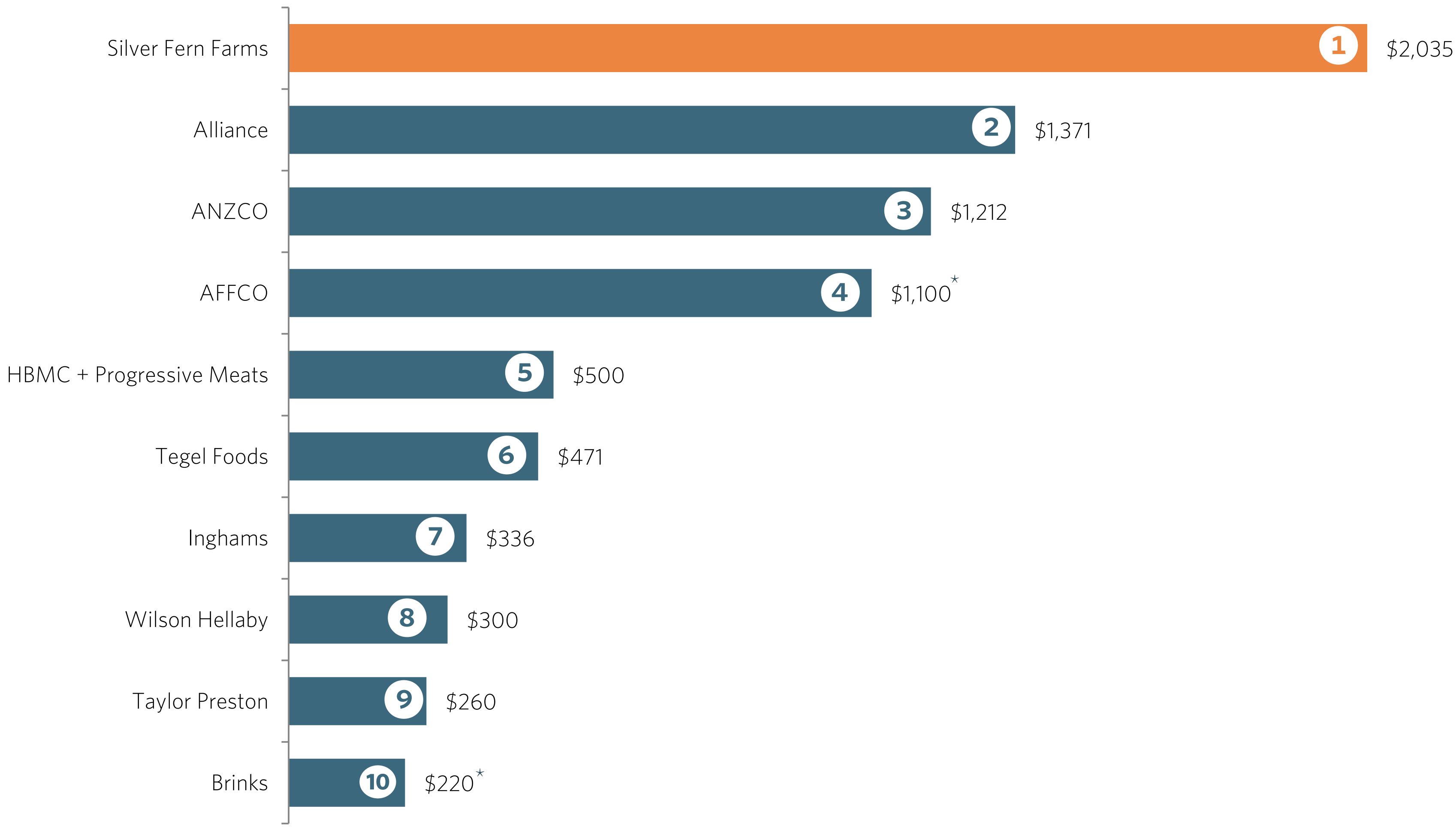
Note: 2012 data latest available as of October 2013; 1. Defined as C111-100 Meat processing, C111-200 Poultry processing & C111-300 Cured meats & smallgoods; ; 2. B, H & SG = Bacon, ham & smallgoods;
Source: Statistics NZ business demographics database; Coriolis analysis

iFAB TOP TEN MEAT FIRM TURNOVER FY12

Silver Fern Farms continues to be the largest meat company in New Zealand

ANNUAL TURNOVER BY TOP 10 MEAT FIRMS

NZ$m; FY2012



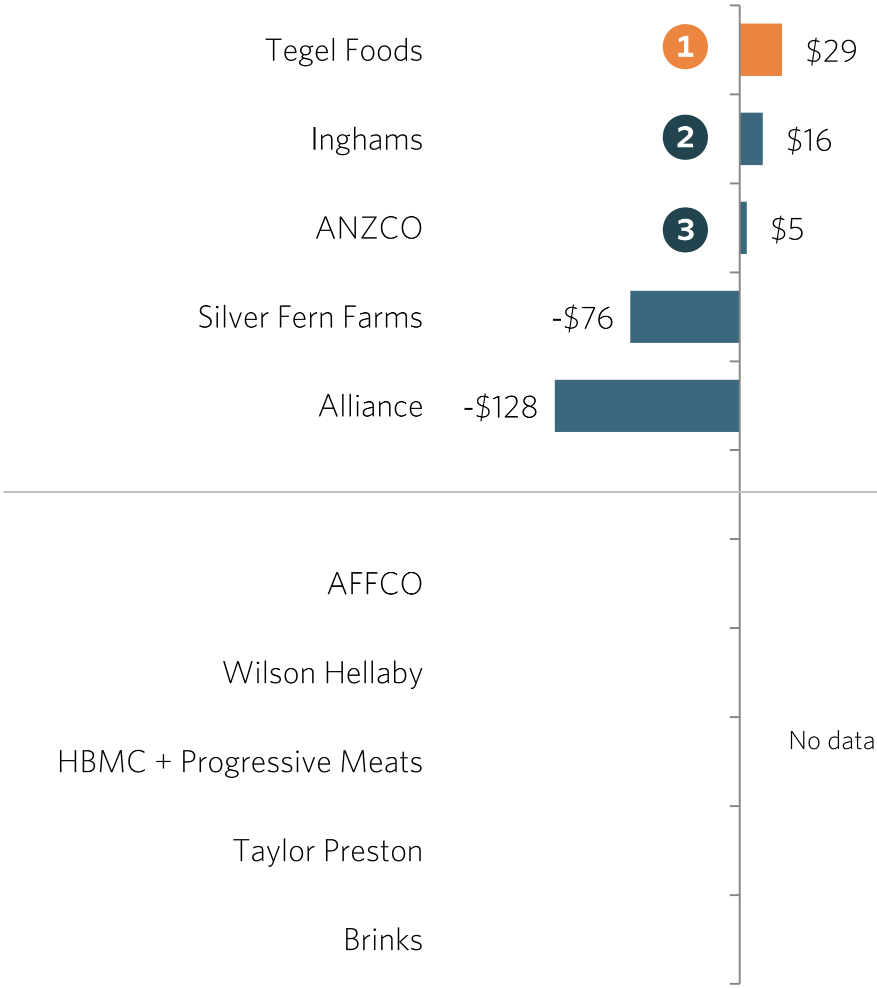
* CORIOLIS ESTIMATE; Source: various company annual reports; NZCO; Coriolis estimates and analysis

iFAB TOP TEN MEAT TURNOVER GROWTH FY12

Chicken companies have lead in turnover growth; beef and lamb companies have been impacted by falling exports

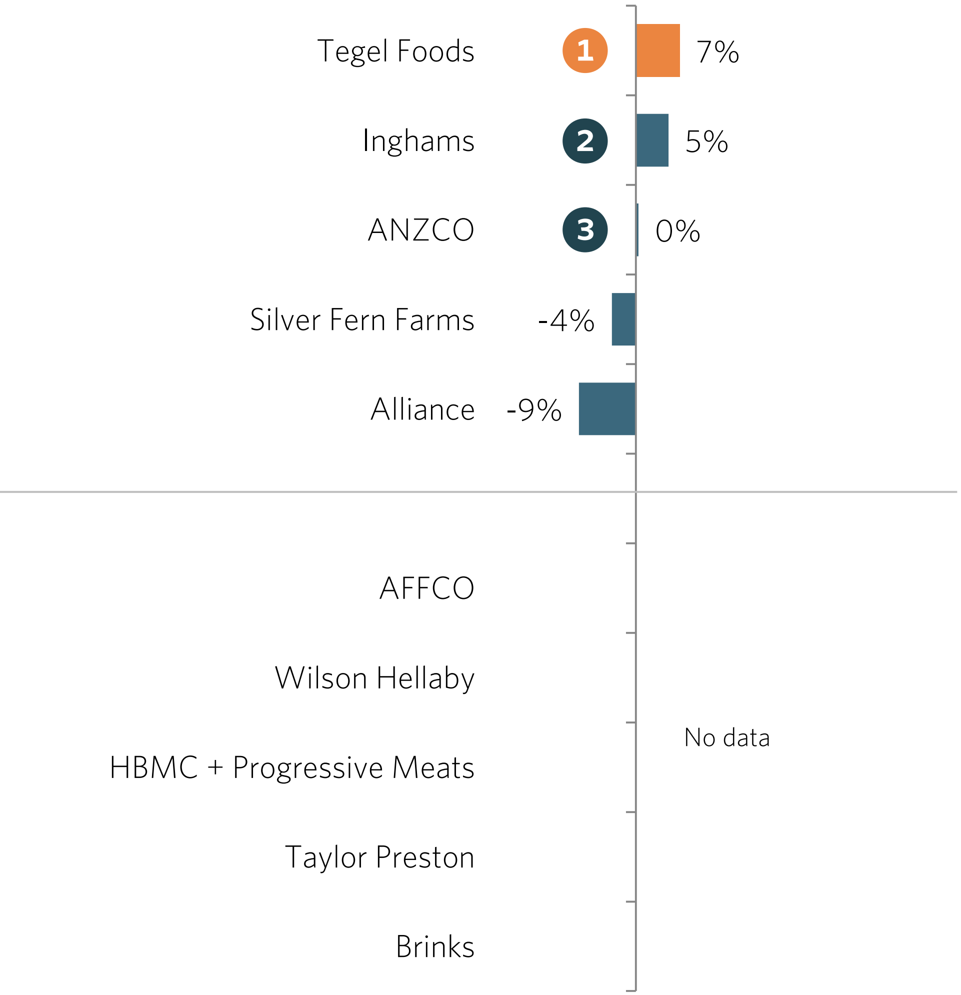
CHANGE IN ANNUAL TURNOVER BY TOP 10 MEAT FIRMS

NZ$m; FY2012 vs. FY2011



ANNUAL TURNOVER % GROWTH BY TOP 10 MEAT FIRMS

NZ$m; FY2012 vs. FY 2011



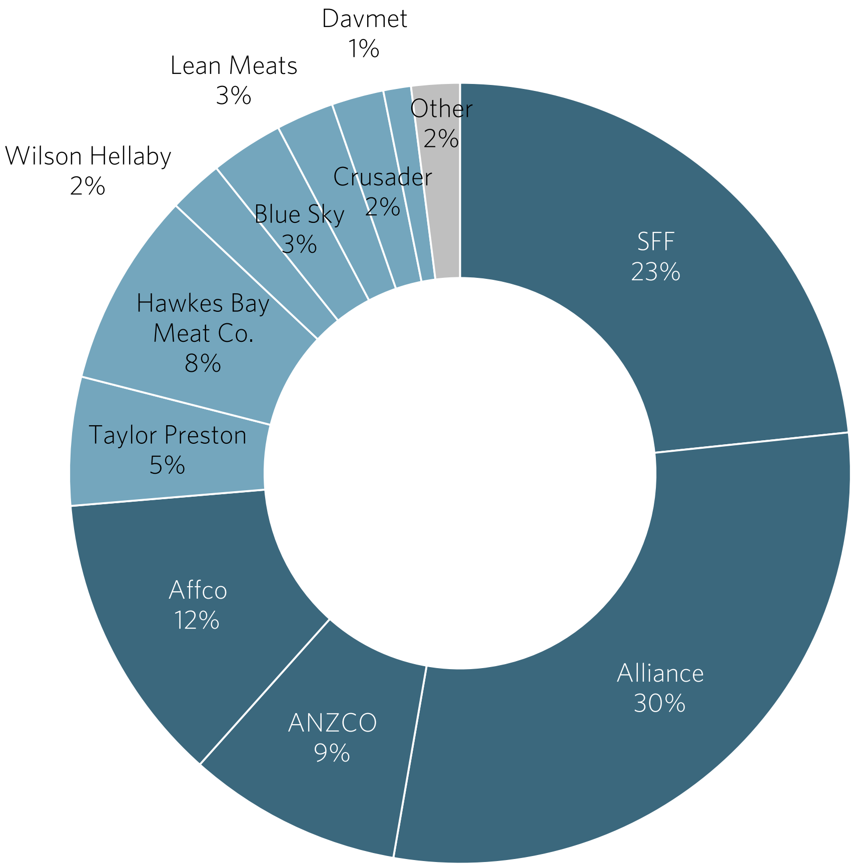
Source: various company annual reports; NZCO; Coriolis estimates and analysis

PRODUCTION SHARE BY FIRM

New Zealand beef and lamb processing is relatively consolidated among the top four firms, however there is a strong second tier, particularly in lamb

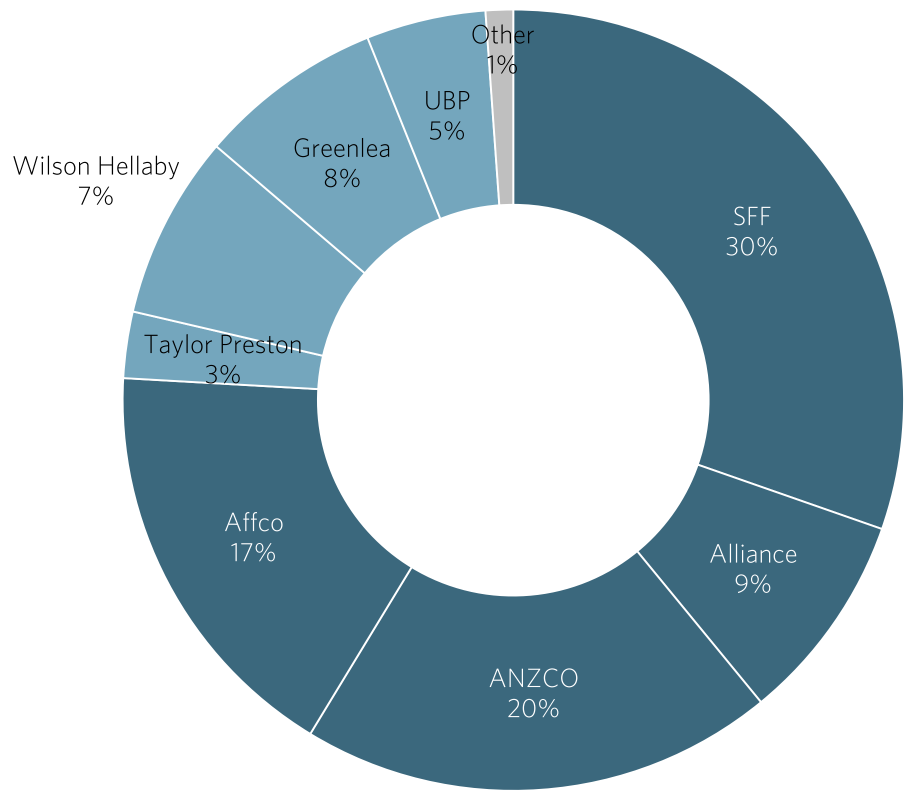
NEW ZEALAND LAMB PRODUCTION MARKET SHARE

% of production [see notes]; 2012



NEW ZEALAND BEEF PRODUCTION MARKET SHARE

% of production [see notes]; 2012



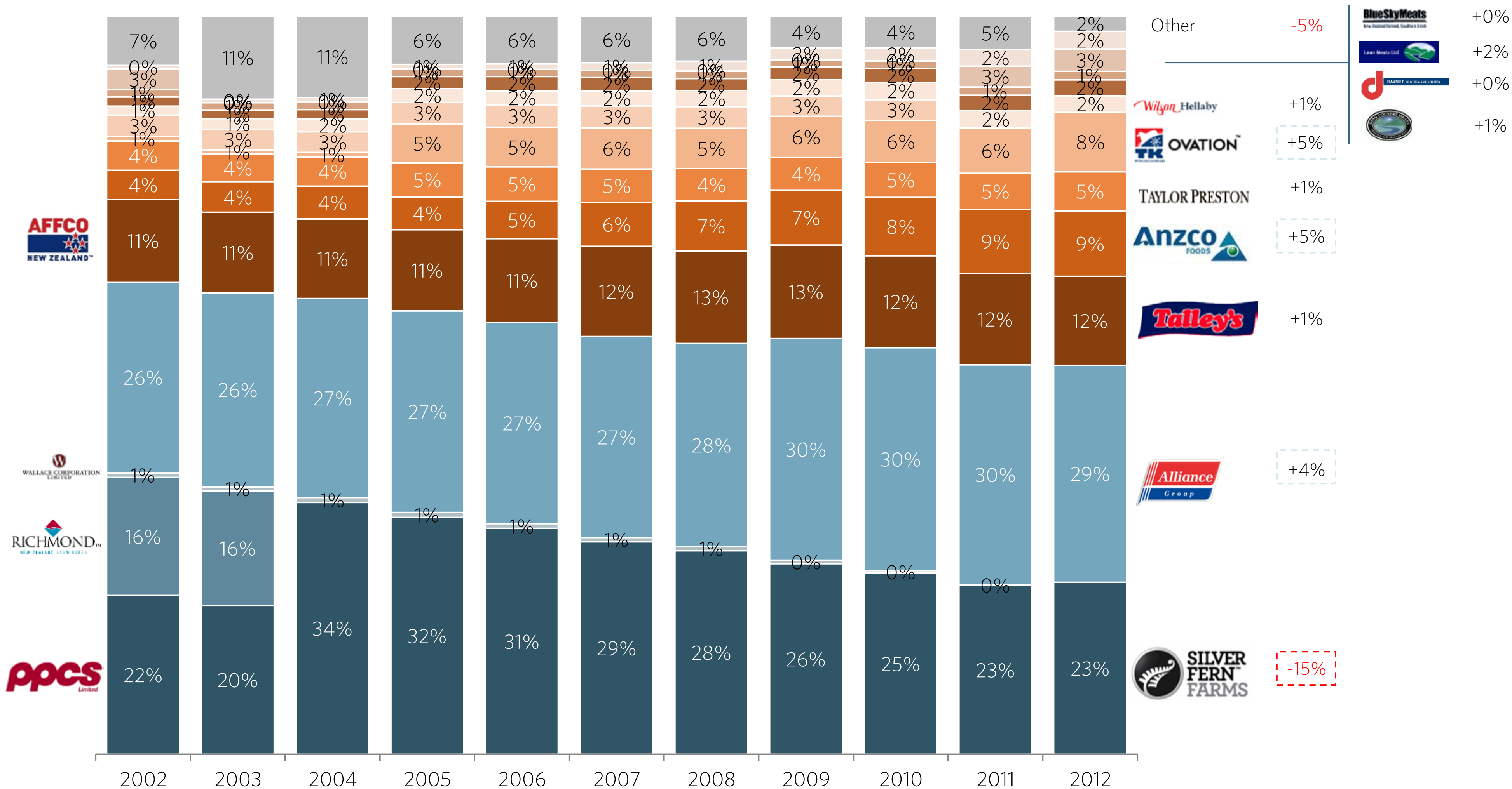
Note: The NZ Meat Board allocates access to quota market on the basis of production history for the three prior seasons; the data here can therefore be seen as a moving average for the three previous years;
Source: New Zealand Meat Board EU Sheepmeat and Goatmeat TRQ Allocation data (http://www.nzmeatboard.org/main.cfm?id=30); Coriolis analysis

PRODUCTION SHARE BY FIRM - LAMB

PPCS/Silver Fern Farms appears to have halted long term lamb share loss, though Alliance and the smaller firms have driven share gains over the past decade

NEW ZEALAND LAMB PRODUCTION MARKET SHARE

% of production [see notes]; 2002-2012



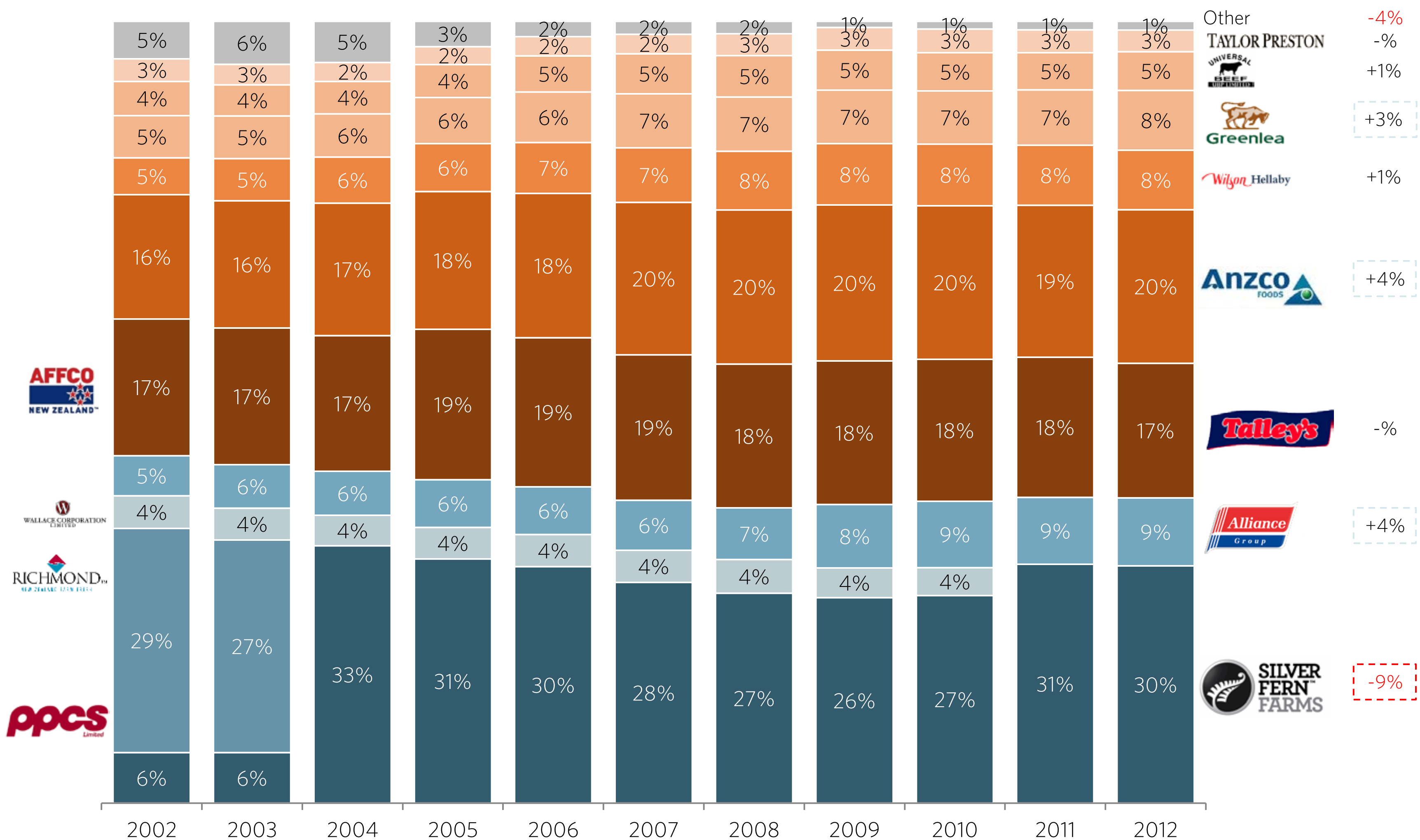
Note: The NZ Meat Board allocates access to quota market on the basis of production history for the three prior seasons; the data here can therefore be seen as a moving average for the three previous years;
Source: New Zealand Meat Board EU Sheepmeat and Goatmeat TRQ Allocation data (http://www.nzmeatboard.org/main.cfm?id=30); Coriolis analysis

PRODUCTION SHARE BY FIRM - BEEF

ANZCO, Alliance and Greenlea have shown the best growth in beef over the past decade

NEW ZEALAND BEEF PRODUCTION MARKET SHARE

% of production [see notes]; 2002-2012



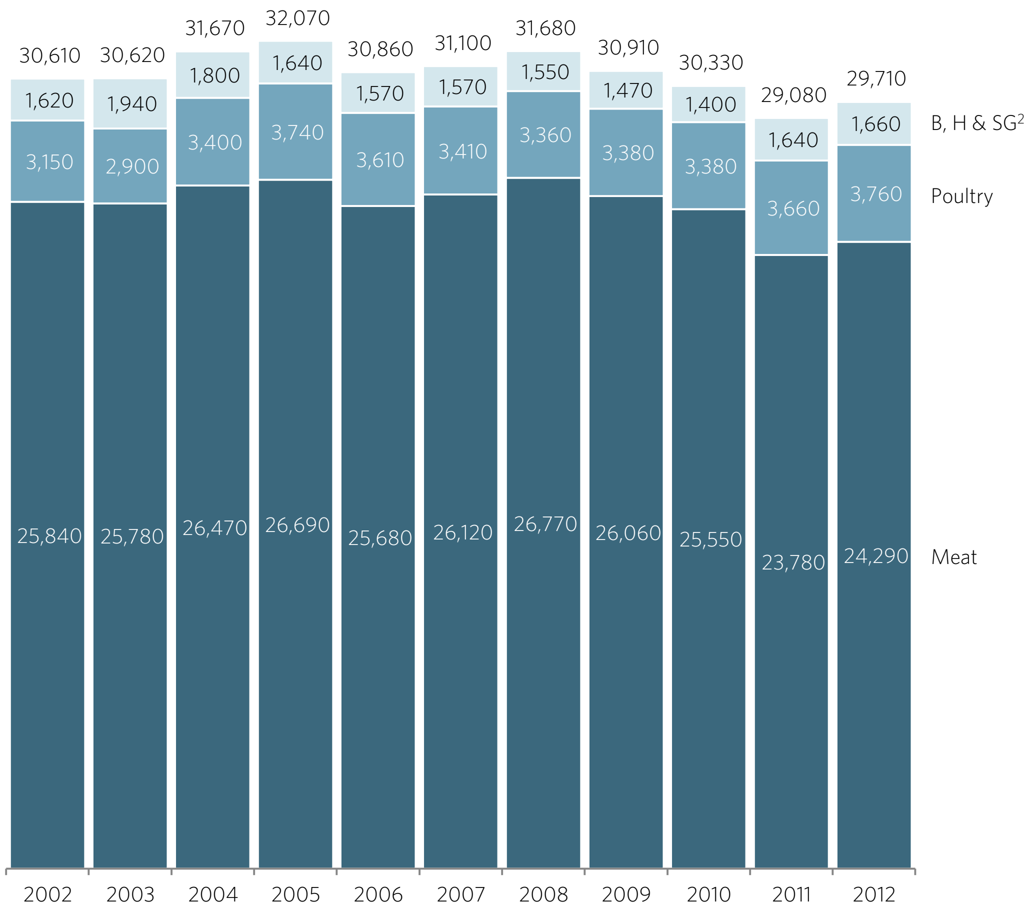
Note: The NZ Meat Board allocates access to quota market on the basis of production history for the three prior seasons; the data here can therefore be seen as a moving average for the three previous years;
Source: New Zealand Meat Board EU Sheepmeat and Goatmeat TRQ Allocation data (http://www.nzmeatboard.org/main.cfm?id=30); Coriolis analysis

EMPLOYMENT BY SECTOR

Industry employment grew in 2012

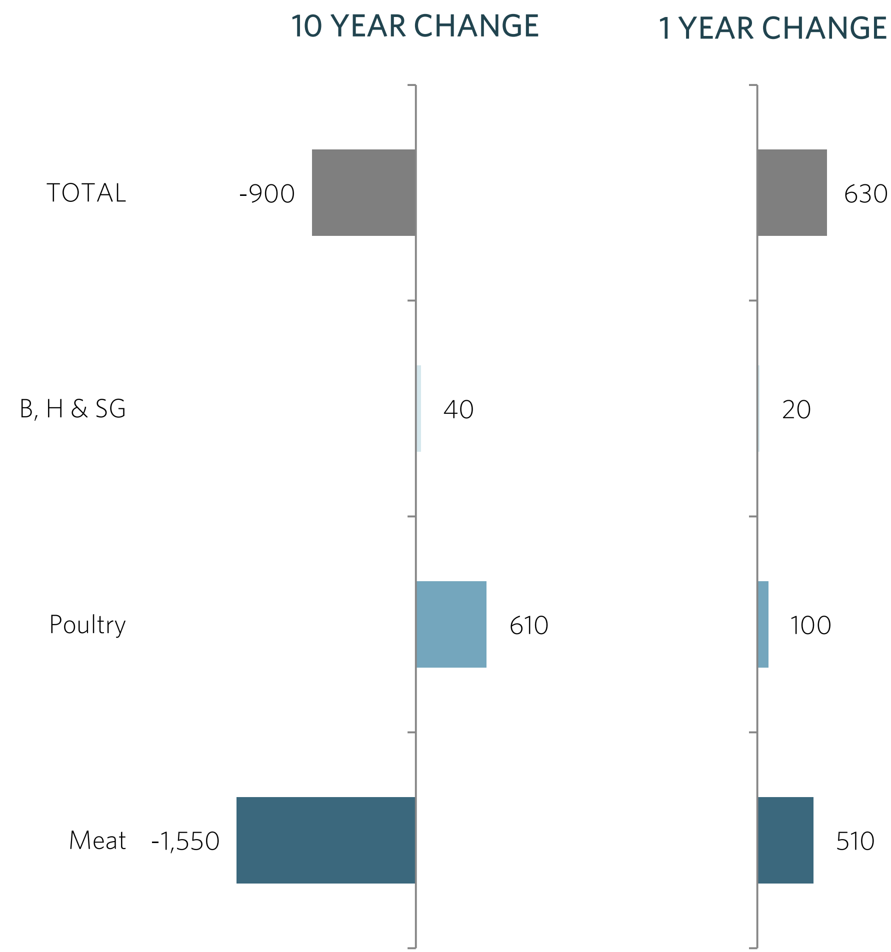
TOTAL EMPLOYMENT BY MEAT PROCESSING ENTERPRISES

Headcount; as of Feb; 2002-2012



CHANGE IN MEAT PROCESSING EMPLOYMENT

Absolute change; periods as given



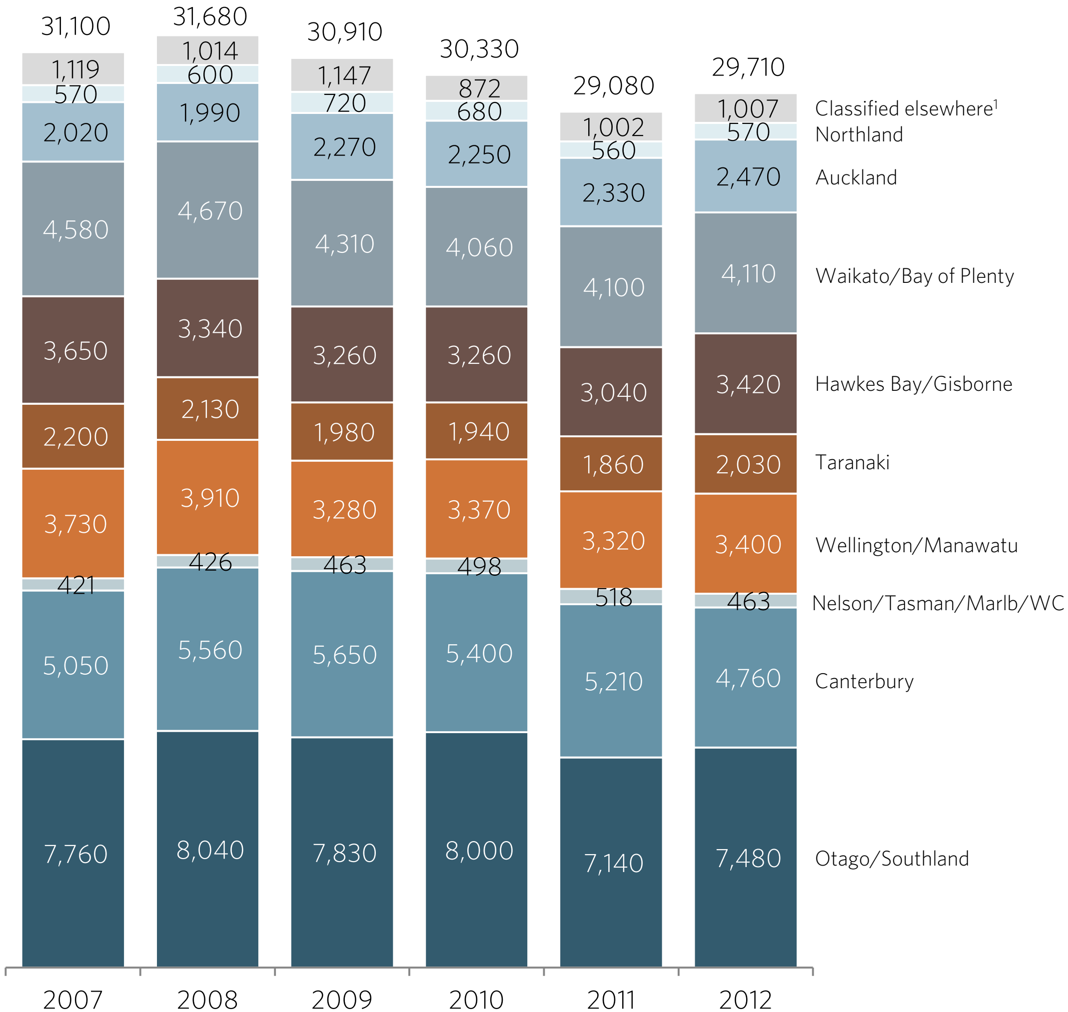
Note: 2012 data latest available as of October 2013; 1. Defined as C113-100 Milk & Cream processing and c113-300 Other Meat processing; Source: Statistics NZ business demographics database; Coriolis analysis

EMPLOYMENT BY REGION

Meat processing employment is shrinking medium-term across most regions; Auckland is the key standout for growth

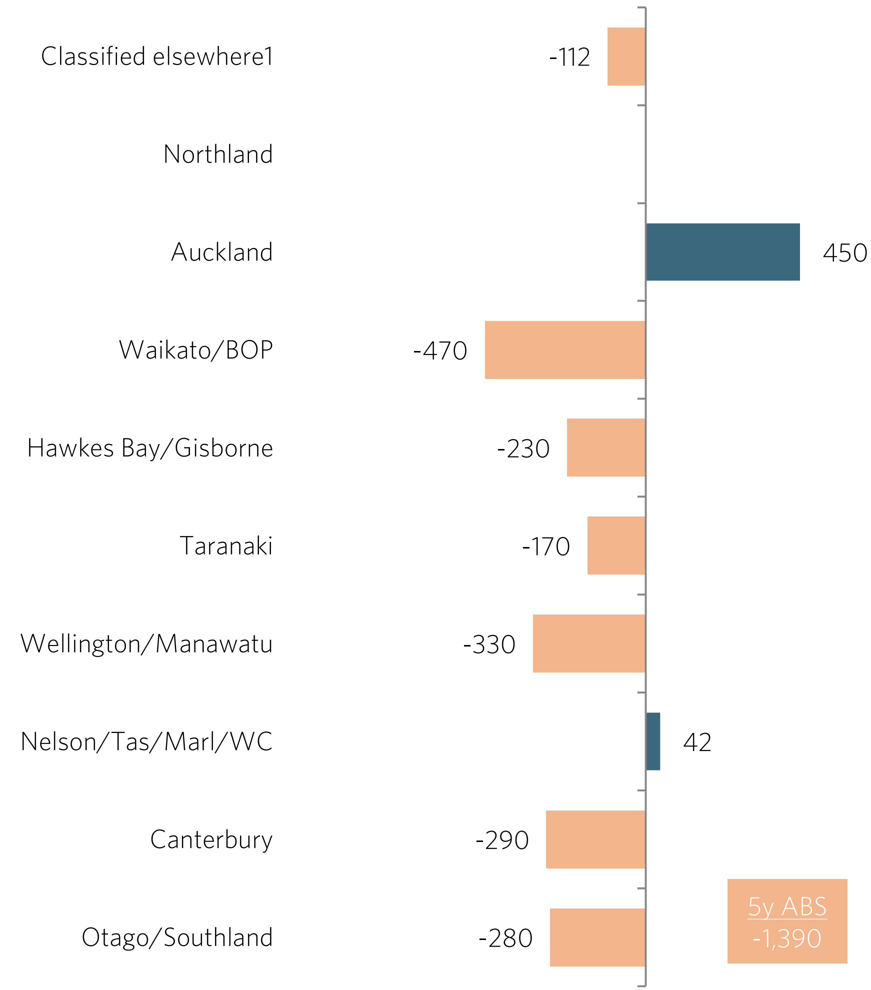
MEAT PROCESSING EMPLOYMENT BY REGION

Headcount; as of Feb; 2007-2012



5 YEAR CHANGE IN EMPLOYMENT BY REGION

Absolute change; 2007-2012



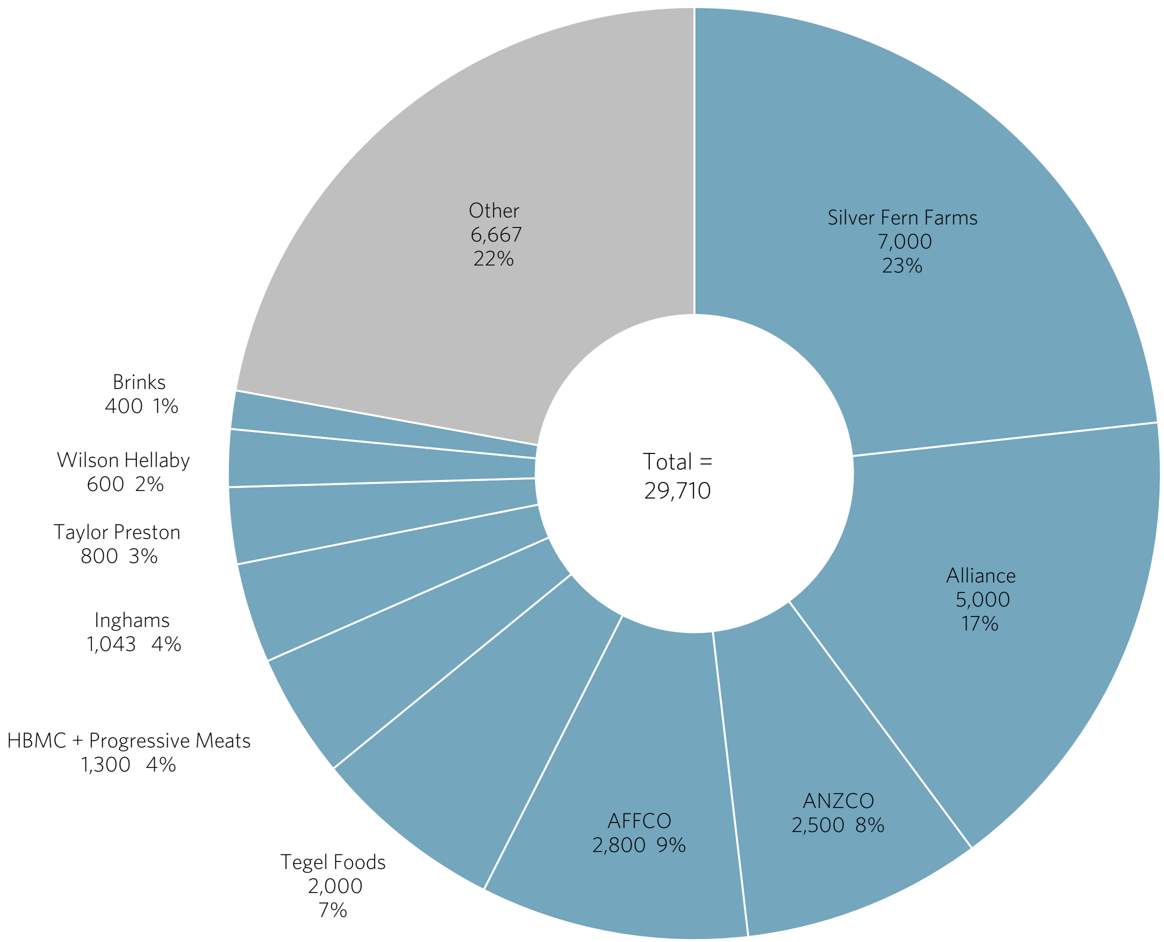
WC = West Coast 1. Data is geographic level; classified elsewhere would include non-"meat processing" activities (e.g. wholesaling); Source:

EMPLOYMENT BY FIRM

The top 10 meat processing firms account for around 80% of industry employment

MEAT PROCESSING EMPLOYMENT BY KEY FIRM

Headcount; 2012/13



Source: SNZ business demographics; various firm websites; published articles; Coriolis interviews & analysis

iFAB TOP SEVEN NEW MEAT INVESTMENTS

About $130m in identified new investment in the New Zealand Meat industry has been announced since 2011

IDENTIFIED MAJOR INVESTMENTS IN NEW PLANT/EQUIPMENT

As of October 2013

Rank	Announced	Investment	Firm	Facility	Location	Opened/planned
1	Dec 2010	$67m	Silver Fern Farms	Te Aroha re-build after fire (380 staff)	Te Aroha	Dec 2012
2	October 2012	$20m	Tegel	New value added chicken production line (300 new jobs), 350tpw processed for export market	Henderson, Auckland	Oct 2012
3	2011	$15m	Alliance Group	New rendering facility at Lorneville	Lorneville	2012
4	2011	$15m	Alliance Group	Plant upgrades to Mataura beef plant	Southland	2012
5	Jan 2012	$8.6m	Alliance Group	New venison plant added to sheep and lamb facility (420/day, 55 new jobs)	Timaru	Nov 2012
6	2012	$8.5m	Silver Fern Farms	FarmIQ systems	National	
7	2013	N/A	Tegel	New broiler hatchery	Christchurch, Canterbury	2013

Source: Coriolis from various published articles, annual reports & interviews

iFAB TOP TEN MEAT ACQUISITIONS

Major acquisitions in the meat processing sector in the past few years have included the #1 (Tegel) and #2 (Inghams) chicken processors changing hands and Talley's buying AFFCO

IDENTIFIED MAJOR ACQUISITIONS INVOLVING NEW ZEALAND MEAT FIRMS

As of October 2013

Rank	Acquirer	Target	Price	Date	Details
1	Texas Pacific Group /TPG Capital	Inghams Enterprises (AU & NZ)	A$850m (AU+NZ)	March 2013	TPG acquires AU/NZ chicken company from founder Bob Ingham; includes #2 New Zealand chicken company (~13% of group turnover); implied valuation for NZ is NZ$120-130m (13% of A$850)
2	Affinity Equity/Primo Smallgoods AU	Tegel Foods (Pacific Equity Partners)	~$600m	April 2011	Fully integrated breeding, hatching, processing, marketing firm with 52% of NZ chicken market
3	Talleys Group	AFFCO Holdings	~$400m (37c/share)	August 2010	Purchased Toocooya Nom. 23% shares for $43.86m giving them 76% of AFFCO. Purchased remaining shares. Valuing business at ~$870m.
4	Caniwi Capital (NZ)	Tegel (3 properties)	$60m	July 2013	Purchased and leased back to Tegel three of Tegels land and buildings (chicken processing plants).
5	Affinity Equity/Primo Smallgoods AU	Premier Beehive	N/A	May 2012	#3 bacon, ham and smallgoods firm in NZ from Sentinel
6	Veritas Investments	Mad Butcher	$40m	Jan 2013	Includes the 36 franchise meat retailing business (revenue $150)
7	Silver Fern Farms	Wallace Meat plant Frasertown sheep plant	$14.5m (incl. differed)	April 2011 Sept 2011	Purchased Waitoa plant; processes beef and bobby calves; later purchased sheep plant in Hawkes Bay with 30 staff; can process 3,750 sheep/week
8	Progressive Meats	Cig Calon Cymru	N/A	2012	Welsh beef processing plant, to increase lamb supply to British market
9	Patty Tzu-chou Lin	Universal Beef/UBP	N/A	Feb 2011	Family ownership of firm restructured; Wellroc/Mystic Springs to Patty Lin personally (now a NZ resident)
10	Santa Rosa	Ex Quiz Eat	N/A	Aug 2013	Value added chicken processor in Auckland (employing 20 people)

Source: Coriolis from various published articles, annual reports & interviews

FOREIGN INVESTORS

The New Zealand meat industry has limited foreign investment currently, primarily the two largest chicken firms and ANZCO

FOREIGN INVESTMENT IN NEW ZEALAND MEAT FIRMS

As of October 2013

Date	Investor	Origin	Investment	Investor description
Mar 2013	Inghams Australia	United States (via Australia)	Inghams Enterprises NZ	Private; private equity firm based in the United States
May 2012	Affinity Equity Partners	Hong Kong	Premier Beehive	Private: private equity firm based in Asia
May 2011	Affinity Equity Partners	Hong Kong	Tegel Foods (Ross Group) ~$600m	Private: private equity firm based in Asia
1980s	Itoham Foods Inc	Japan	48% of ANZCO	Listed: Japans #2 BH&SG company with annual sales of US$10b
1980s	Nippon Suisan Kaisha	Japan	25% of ANZCO	Listed: Japans largest seafood company with annual sales of US$10b

Source: Coriolis from various published articles, annual reports & interviews

PROFILES

Meat

TOP 11 MEAT FIRM PROFILES

1	2	3	4
SILVER FERN FARMS	**ALLIANCE GROUP**	**ANZCO FOODS**	**AFFCO**
			
Keith Cooper Chief Executive	**Grant Cuff** Chief Executive	**Mark Clarkson** Managing Director	**Hamish Simson** Chief Executive Officer
DESCRIPTION: Leading processor, marketer and exporter of lamb, beef, venison to 60 countries, 16,000 farmers over 22 processing sites	DESCRIPTION: Processor of lamb, sheep, beef and venison; 5,000 farmers send to 8 plants	DESCRIPTION: Vertically integrated farming and manufacturing facilities; leading exporter of beef and sheep meat over 11 sites	DESCRIPTION: Processor of meat products, and hides from 9 locations to over 70 countries
KEY PRODUCTS: Meat (Lamb, beef, venison), wool, pelts, byproducts and co-products	KEY PRODUCTS: Lamb, sheep, beef and venison meat cuts, byproducts and co-products	KEY PRODUCTS: Beef, lamb, sheep meat, healthcare solutions, offals and co-products, prepared and gourmet foods	KEY PRODUCTS: Lamb, sheep, beef meat, pork, goat cuts, byproducts and co-products
OWNERSHIP: **NZ;** Co-operative (16,000 farmers)	OWNERSHIP: **NZ;** Co-operative (5,000 farmers)	OWNERSHIP: NZ/Japan (Itoham 48%; Nippon 25.1%; Harrison 12.6%; JANZ 11.7%; others)	OWNERSHIP: NZ; Private (100%Talley's Group)
COMPANY NUMBER: **149713**	COMPANY NUMBER: 154786	COMPANY NUMBER: 656378	COMPANY NUMBER: 3342490
ADDRESS: 218 George Street, Dunedin 9016 , New Zealand	ADDRESS: 51 Don Street, Invercargill	ADDRESS: Unit 2, 49 Sir William Pickering Drive, Harewood, Christchurch	ADDRESS: 6128 Great South Road, Horotiu, Hamilton, 3200 , New Zealand
PHONE: +64 3 477 3980	PHONE: +64 3 214 2700	PHONE: +64 3 358 2200	PHONE: +64 7 829 2888
WEBSITE: www.silverfernfarms.com	WEBSITE: www. alliance.co.nz	WEBSITE: www.anzcofoods.com; www.cmp.co.nz; www.riverlands.co.nz	WEBSITE: www.affco.co.nz; www.talleys.co.nz
YEAR FORMED: 1948	YEAR FORMED: 1948	YEAR FORMED: 1984/1995	YEAR FORMED: 1904
STAFF EMPLOYED: 7,000 (peak)	STAFF EMPLOYED: 5,000	STAFF EMPLOYED: 2,500	STAFF EMPLOYED: 2,800
REVENUE: $2,035 (FY12)	REVENUE: $1,371 (FY12)	REVENUE: $1,212 (FY12)	REVENUE: $1,100*
COMPANY HIGHLIGHTS: Part of FarmIQ $150m joint investment ; Rebuilt flagship Te Aroha plant after fire; x-ray machines to be added to all plants to measure cuts and yields	COMPANY HIGHLIGHTS: $57m operating loss for 2012, first loss in 20 years. Closed Sockburn (CHCH) plant in 2012, cease sheep operations at Mataura; Using "Pure South" as umbrella brand for beef, lamb and venison; Secured deal with Marks and Spencer's (UK)	COMPANY HIGHLIGHTS: pre-tax loss of $25.6m in 2012; Partnering with Waitrose (UK); Developing pharmaceutical, nutraceutical products for healthcare sector	COMPANY HIGHLIGHTS: 2012 marred by industrial disputes between meatworkers' union and AFFCO

* Coriolis estimate Source: annual reports, company websites, company data, NZ Companies Office, interviews, Coriolis estimates

5	6	7	8
HAWKES BAY MEAT CO. + PROGRESSIVE MEATS	**TEGEL FOODS**	**INGHAMS ENTERPRISES NZ**	**WILSON HELLABY**
			
Craig Hickson, Owner, Director	**John Lea** Chief Executive Officer	**Adrian Revell** Plant Manager	**Fred Hellaby** Managing Director
DESCRIPTION: Multi business processors and marketers of lamb (some venison) over four locations in the the North Island; HBMC owns Ovation New Zealand 100%, TeKuiti Meats, 100% Lamb Packers Fielding 100%, Pasture Petfoods (37%), Progressive Leathers; Progressive Meats (toll processor)	**DESCRIPTION**: Leading fully integrated poultry processor in New Zealand; 3 plants manufacturing 1,200 product lines, processing 40m broilers annually	**DESCRIPTION**: Fully owned subsidiary of Inghams Australia, #2 Chicken and turkey processor in NZ, vertically integrated in NZ; includes 3 mills	**DESCRIPTION**: Processing and further manufacturing of meat products at two plants in Auckland; rendering business and significant presence in domestic branded meat market
KEY PRODUCTS: Lamb cuts co-products , ingredients, mechanically deboned meat (MDM), Petfood ingredients	**KEY PRODUCTS**: Chicken (fresh, frozen, smoked, meals)	**KEY PRODUCTS**: Chicken meat, horse feed	**KEY PRODUCTS**: Processed beef, sheep, pig and goat frozen and chilled, processed meats and offal
OWNERSHIP: Private (Hickson (majority) and others)	**OWNERSHIP**: Private: Affinity Equity Partners (Sing)	**OWNERSHIP**: **Private Equity Ingham Enterprise AU (TPG Private Equity)**	**OWNERSHIP**: Private: (Syminton, Hellaby)
COMPANY NUMBER: 1894570/252512/600768/ 36215	**COMPANY NUMBER**: 99660	**COMPANY NUMBER**: 464829	**COMPANY NUMBER**: 900980
ADDRESS: 10 Cook Street, Waipukurau 4242, New Zealand	**ADDRESS**: 3rd Floor, Tower B, 100 Carlton Gore Road, Newmarket, Auckland	**ADDRESS**: 624 Waihekau Road, R D 1, Waitoa, 3380 , New Zealand	**ADDRESS**: 131 Portage Road, Otahuhu, Auckland
PHONE: +64 7 878 6045 +64 6 873 9090	**PHONE**: +64 9 977 9000	**PHONE**: +64 7 884 6549	**PHONE**: +64 9 276 3800
WEBSITE: www.tkmeats.co.nz; www.ovation.co.nz	**WEBSITE**: www.tegel.co.nz	**WEBSITE**: www.inghams.co.nz	**WEBSITE**: www.wilsonhellaby.co.nz
YEAR FORMED: 1980	**YEAR FORMED**: 1875/1966	**YEAR FORMED**: 1990	**YEAR FORMED**: 1998
STAFF EMPLOYED: 1,300	**STAFF EMPLOYED**: 2,000	**STAFF EMPLOYED**: 1,043	**STAFF EMPLOYED**: 600
REVENUE: ~$500m	**REVENUE**: $471m (FY12)	**REVENUE**: $336m (FY12)	**REVENUE**: +$300m
COMPANY HIGHLIGHTS: HBMC acquires 100% share in TeKuiti Meats in 2012; Acquire Welsh Meat processing company in 2012	**COMPANY HIGHLIGHTS**: Opened new value added production line to grow export markets; built new hatchery in Christchurch, selling and leasing back its 8 industrial properties over 2013 to reinvest capital in export operations. Achieved some of the lowest global FCR^ (1.4 to 1.6). Profit of $6m in FY2012	**COMPANY HIGHLIGHTS**: Profit of $30m in 2012; Transition to "Ross 308" breed in NZ	**COMPANY HIGHLIGHTS**:

^ FCR Feed Conversion Ratio *Coriolis estimate; Source: annual reports, company websites, company data, NZ Companies Office, interviews, Coriolis estimates

TOP 10 MEAT FIRM PROFILES

9	10
TAYLOR PRESTON TAYLOR PRESTON Simon Gatenby Chief Executive Officer	**VAN DEN BRINK POULTRY** Brink's **Karl van den Brink** Managing Director
DESCRIPTION: Multispecies meat processors processing 1.5m animals annually, based in Wellington, exporting to 60 countries	**DESCRIPTION**: Vertically integrated poultry processor in New Zealand (#3) across three plants
KEY PRODUCTS: Sheep and beef meat cuts	**KEY PRODUCTS**: Chicken products primarily for domestic retail and foodservice
OWNERSHIP: Private (Taylor, Preston & Grace)	**OWNERSHIP**: Private: (Van Den Brink)
COMPANY NUMBER: 1906031	**COMPANY NUMBER**: 66969 (others)
ADDRESS: Centennial Highway, Ngauranga Gorge, Wellington	**ADDRESS**: 652 Great South Road, Manukau, Auckland
PHONE: +64 4 472 7987	**PHONE**: +64 9 262 0903
WEBSITE: www.taylorpreston.co.nz	**WEBSITE**: www.brinks.co.nz
YEAR FORMED: 1991	**YEAR FORMED**: 1964
STAFF EMPLOYED: 800	**STAFF EMPLOYED**: ~400
REVENUE: ~$260m	**REVENUE**: $220*
COMPANY HIGHLIGHTS:	**COMPANY HIGHLIGHTS**: Ownership of multiple companies with (Taylor and Van Den Brink); Tegel looking to acquire in 2009 but refused by Commerce Commission.

* Coriolis estimate; Source: annual reports, company websites, company data, NZ Companies Office, interviews, Coriolis estimates

OTHER MEAT FIRM PROFILES

Company	MD/CEO	Business description	Ownership Company #	Formed	Revenue ($m)	Staff (head)	Address	Website
Greenlea Premier Meats	Tony Egan Managing Director	Meat processing over 2 plants, Hamilton and Morrinsville	558256 (Private, Egan)	1992	$220-240m*	500	Greenlea Lane, Hamilton, Waikato 64 7 957 8125	www.greenlea.co.nz/
Hellers Ltd	Nick Harris Managing Director	Bacon, ham and smallgoods manufacturer	386096 PE (Rangatira, Heller, Harris)	1988	$150-170m*	500	67 Main North Road, Kaiapoi , Canterbury 64 3 375 5017	www.hellers.co.nz; www.rangatira.co.nz 2 plants (Kaiapoi, Alkd)
Blue Sky Meats	Ricky Larson Managing Director	Processor of lamb, veal and goat based in the South Island , includes Horizon	315886 Public (Lowe 17%)	1986	$85m (10)	150-300	Morton Mains, RD 1, Invercargill, Southland64 64 3 231 3421	www.bluesky.co.nz
Fresh Pork NZ	Lyndon Glass CEO	Specialist fresh pork meat wholesaler	264663 Private (Glass, Tothill)	1985	$73m*	180	Unit 6, 92 B Russley Road, Christchurch 64 3 336 0240	www.freshporkfarmers.co.nz
Premier Beehive	John Kippenberger Managing Director	Bacon and ham manufacturer	3820621 Private Equity (Affinity; Sing)	1991	$70m*	180	Carterton, Wairarapa 64 6 379 6701	www.premierbeehive.co.nz
Lean Meats Ltd	Richard Thorp CEO	Lamb processors and exporters; USA further processing	432842 Private (Atkins, Hickson, others)	1989	$120m*	172	211 Market Street South Hasting 64 6 871 5407	www.leanmeats.co.nz
Universal Beef Packers	Roger Stewart Managing Director	Beef processors	945877 Private	1999	$135m*	160	Waitete Road, Te Kuiti, Waikato 64 7 878 8926	-
Huttons (GF Meat)	Peter Reidie Managing Director (NZ)	Bacon, ham and smallgoods manufacturer	1715832 AU listed Goodman Fielder	1882/ 2005	~$150m -$160*	150 (man)	2/8 Nelson St, Auckland 64 9 301 6000	www.goodmanfielder.com.au
Crusader Meats	John Ramsey Owner	Processor of lamb, venison & goat	711318 Private (Ramsey)	1967	$90-$100*	140	State Highway 30, Benneydale, Rd 7 64 7 878 7077	www.crusadermeats.co.nz
Prime Range	Tony Forde CEO	Meat processors	549378 Private (Forde, Tulloch)	1992	$30-40m*	100-120	Sussex Street, Waikiwi, Invercargill, 64 3 215 9079	www.primerange.co.nz
A Verkerk Ltd	Terry Pearson CEO	Producers of continental smallgoods and meat products	125112 Private (Verkerks)	1957	$70-80m	100	94 Vagues Road, Papanui, Christchurch 8052 64 3 375 0560	www.verkerks.co.nz.
Fresh Meats NZ / Integrated Foods	Alistair Martin Manager	Vertically integrated Sheep and pig processor; division of Mangatu	453387 Maori Corp (Mangatu)	1989	$23m (11)	90	266 Chiders Road, Gisborne, NZ 64 6 835 9099	www.freshmeatsnz.co.nz IF + 40 staff)

* Estimate based on number of employees and type of business activity Source: annual reports, company websites, company data, NZ Companies Office, interviews, Coriolis estimates

OTHER MEAT FIRM PROFILES

Company	MD/CEO	Business description	Ownership Company #	Formed	Revenue ($m)	Staff (head)	Address	Website
Turks	Ron Turk Managing Director	Poultry processor	20802 Private (Turks)	1968	$80m* (11)	60-80	108 Purcell St, Foxton 64 6 363 0013	www.turkspoultry.com
Santa Rosa	Michael Crooks Managing Director	Poultry processor	638685 Private (Dunn…)	1950/ 1994	$60m*	85	Two Chain Road, Burnham, Christchurch 64 3 347 6727	www.santarosa.co.nz
Cabernet Foods/ Kintyre Meats	Lyndon Everton Managing Director	Meat wholesalers and processor	1205992 Private (Everton, Richards)	2002	$15-20*	50	530 Gladstone Road RD2, Carterton 64 6 372 7882	www.cabernet.co.nz
Leonards Superior Smallgoods	Doug Leonard Managing Director	Bacon and ham manufacturer	411722 Private (Fathers Holdings, Leonard, Kornman)	1988	~$15m	50	Block 5, 22 Harris Road, East Tamaki, Auckland 64 9 274 1254	www.leonards.co.nz
Hobson's Choice Meat and Bacon Co	Graham Curd Director	Bacon, ham and smallgoods manufacturer	806615 Private (Curd, Bixley)	1996	$10-15m*	40-45	12 Homestead Dr, Mt Wellington, Auckland 64 9 570 1912	www.hobsonschoice.co.nz
First Light Foods	Gerard Hickey Managing Director	Venison, Wagyu, meat processors and exporters	1549391 Private (Hickey, Scannell Ross Evans ..)	2004	$70-80m*	30	211 Market Street South, Hastings 64 6 878 2712	www.firstlightfoods.co.nz
Franklin Foods	Paul Brown Managing Director	Processed meat under Andrew Corbett, Top Notch brands	580830 Private (Brown, Kelly..)	1993	$5-10m	30	13 Adams Dr Pukekohe 2120, Auckland 64 9 238 6315	www.franklinfoods.co.nz
Colonial Bacon & Ham Co	Robert Corbett Managing Director	Bacon and ham manufacturer	909303 Private (Corbett)	1998	$20m*	30	109 Cavendish Drive, Manukau City 64 9 278 3420	www.colonialbacon.co.nz
Davmet	Ian McGarvie Director	Lamb broker/wholesaler	404292 Private (Francis, McGarvie)	1988	$15-25m*	8	74 Station Street PO Box 1149 Napier 64 6 835 8288	www.davmet.co.nz/

* Estimate based on number of employees and type of business activity; Source: annual reports, company websites, company data, NZ Companies Office, interviews, Coriolis estimates

MARKETS

Meat

EXPORT VALUE BY REGION

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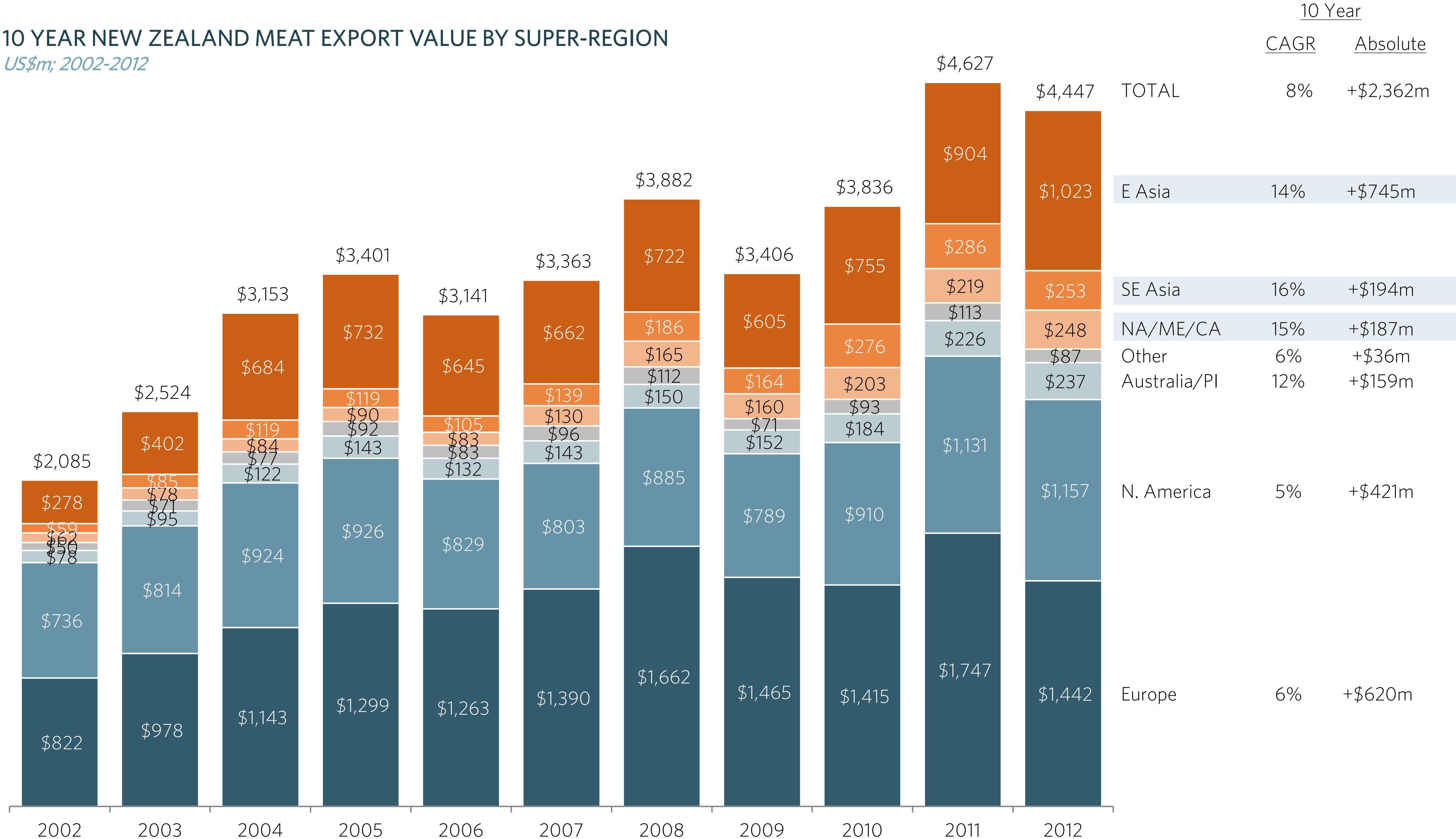
New Zealand meat exports have achieved growth driven by developing markets, particularly in Asia

10 YEAR NEW ZEALAND MEAT EXPORT VALUE BY SUPER-REGION

US$m; 2002-2012



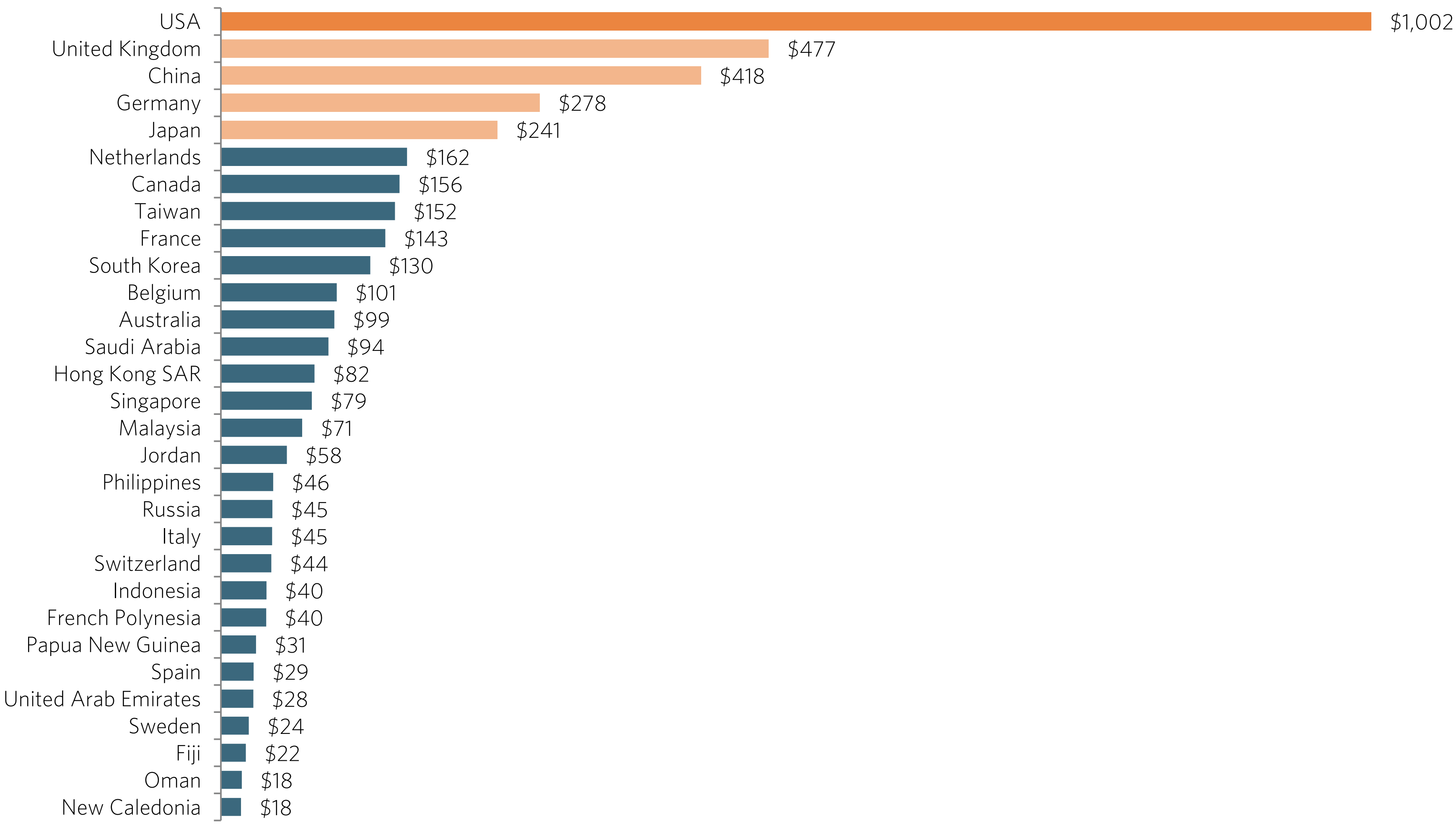
Source: UN Comtrade database; Coriolis analysis

EXPORT DOLLARS

The USA continues to be the number one export market for New Zealand meat, followed by the UK, China, Germany and Japan

TOP 30 MEAT MARKETS BY EXPORT VALUE

US$m; 2012



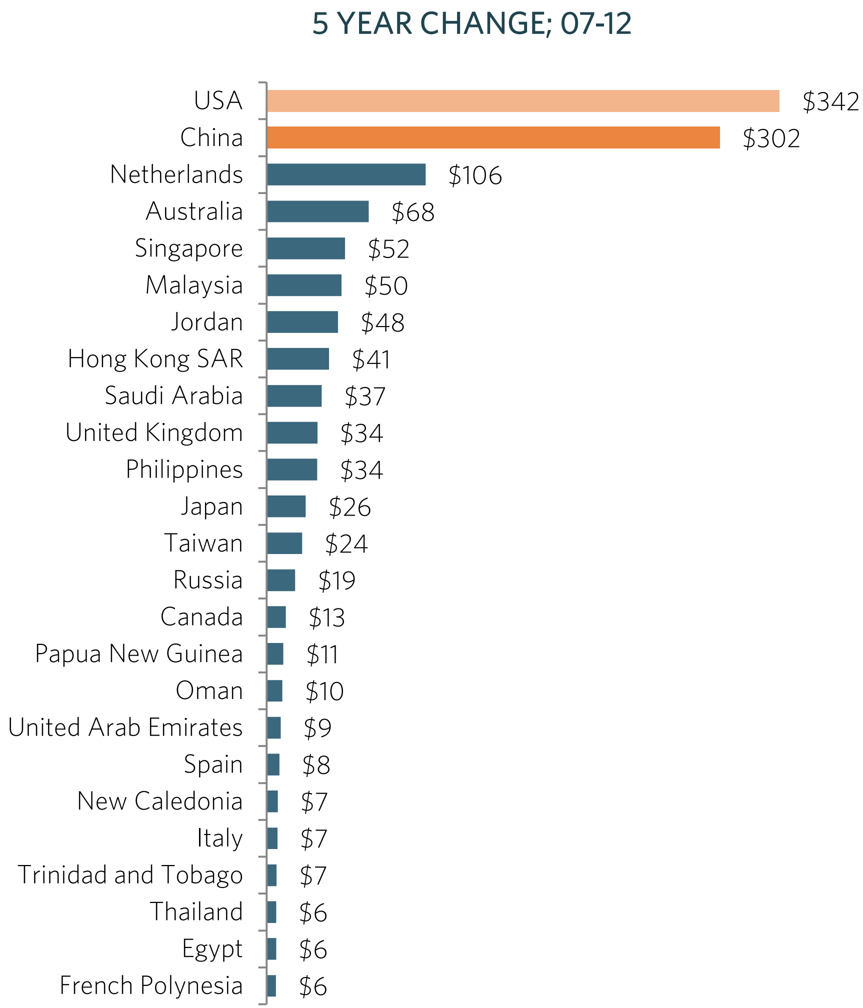
Source: UN Comtrade database; Coriolis analysis

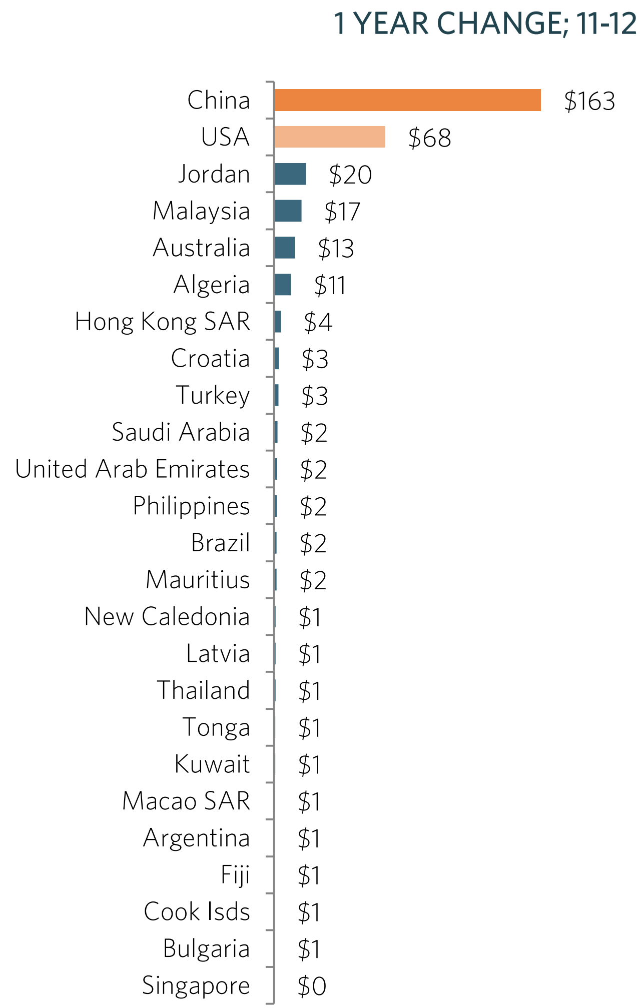
EXPORT DOLLAR GROWTH

China & the USA driving dollar value growth

TOP 25 MEAT MARKETS BY CHANGE IN EXPORT VALUE

US$m





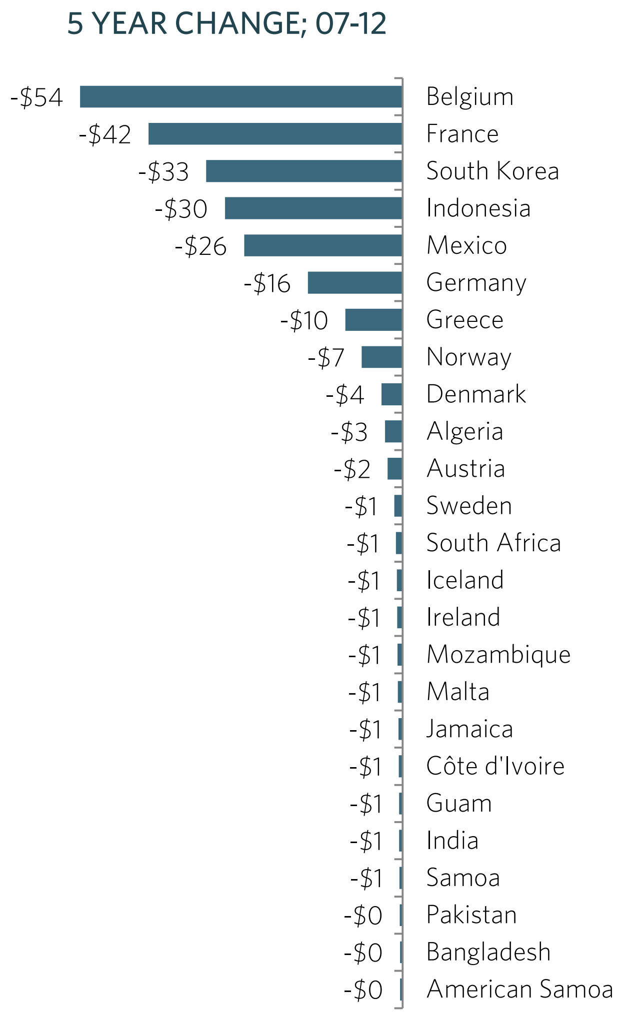
Source: UN Comtrade database; Coriolis analysis

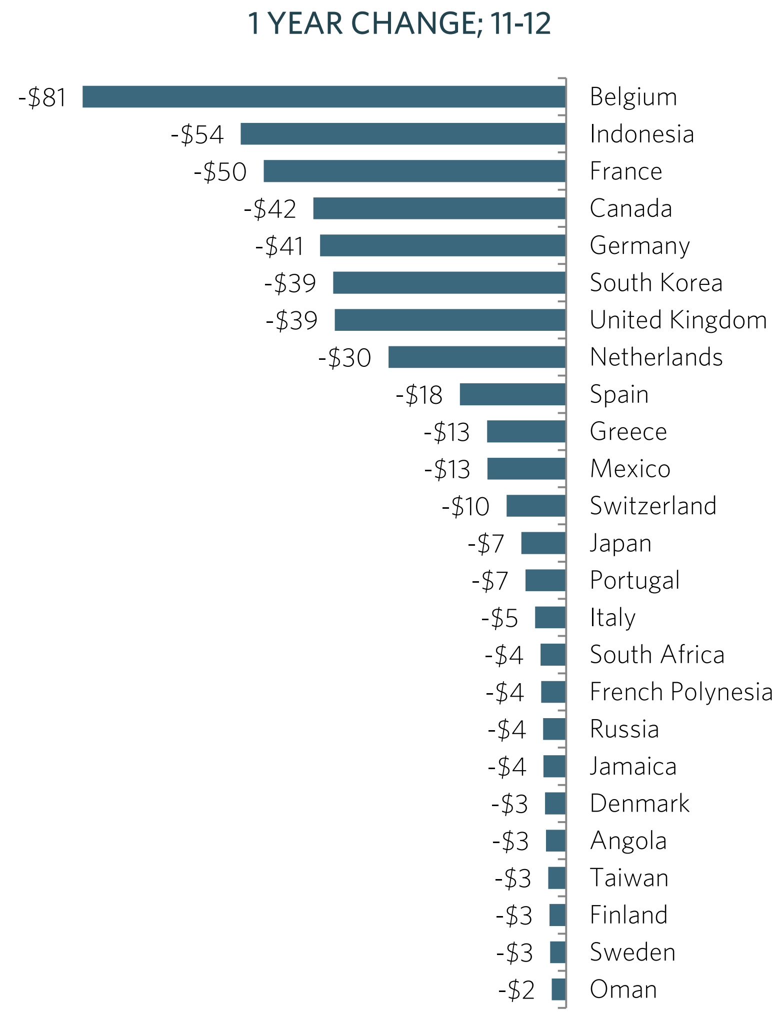
EXPORT DOLLAR DECLINE

European countries, Indonesia & South Korea leading declining markets by total value

BOTTOM 25 MEAT MARKETS BY CHANGE IN EXPORT VALUE

US$m





Source: UN Comtrade database; Coriolis analysis

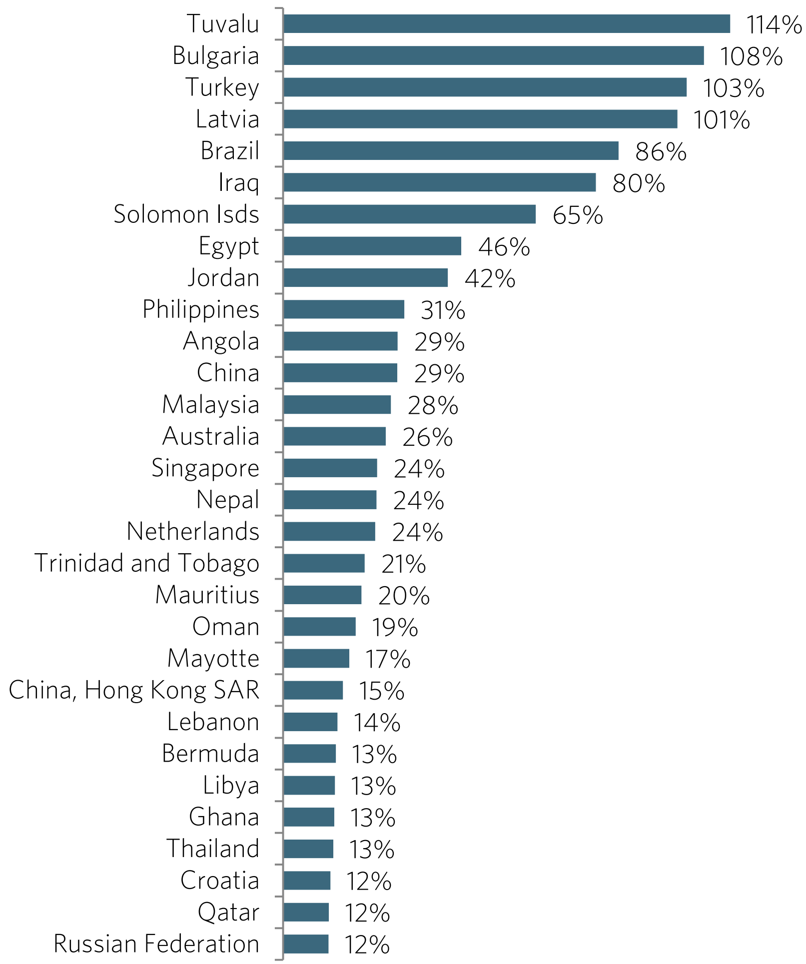
PERCENT GROWTH

Strong growth rates coming out of Turkey, smaller Pacific Islands and a wide range of developing countries

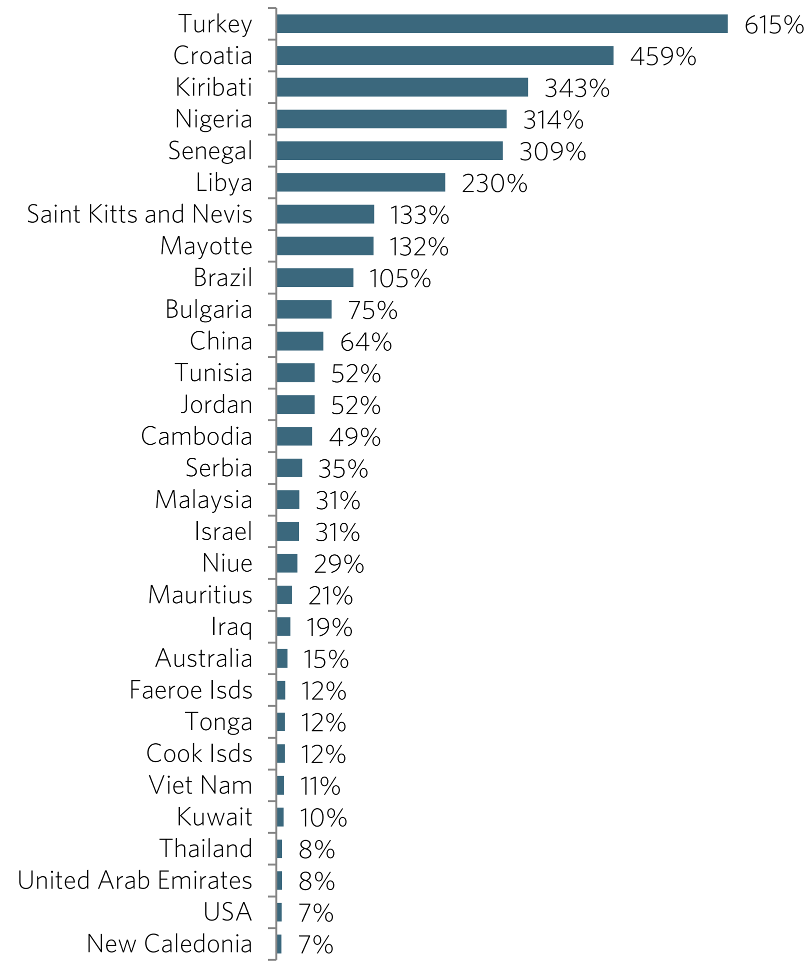
TOP 30 MEAT MARKETS BY CAGR PERCENT CHANGE IN EXPORT VALUE

US$m; %

5 YEAR CAGR; 07-12



1 YEAR CHANGE; 11-12



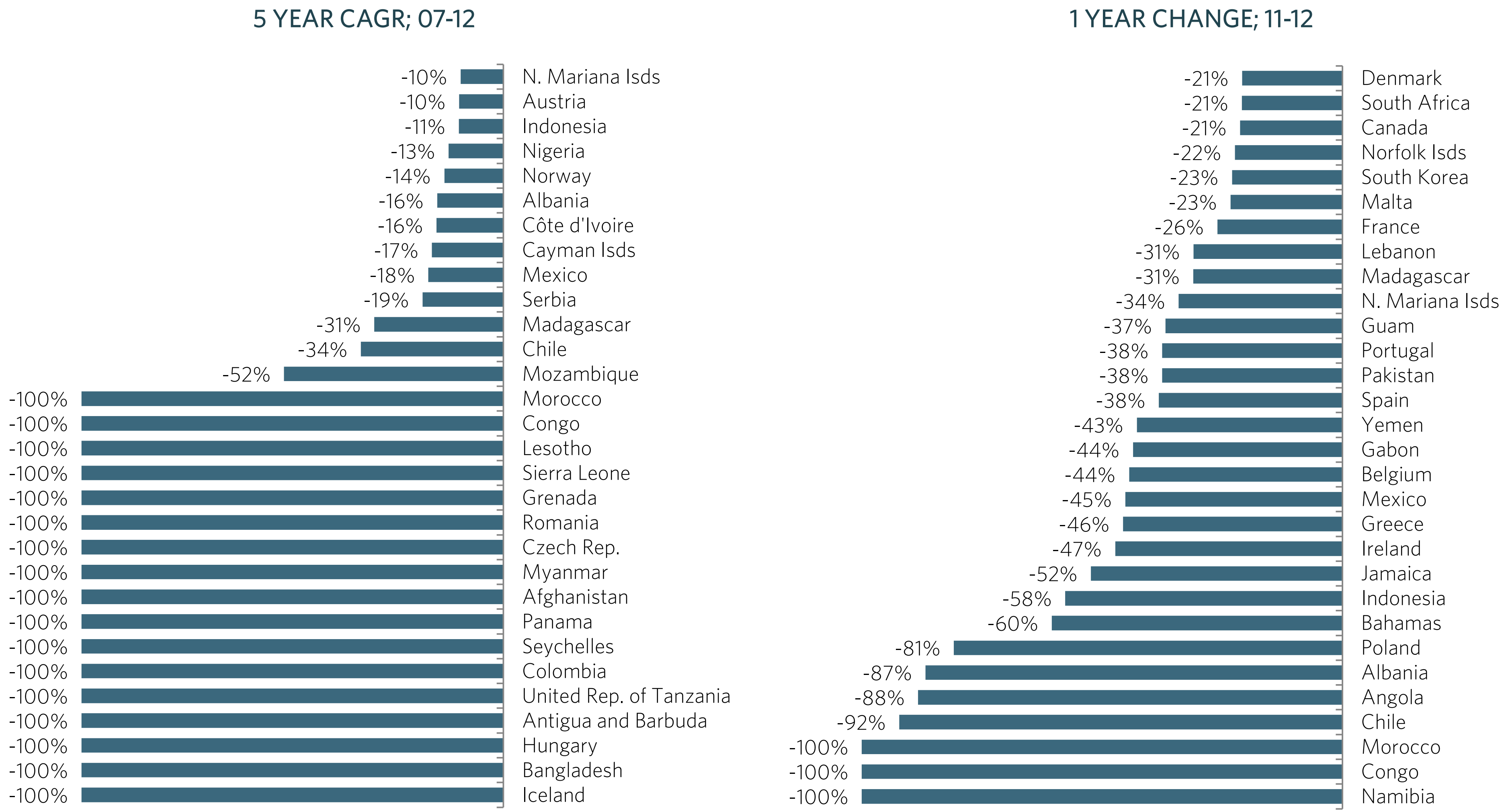
Source: UN Comtrade database; Coriolis analysis

PERCENT DECLINE

Wide range of declining markets – smaller developed European and poorer countries stand out in declining markets

BOTTOM 30 MEAT MARKETS BY CAGR PERCENT CHANGE IN EXPORT VALUE

US$m



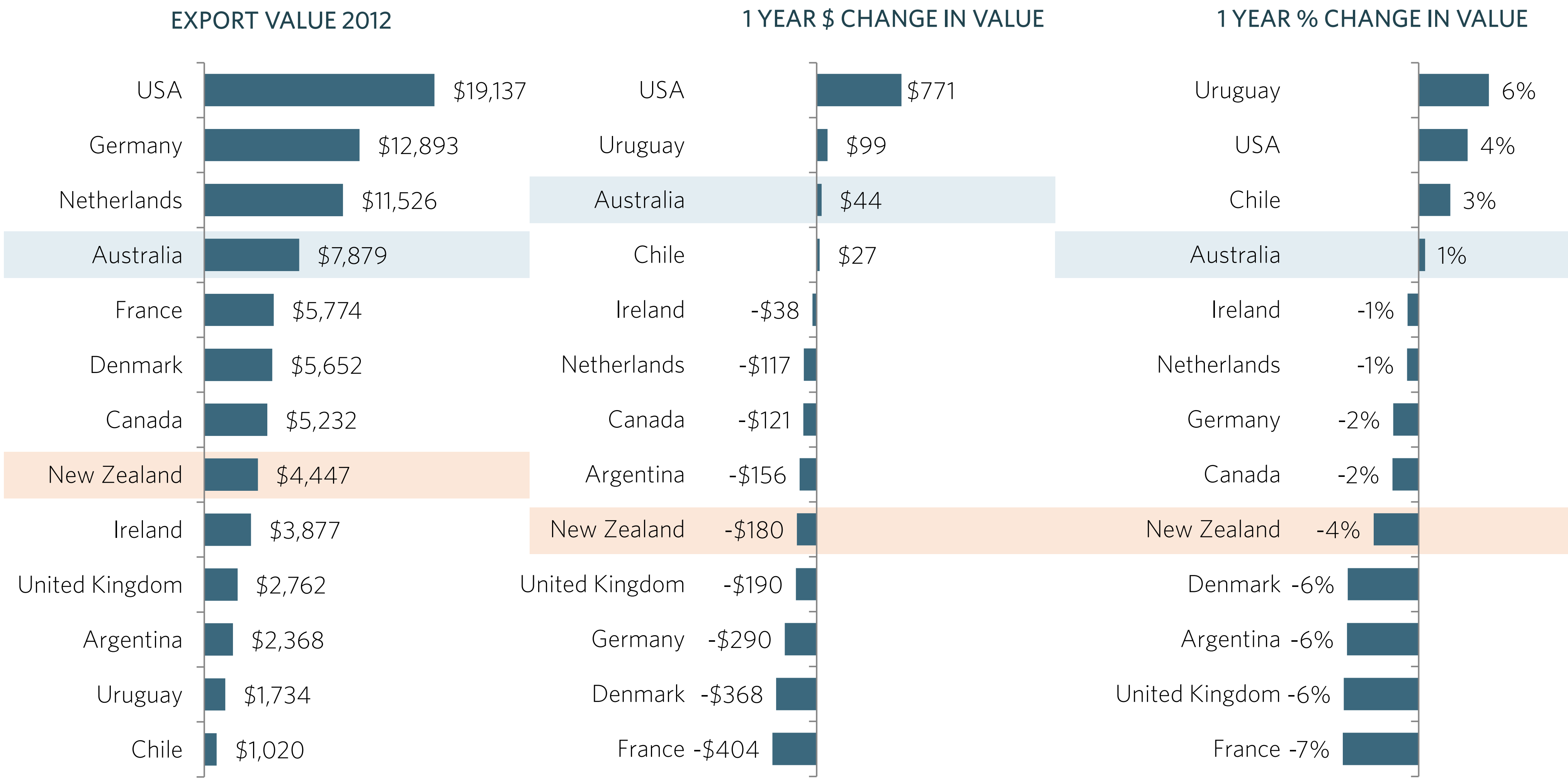
Source: UN Comtrade database; Coriolis analysis

BENCHMARK – EXPORT GROWTH VS. COMPETITORS

New Zealand's performance in a difficult year globally was good relative to some competitors but poor relative to Australia, the USA, Chile or Uruguay

TOTAL MEAT EXPORT VALUE IN 2012: NZ VS. COMPETITORS

US$m; 2012; 2012 vs. 2011



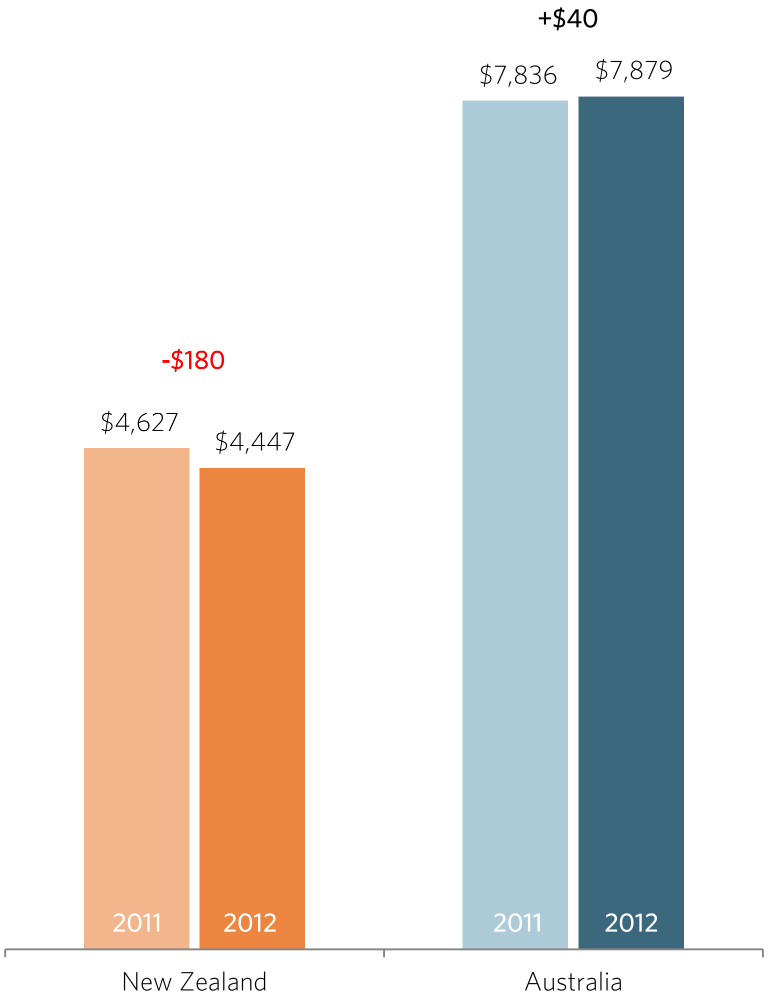
Source: UN Comtrade database; Coriolis analysis

FOCUS – NZ VS. AUSTRALIA

Australia is achieving strong growth in meat exports into the US market (where it has a free trade deal) and into China

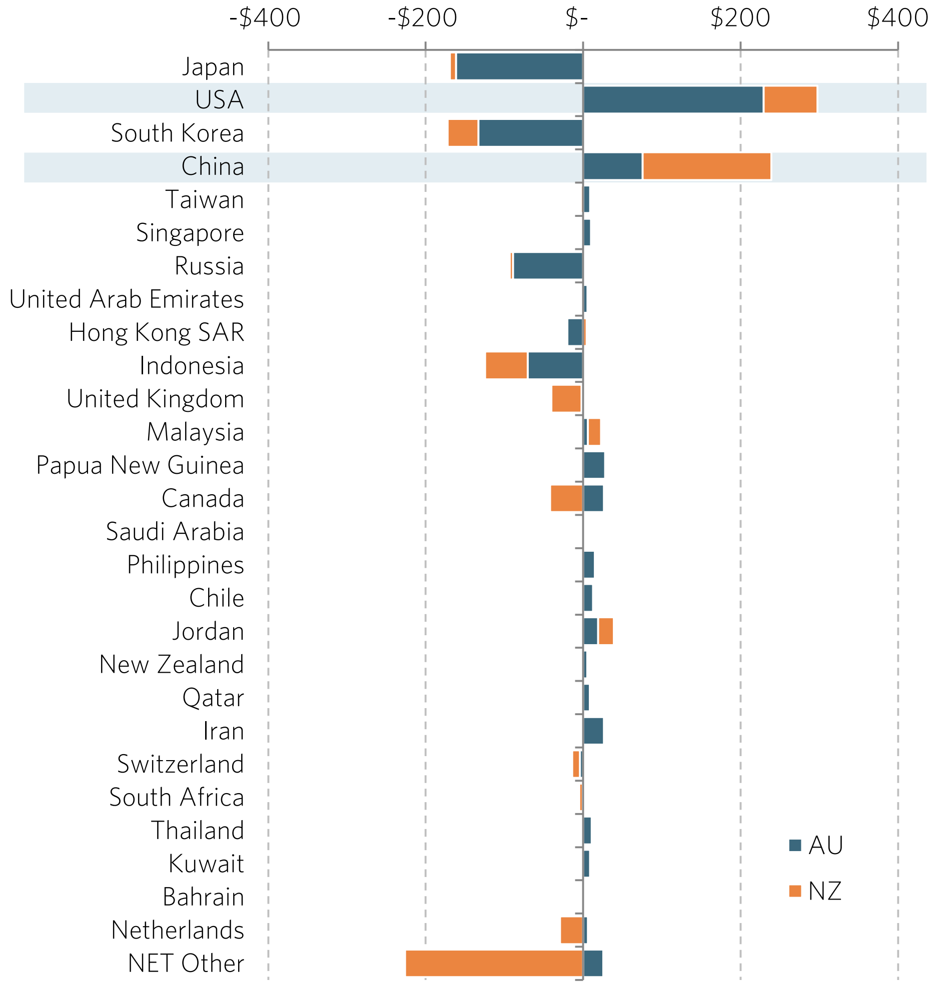
MEAT EXPORT VALUE: NZ VS. AUSTRALIA

US$m; 2011-2012



TOP 25 AUSTRALIAN MEAT EXPORT MARKETS BY 1Y VALUE GROWTH VS. NZ

US$m; 2012 vs. 2011



Source: UN Comtrade database; Coriolis analysis

PRODUCTS

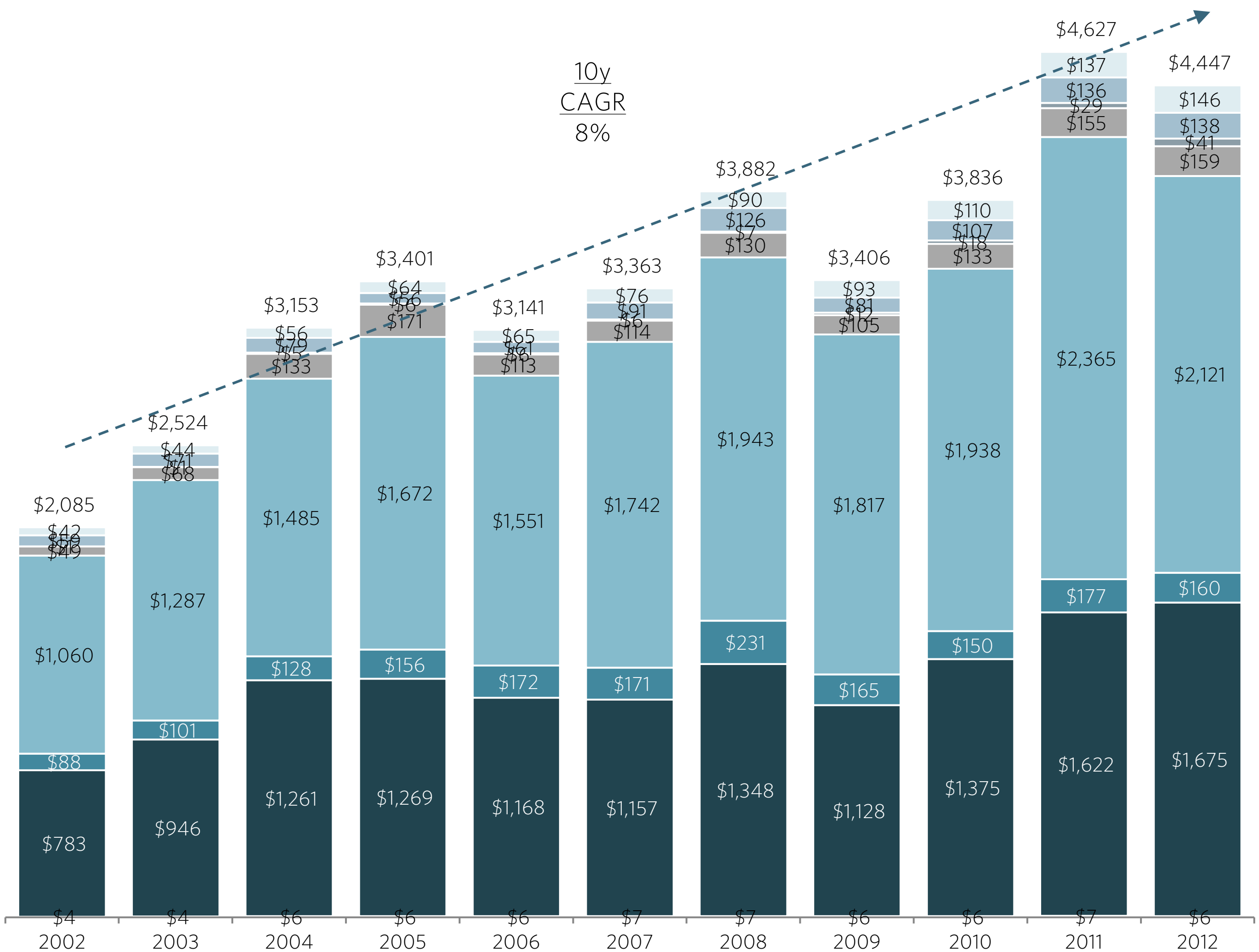
Meat

MEAT – EXPORTS BY TYPE

New Zealand meat exports have achieved growth in the past decade

10 YEAR NEW ZEALAND MEAT EXPORT BY CATEGORY/SUPER-CATEGORY (HS4/6 LEVEL)

US$m; 2002-2012



	10 Year CAGR	10 Year Absolute
TOTAL	8%	+$2,362m
Processed meat	13%	+$104m
Animal fats	9%	+$78m
Poultry	42%	+$40m
Offal	13%	+$110m
Sheep/lamb	7%	+$1,062m
Deer	6%	+$72m
Beef	8%	+$893m
Other	6%	+$3m

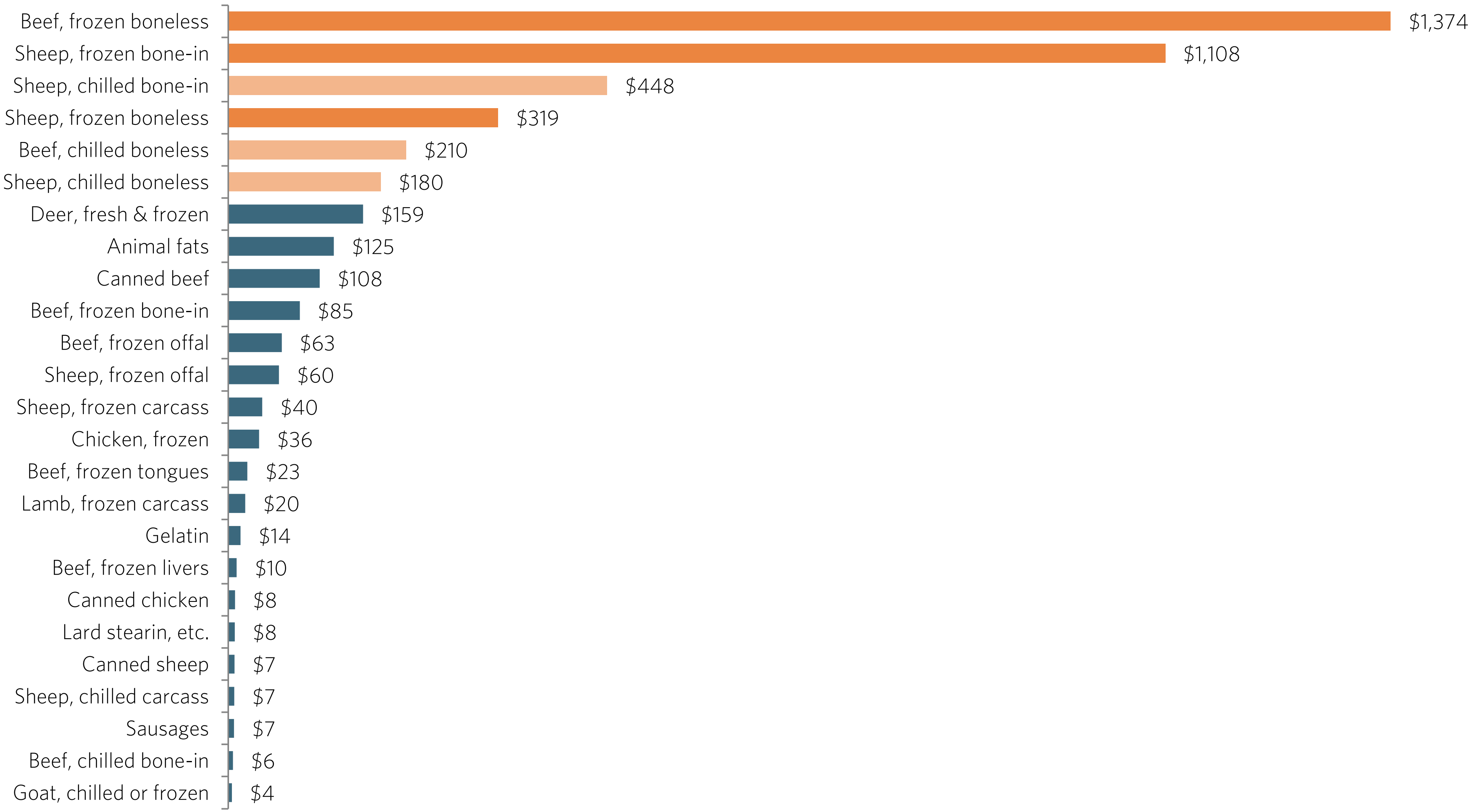
Source: UN Comtrade database; Coriolis analysis

EXPORT DOLLARS

Frozen beef and sheep meat continue to be New Zealand's largest meat exports by value, though chilled products round out the top six

EXPORT VALUE OF TOP 25 MEAT PRODUCTS (HS6 LEVEL) EXPORTS IN 2012

US$m; 2012



Source: UN Comtrade database; Coriolis analysis

EXPORT DOLLAR GROWTH

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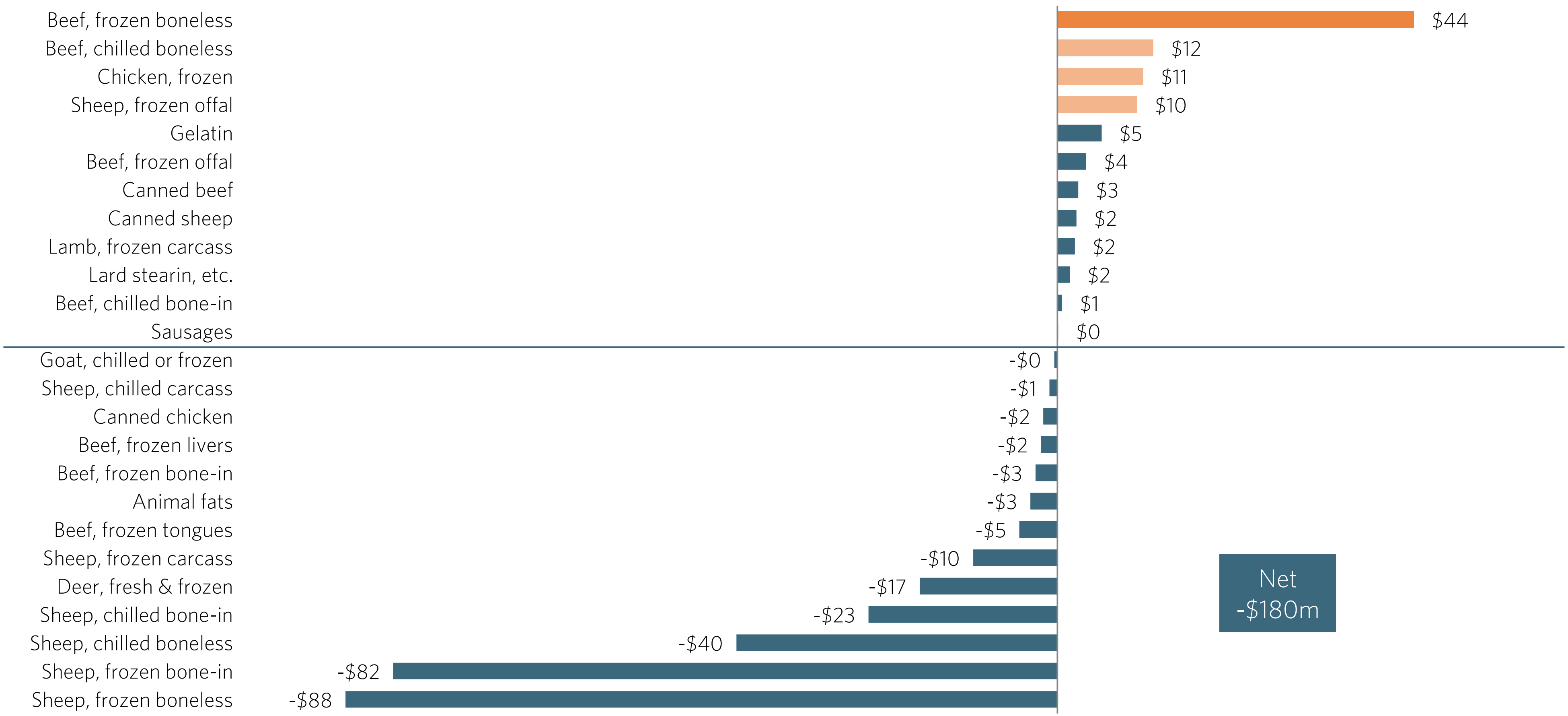
In 2012, boneless beef, chicken and frozen sheep offal grew export value, while most sheep and deer were down

ANNUAL CHANGE IN EXPORT VALUE OF TOP 25 MEAT EXPORTS

US$m; 2012 vs. 2011



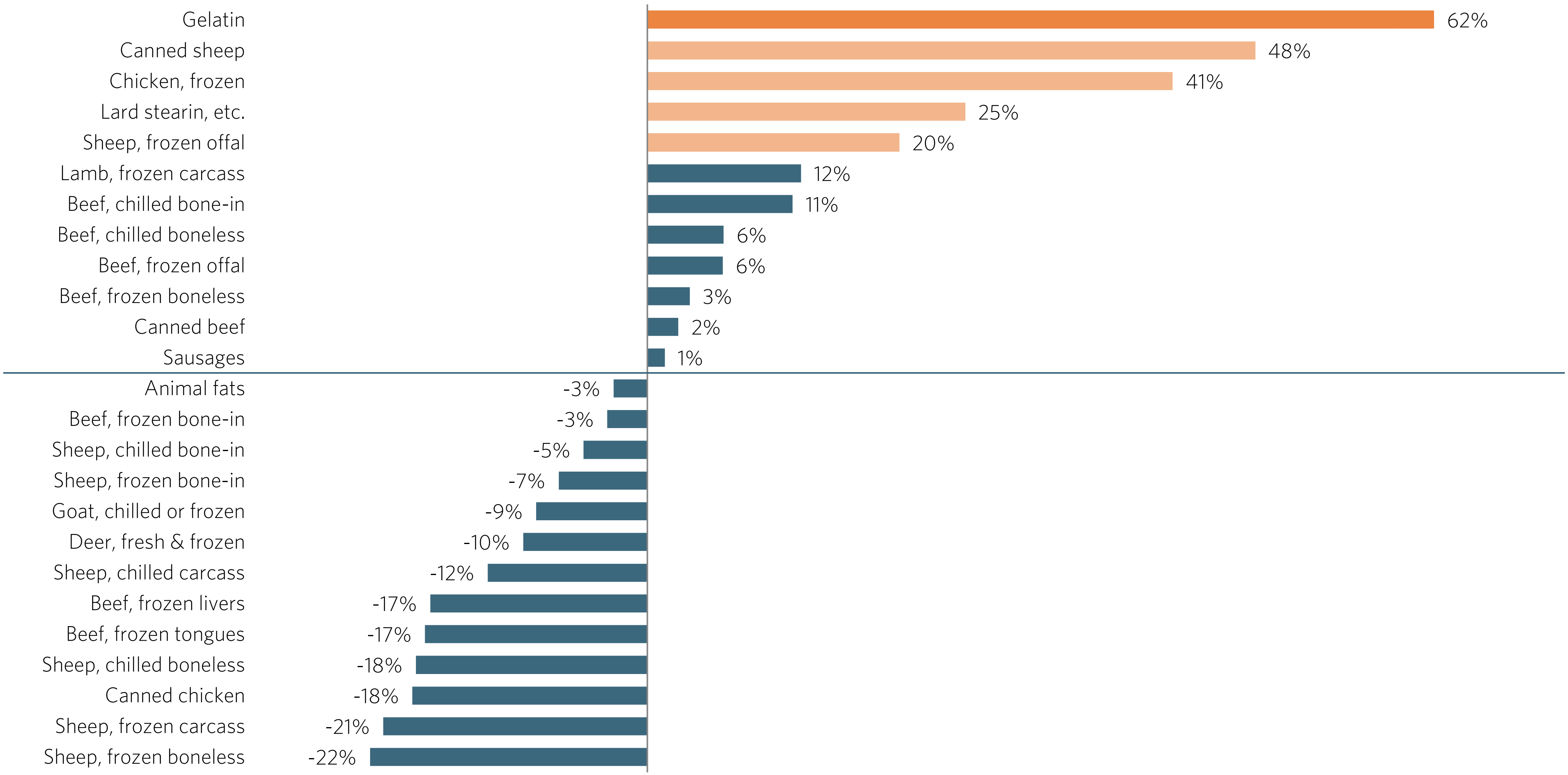
Source: UN Comtrade database; Coriolis analysis

PERCENT GROWTH

In 2012, gelatin, canned sheep, frozen chicken, lard and frozen sheep offal grew at the fastest rate, while canned chicken and most sheep products led declines

ANNUAL PERCENT GROWTH IN TOP 25 MEAT EXPORTS

US$m; 2012 vs. 2011



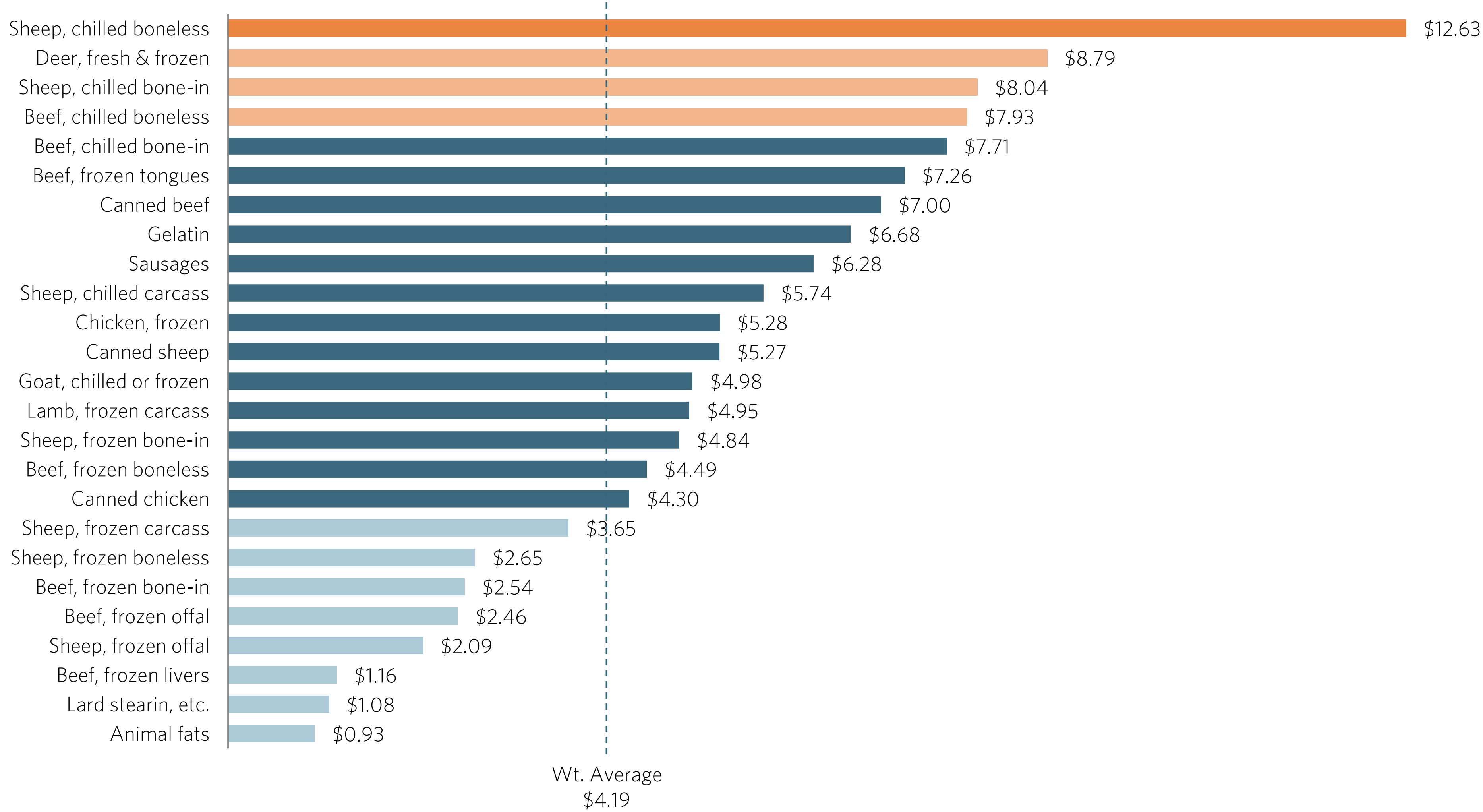
Source: UN Comtrade database; Coriolis analysis

$/KG

In 2012 chilled sheep/lamb and deer led in terms of export dollars per kilo, while offal and fats had the lowest returns per kilo

VALUE PER KILOGRAM OF TOP 25 MEAT EXPORTS

US$/kg; 2012



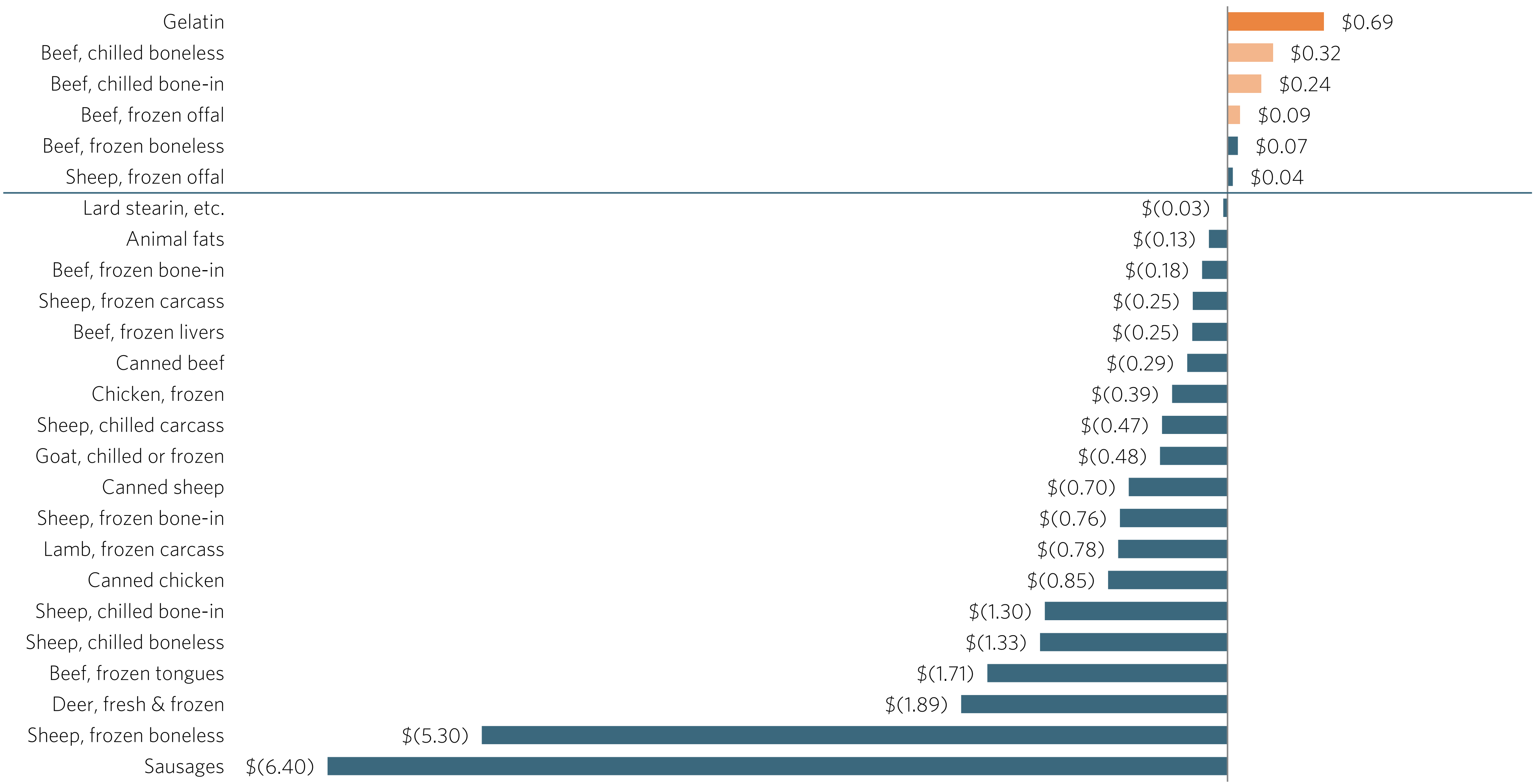
Source: UN Comtrade database; Coriolis analysis

$/KG CHANGE

In 2012 only a handful of items achieved price increases, while most meat items were down strongly led by sausages and frozen boneless lamb/sheep

ANNUAL CHANGE IN VALUE PER KILOGRAM OF TOP 25 MEAT EXPORTS

US$/kg; 2012 vs. 2011



Source: UN Comtrade database; Coriolis analysis

APPENDICES

Meat

MEAT – INDUSTRY ORGANISATIONS

There are a range of organisations representing the meat industry

KEY MEAT INDUSTRY ORGANISATIONS IN NEW ZEALAND

2013

	Represents	Funding	Website/notes
mia Meat Industry Association	Meat processors	- Membership fees	www.mia.co.nz
beef+lamb new zealand	Sheep and beef farmers	- Commodity Levies (Meat) Order 2010 $23.8m - Grant funding NZ Meat Board $2.1m; Other $2.75m	www.beeflambnz.co.nz www.meatnz.co.nz
New Zealand Meat Board	Manages export quotas	- Meat Board Act 2004 management of quota and farmer reserves of $81m	www.nzmeatboard.org
Federated Farmers of New Zealand	Farmer advocacy	- Membership fees	www.fedfarm.org.nz Independent advocacy
New Zealand Pork	Pig farmers	- Pork Levy	www.nzpork.co.nz
PIANZ	Poultry meat producers	- Poultry levy based on /head processed	www.pianz.org.nz Poultry Association of NZ
Deer Industry New Zealand; NZDFA New Zealand Deer Farmers' Association	Producers	- Levy Venison, Levy Velvet, Animal Health Board Levy - Commodity Levies (Farmed Deer Products) Order 2001	www.deernz.org

Source: Coriolis analysis

MEAT – INDUSTRY SCIENTIFIC RESEARCH

Two organisations have strong involvement in meat industry research

KEY SCIENTIFIC RESEARCH ORGANISATIONS INVOLVED IN MEAT INDUSTRY RESEARCH IN NEW ZEALAND
2013

	Focus & activities
agresearch / AgResearch MIRINZ	- AgResearch-MIRINZ Centre - Foods & Bio-based Products; food composition and function, The role of foods in human health and wellbeing
Plant & Food RESEARCH RANGAHAU AHUMĀRA KAI	- Food innovation – foods with functionalities
The New Zealand Institute Of Food Science & Technology Inc	www.nzifst.org.nz Scientists involved in food processing and distribution

Source: Coriolis analysis

METHODOLOGY & DATA SOURCES

Data was from a variety of sources, and has a number of identified limitations

This report uses a range of information sources, both qualitative and quantitative.

The numbers in this report come from multiple sources. While we believe the data are directionally correct, we recognise the limitations in what information is available. In many cases different data sources disagree (e.g. Statistics New Zealand vs. FAO vs. UN Comtrade). Many data sources themselves incorporate estimates of industry experts (e.g. FAO AgStat). As one example, in many cases, the value and/or volume recorded as exported by one country does not match the amount recorded as being received as imports by the counterparty [for understood reasons]. In addition, in some places, we have made our own clearly noted estimates.

All trade data analysed in all sections of the F&B Information project are calculated and displayed in US$. This is done for a range of reasons:

1. It is the currency most used in international trade
2. It allows for cross country comparisons (e.g. vs. Denmark)
3. It removes the impact of NZD exchange rate variability
4. It is more comprehensible to non-NZ audiences (e.g. foreign investors)
5. It is the currency in which the United Nations collects and tabulates global trade data

The opinions expressed in this report represent those of the industry participants interviewed and the authors. These do not necessarily represent those of Coriolis Limited or the New Zealand Government.

Coriolis has not been asked to independently verify or audit the information or material provided to it by or on behalf of the Client or any of the data sources used in the project. The information contained in the report and any commentary has been compiled from information and material supplied by third party sources and publicly available information which may (in part) be inaccurate or incomplete. Coriolis makes no representation, warranty or guarantee, whether express or implied, as to the quality, accuracy, reliability, currency or completeness of the information provided in the report.

If you have any questions about the methodology, sources or accuracy of any part of this report, please contact project lead Tim Morris at Coriolis, on +64 9 623 1848

Project defines the following trade codes as Meat

GLOBAL HARMONISED SYSTEM (HS) TRADE CODES DEFINED AS MEAT

HS2002

HS Code	Short Description	Longer official description
20110	Beef, chilled carcass	Fresh or chilled bovine carcasses and half carc
20120	Beef, chilled bone-in	Fresh or chilled unboned bovine meat (excl. car
20130	Beef, chilled boneless	Fresh or chilled boneless bovine meat
20210	Beef, frozen carcass	Frozen bovine carcasses and half carcasses
20220	Beef, frozen bone-in	Frozen unboned bovine meat (excl. carcasses)
20230	Beef, frozen boneless	Frozen boneless bovine meat
20311	Pork, chilled carcass	Fresh or chilled swine carcasses and half carca
20312	Pork, chilled cuts	Fresh or chilled unboned hams, shoulders and cu
20319	Pork, chilled nes	Fresh or chilled swine meat, nes (unboned)
20321	Pork, frozen carcass	Frozen swine carcasses and half carcasses
20322	Pork, frozen cuts	Frozen unboned hams, shoulders and cuts thereof
20329	Pork, frozen nes	Frozen swine meat, nes
20410	Sheep, chilled carcass	Fresh or chilled lamb carcasses and half carcas
20421	Sheep, chilled carcass	Fresh or chilled sheep carcasses and half carca
20422	Sheep, chilled bone-in	Fresh or chilled unboned meat of sheep
20423	Sheep, chilled boneless	Fresh or chilled boneless meat of sheep
20430	Lamb, frozen carcass	Frozen lamb carcasses and half carcasses
20441	Sheep, frozen carcass	Frozen sheep carcasses and half carcasses (excl
20442	Sheep, frozen bone-in	Frozen unboned meat of sheep
20443	Sheep, frozen boneless	Frozen boned meat of sheep
20450	Goat, chilled or frozen	Fresh, chilled or frozen goat meat
20500	Horse	Meat of horses/asses/mules/hinnies, fresh/chilled/frozen
20610	Beef, chilled offal	Fresh or chilled edible bovine offal
20621	Beef, frozen tongues	Frozen bovine tongues
20622	Beef, frozen livers	Frozen bovine livers
20629	Beef, frozen offal	Frozen edible bovine offal (excl. tongues and l
20630	Pork, offal chilled	Fresh or chilled edible swine offal
20641	Pork, frozen livers	Frozen swine livers
20649	Pork, offal frozen	Frozen edible swine offal (excl. livers)
20680	Sheep, chilled offal	Sheep, goat, ass, mule, hinnie offal, fresh or chilled
20690	Sheep, frozen offal	Sheep, goat, ass, mule, hinnie edible offal, frozen

HS Code	Short Description	Longer official description
20711	Chicken, whole chilled	Fowls, domestic, not cut (FROZEN)
20712	Chicken, whole frozen	Meat of fowls of species Gallus domesticus, not cut in pieces, frozen
20713	Chicken, cuts chilled	Fowls, cuts & offal, fresh
20714	Chicken, frozen	Fowls, cuts & offal, frozen
20724	Turkey, whole chilled	Turkeys, not cut, fresh
20725	Turkey, whole frozen	Turkeys, not cut, frozen
20726	Turkey, cuts chilled	Turkey cuts & offal fresh
20727	Turkey, cuts frozen	Turkey cuts & offal frozen
20732	Ducks, whole chilled	Ducks, geese, not cut fresh
20733	Ducks, whole frozen	Ducks, geese, not cut frozen
20734	Goose/duck liver chilled	Fatty livers of geese or ducks, fresh or chilled
20735	Poultry, cuts fresh	Poultry cuts&offal, fresh
20736	Poultry, cuts frozen	Poultry cuts&offal, frozen
20810	Rabbit	Rabbit or hare meat, offal, fresh, chilled or frozen
20890	Deer, fresh & frozen	Meat and edible offal nes fresh, chilled or frozen (includes deer meat)
20900	Fat, pig & poultry	Pig and poultry fat, fresh, chilled, frozen, sa
21011	Pork, bone-in hams	Unboned swine hams, shoulders and cuts thereof,
21012	Pork bellies	Bellies and cuts thereof of swine, salted... or
21019	Pork, smoked	Meat of swine, salted... or smoked, nes
21020	Beef, salted/smoked	Meat of bovine animals, salted... or smoked
21092	Dolphin & whale, smoked	Meat & edible meat offal of whales/dolphins/porpoises (order Cetacea)/manatees & dugongs (order Sirenia), salted/in brine/dried/smoked, incl. edible flours/meals
21099	Deer, salted/dried	Meat & edible meat offal, n.e.s., salted/in brine/dried/smoked, incl. edible flours/meals
150200	Animal fats	Fats of bovine animals, sheep or goats, raw or
150300	Lard stearin, etc.	Lard stearin, lardoil, oleostearin, oleo-oil an
160100	Sausages	Sausages and similar products; food preparation
160210	Baby food?	Homogenized preparations of meat and meat offal
160220	Pate & prepared livers	Livers of any animal prepared or preserved
160231	Processed turkey	Preparations of turkey meat
160232	Canned chicken	Fowls meat and meat offal of poultry
160239	Canned chicken	Preparations of poultry (excl. turkey)
160241	Swine, hams	Swine hams & cuts thereof, prepared or preserved
160242	Swine, shoulder cuts	Swine shoulders & cuts thereof, prepared or preserved
160249	Swine, prepared nes	Swine meat or offal nes, prepared,preserved, not liver
160250	Canned beef	Bovine meat, offal nes, not livers, prepared/preserved
160290	Canned sheep	Meat, meat offal and blood, prepared or preserved, nes
350300	Gelatin	Gelatin and derivatives; isinglass; glues of an

Source: United Nations codes; Coriolis definitions in conjunction with project steering group

GLOSSARY OF TERMS

This report uses the following acronyms and abbreviations

A$/AUD	Australian dollar
ABS	Absolute change
ANZSIC	AU/NZ Standard Industry Classification
AU	Australia
Australasia	Australia and New Zealand
b	Billion
CAGR	Compound Annual Growth Rate
C/S America	Central & South America (Latin America)
CRI	Crown Research Institute
CY	Calendar year (ending Dec 21)
E Asia	East Asia
EBITDA	Earnings before interest, tax, depreciation and amortization
FAO	Food and Agriculture Organisation of the UN
FY	Financial year (of firm in question)
£/GBP	British pounds
JV	Joint venture
m	Million
n/a	Not available/not applicable
NA/ME/CA	North Africa / Middle East / Central Asia
Nec/nes	Not elsewhere classified/not elsewhere specified

N/C	Not calculable
N.H	Northern Hemisphere
NZ	New Zealand
NZ$/NZD	New Zealand dollar
R&D	Research and Development
S Asia	South Asia (Indian Subcontinent)
SE Asia	South East Asia
S.H	Southern Hemisphere
SS Africa	Sub-Saharan Africa
T/O	Turnover
US/USA	United States of America
US$/USD	United States dollar
UK	United Kingdom
US	United States of America
YE	Year ending
YTD	Year to date
	Sources
AR	Annual report
Ce	Coriolis estimate
Ci	Coriolis interview

Coriolis is a boutique management consulting firm that focuses on food, consumer packaged goods, retailing and foodservice.

Coriolis advises clients on strategy, operations, organization, and mergers and acquisitions. We develop practical, fact-based insights grounded in the real world that guide our clients decisions and actions. Founded in 1999, Coriolis is based in Auckland, New Zealand and works on projects across the Asia Pacific region.

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We help our clients assemble the facts needed to guide their big decisions. We make practical recommendations. Where appropriate, we work with them to make change happen.

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Our style is practical and down-to-earth. We try to put ourselves in our clients' shoes and focus on actions. We listen hard, but we are suspicious of the consensus. We provide an external, objective perspective. We are happy to link our fees to results.

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CORIOLIS
research · consulting · strategy

CORIOLIS LIMITED
PO BOX 90-509
AUCKLAND, NEW ZEALAND
T: +64 9 623 1848
www.coriolisresearch.com