



7TH ANNUAL
Altech[®] GLOBAL FEED SURVEY | 2018

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Managing Director – India
Regional Director – South Asia

Most Comprehensive Survey

- ❖ 144 countries
- ❖ Over 30,000 mills being visited by Alltech salespeople
- ❖ 7th Alltech Global Feed Survey



* Alltech's global presence makes it the best placed organization to collect & analyze this data.

What is the purpose of the survey?

- Demonstrates the strength & global presence of the feed industry.
- Useful to
 - Policy makers
 - Institutions, investors
 - Industry organizations (IFIF)
 - NGOs & United Nations
- Agricultural advocacy support (#agvocates).

World Feed Production Exceeds



1.07 Billion Metric Tons

2.57%

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Africa — Still on the fast track

- 30% up in the last 5 yrs (compared to global growth 13%)

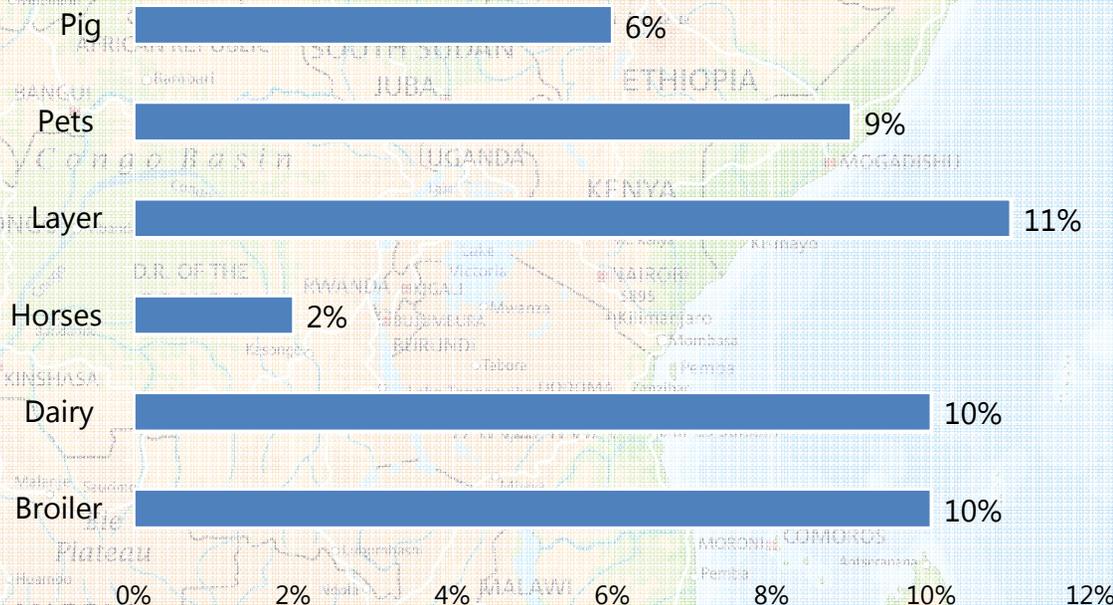
- Species slightly down:

- Beef & aquaculture

- Species Up:

- Pig, Dairy, Layer, Broiler, Pets & Horses

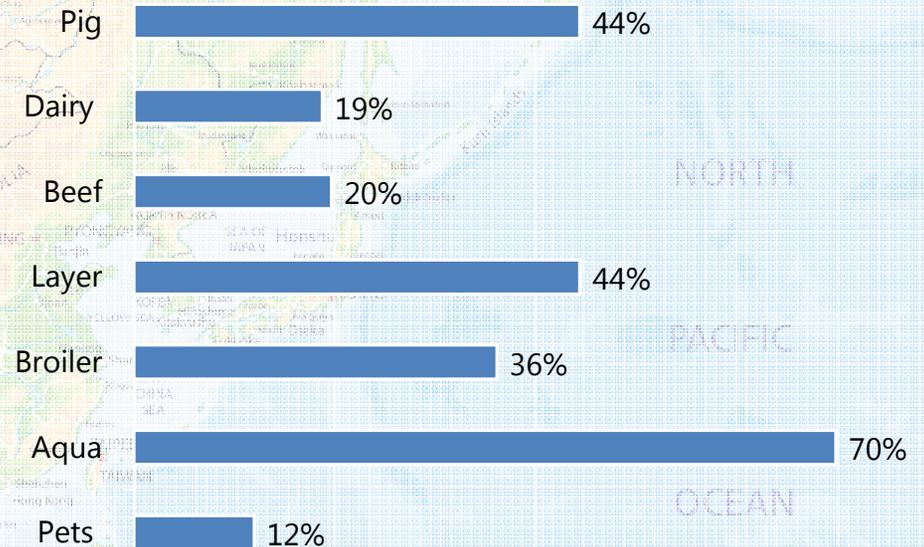
Africa Species Growth



Asia-Pacific — The primary producer

- 35.6% of global feed production
- Region grew by 3%
 - Primarily pigs, pets & equine
 - Thailand (8%) & India (7%)
- 70% of global aqua feed production

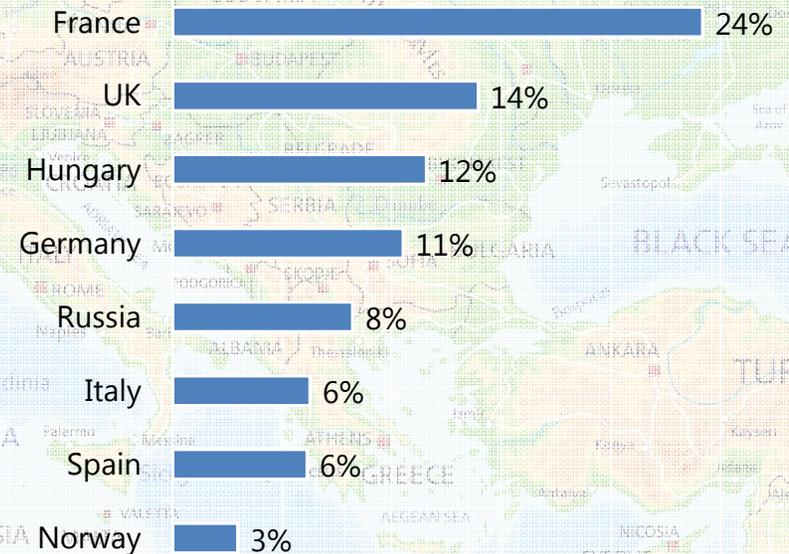
Asia Pacific % of Global Total



Europe — A growing leader

- 3% growth
 - Pig, broiler & aqua
- No.1 for pet food
 - Over 1/3 of global total
 - Hungary's pet food production is 30% of its total production!

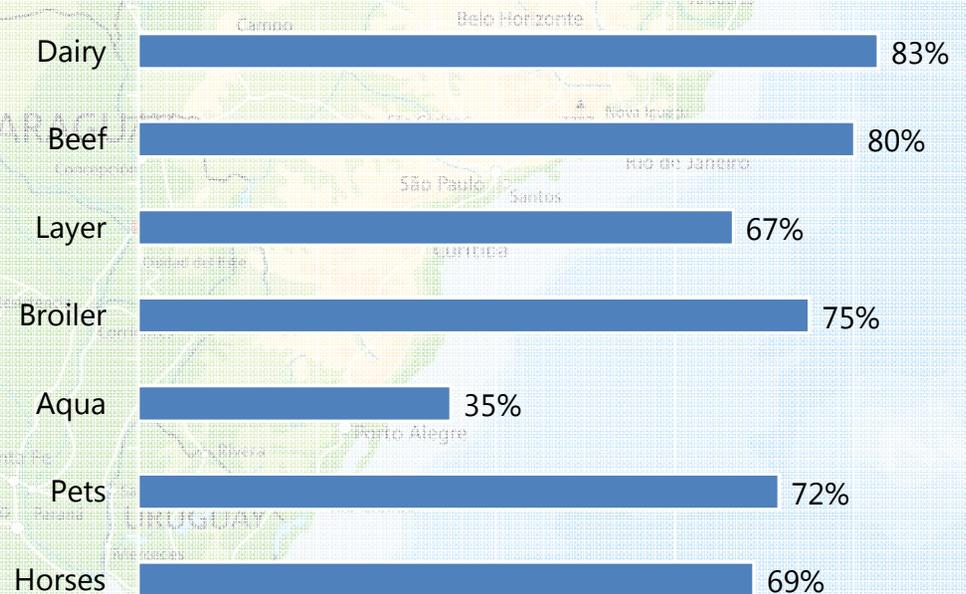
Top 7 Pet Feed Producers in Europe



Latin America — Brazil is the meat

- Brazil regional leader (3rd globally)
 - Over 43% regional total
- Mexico leads in beef & layer
- Top 3: Brazil, Mexico & Argentina now account for almost 75% of the region's feed production

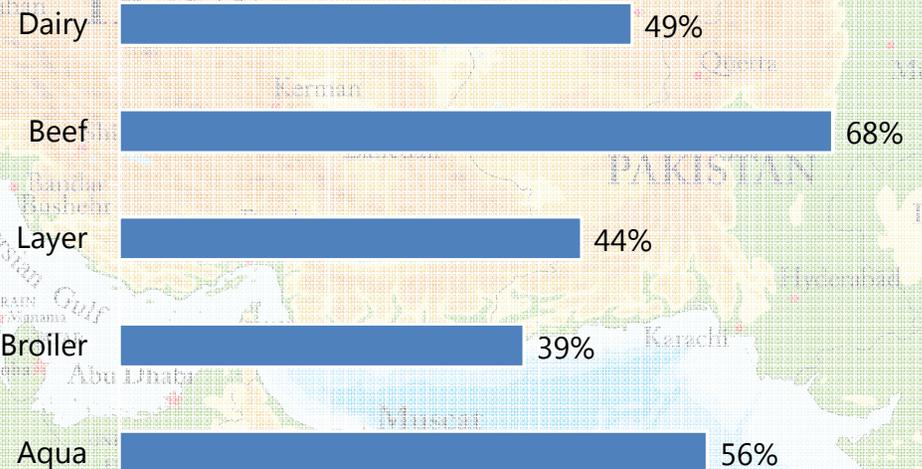
Brazil, Mexico & Argentina V. Regional Total



Middle East — Led by Iran

- Region down 1% from 2016
- Aqua, pets & horses grew
- Iran No.1 in most species
 - except Horses (UAE) & Pets (Israel)

Iran % of Regional Total



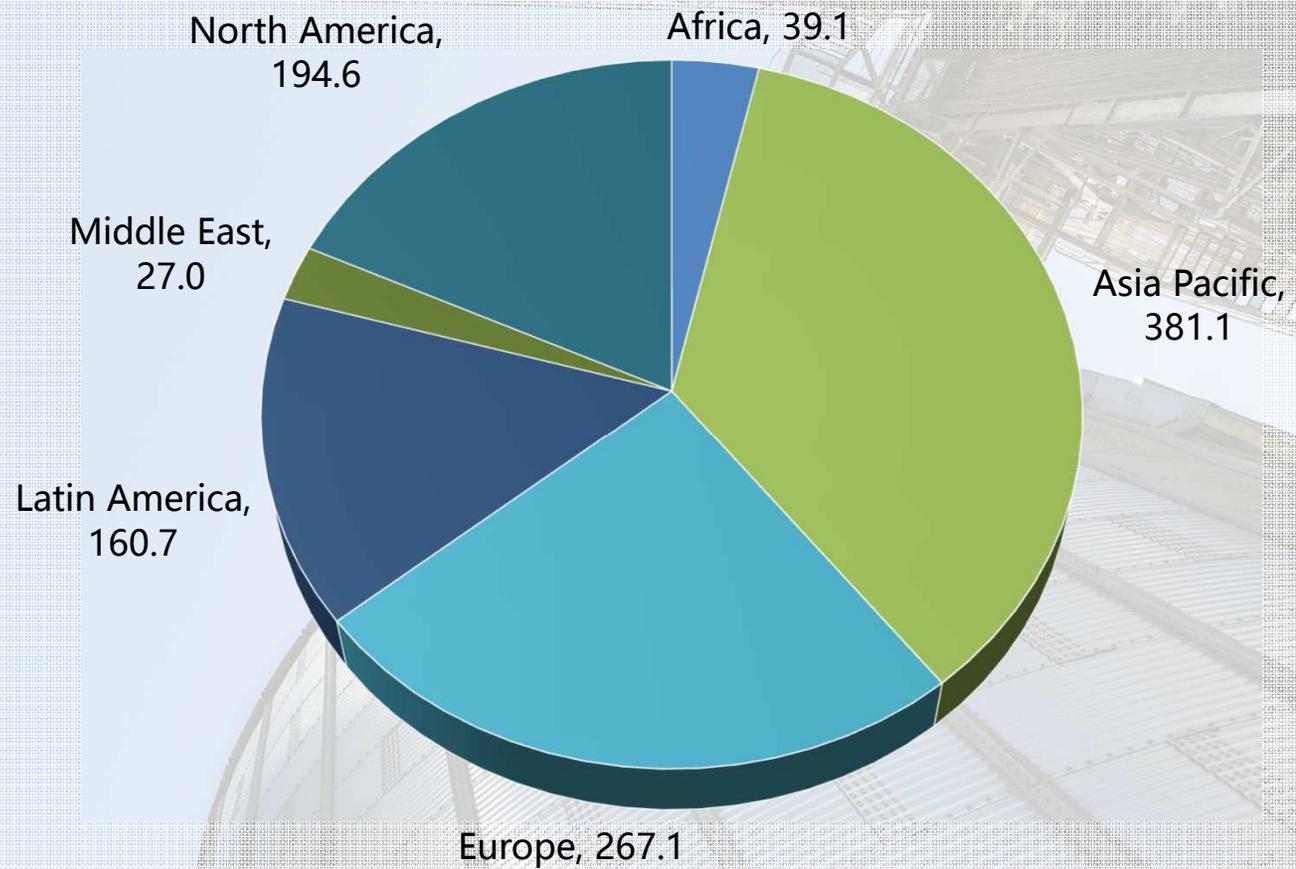
North America — Steady as can be

- Region with highest horse feed production
 - U.S. No.1 & Canada No.3 globally or 46% of total.
- Top beef
 - U.S. produces 1/3 global beef feed
- 2nd highest in global pet food production (31.5%)

Regional Growth - Five Year Analysis (MT)

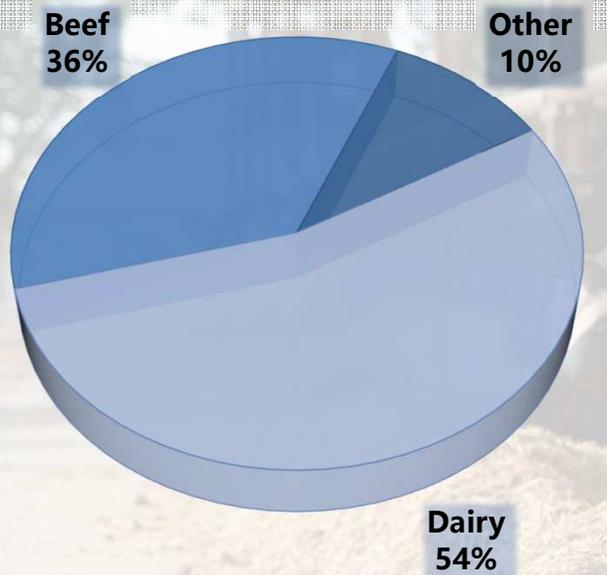
	2017	2012	% Change
Africa	39.1	30.3	29%
Asia-Pacific	381.1	356.5	7%
Europe	267.1	208.4	28%
Latin America	160.7	137.0	17%
Middle East	27.0	25.4	6%
North America	194.6	188.1	3%
Total	1069.7	945.8	13%

Regional Production Totals



Dairy: Up 3%

RUMINANT FEED

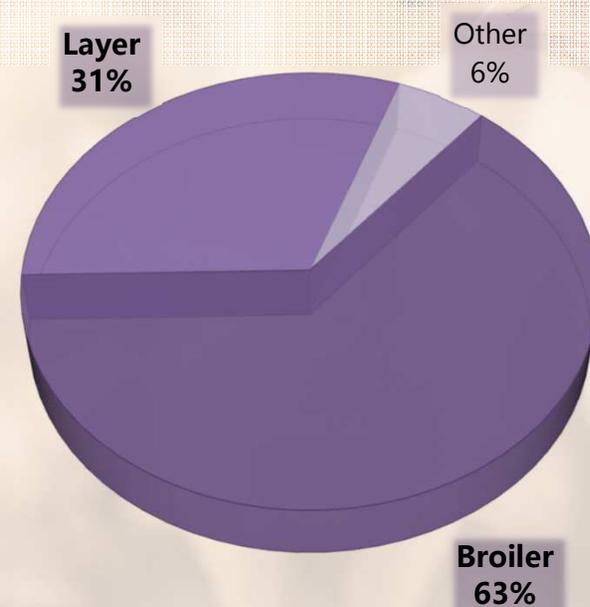


- Over half global ruminant feed production
- Up
 - Growing in all regions
 - Africa top growth, up 10%

Broiler: Up 3%

- Majority of feed production is broiler
- Growth in all regions
 - Africa fastest growing, up 10%

POULTRY FEED



Layers: Up 1%

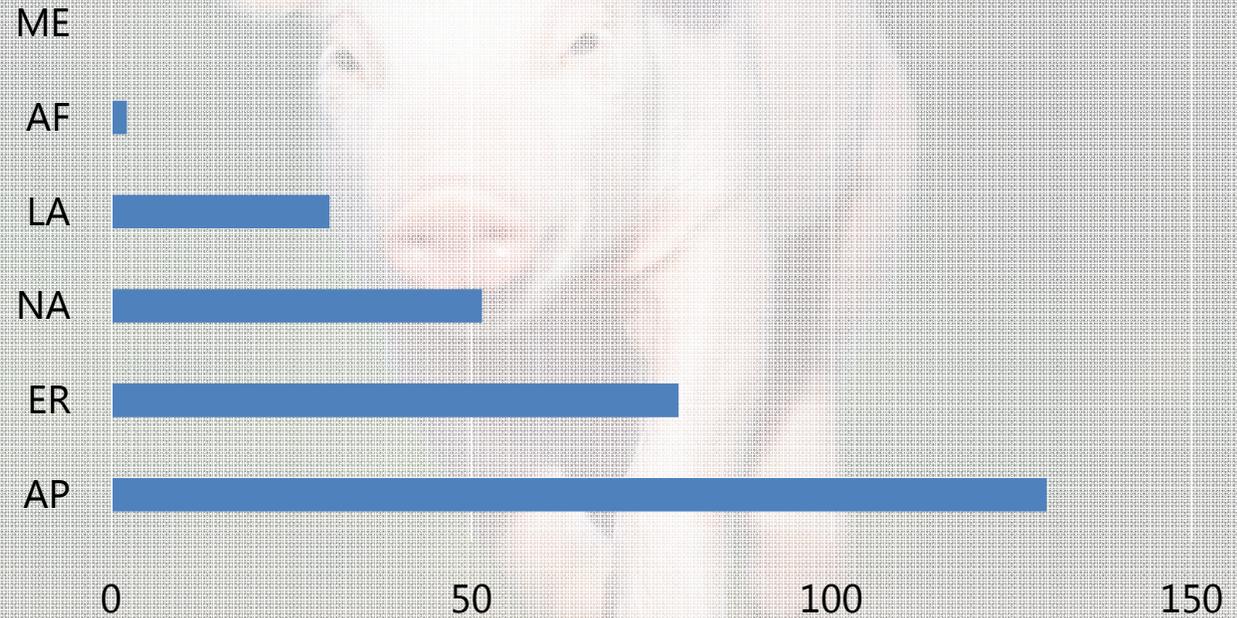
- Growing in all regions
- Genetic & management improvements mean egg production increasingly more efficient
- Asia-Pacific represents 44% of global layer feed production

Beef: Down 1%

- Down globally 1%
 - Biggest drop Latin America (-9%), Asia-Pacific
- Trend toward leaner “white” meats
- USA produces 1/3 global beef feed
 - 5X that of next highest producer (South Korea)

Pigs: Up 5.5%

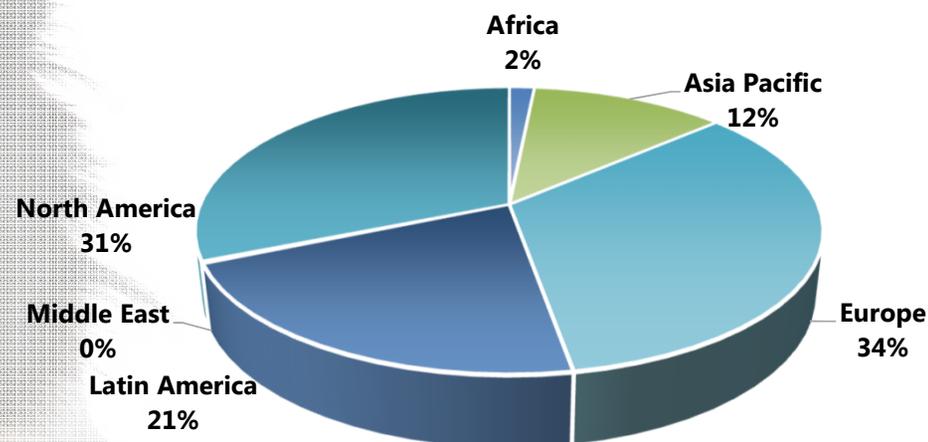
- Asia-Pacific – China rebounded in '17
- Europe – Russia starring
- Africa – Kenya, Tanzania, Mozambique, Uganda & Namibia



Pets Perk Up

- 28.1 Million tons
- Growing middle classes in Asia-Pacific, Europe & Latin America
- NA market remained relatively flat
 - Higher value, lower volume

Regional Pet Food Production

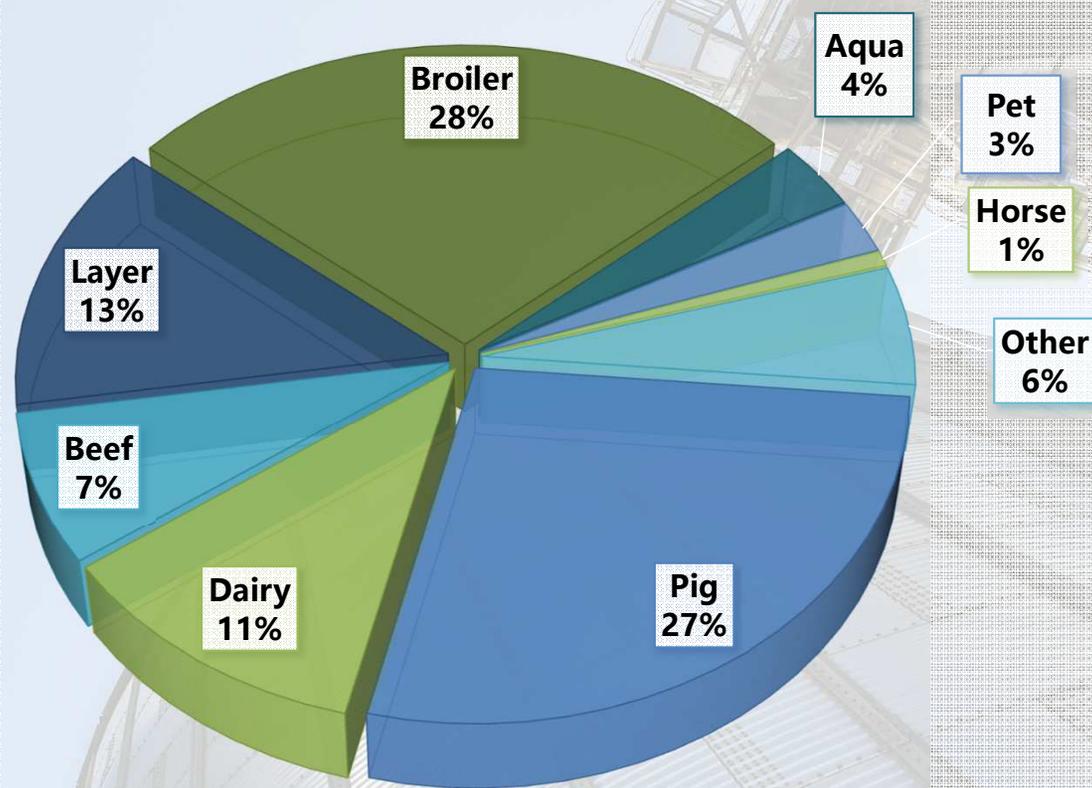




Horses Race Ahead

- Every region grew- total 8 M tons
- NA & Africa smallest growth
- LA up 108K tons
 - Peru, Brazil & Mexico
- AP up 160K tons
 - South Korea, China & Australia
- ME up 25K tons
 - Saudi Arabia & UAE
- Europe up 24%
 - The Netherlands, Ireland, France & Russia

Percentage of Global Feed Production by Species



Top Seven of 2017 — significant!

S. No	Country	Mills	Production (MT)	Growth
1	China	6,000	186.9	-0.39%
2	USA	6,241	173	2%
3	Brazil	1,572	69.9	1%
4	Russia	569	37.6	19%
5	Mexico	501	34.4	2%
6	India	1,201	34.2	7%
7	Spain	845	33	2%

Seven findings from Alltech Global Feed Survey #7



1. China: The bull takes a small step back



2. Russia leaps forward



3. India ignites

4. Africa still on the fast track

5. Aqua treads water

6. Horses Race Ahead

7. Feed costs reflect food costs



China: The bull takes a small step back

- 0.4% *decline because:*
 - Dairy: Milk farmers struggling to balance high priced inputs with poor returns
 - Beef: Local production replaced w/ cheaper and/or higher quality imports.
 - Layer: Rapid consolidation & increasingly efficient.
 - Broiler: Stagnating market, poor prices for 'white broilers'



China gained in...

- Pigs: larger, professional farms
 - Cost efficient pork production
- Pets: Growing middle class owning & buying more
 - Up 25%



Russia leaps forward

- Increased self-sufficiency
 - Fewer imports
- From #7 to #4
- All major species up



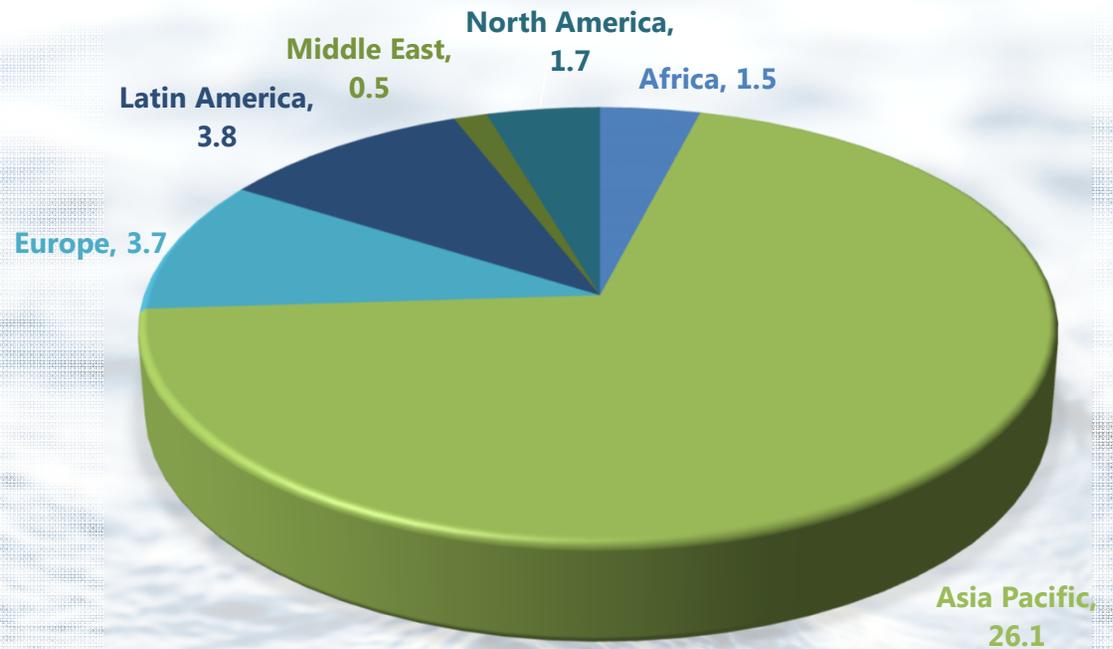
India ignites

- Up 7%
- Growth based on fewer species than other countries due to culture/religions.
- Big growth in broiler (12%) & aqua*(8%) feeds
 - *Shrimp, prawns, carp & catfish

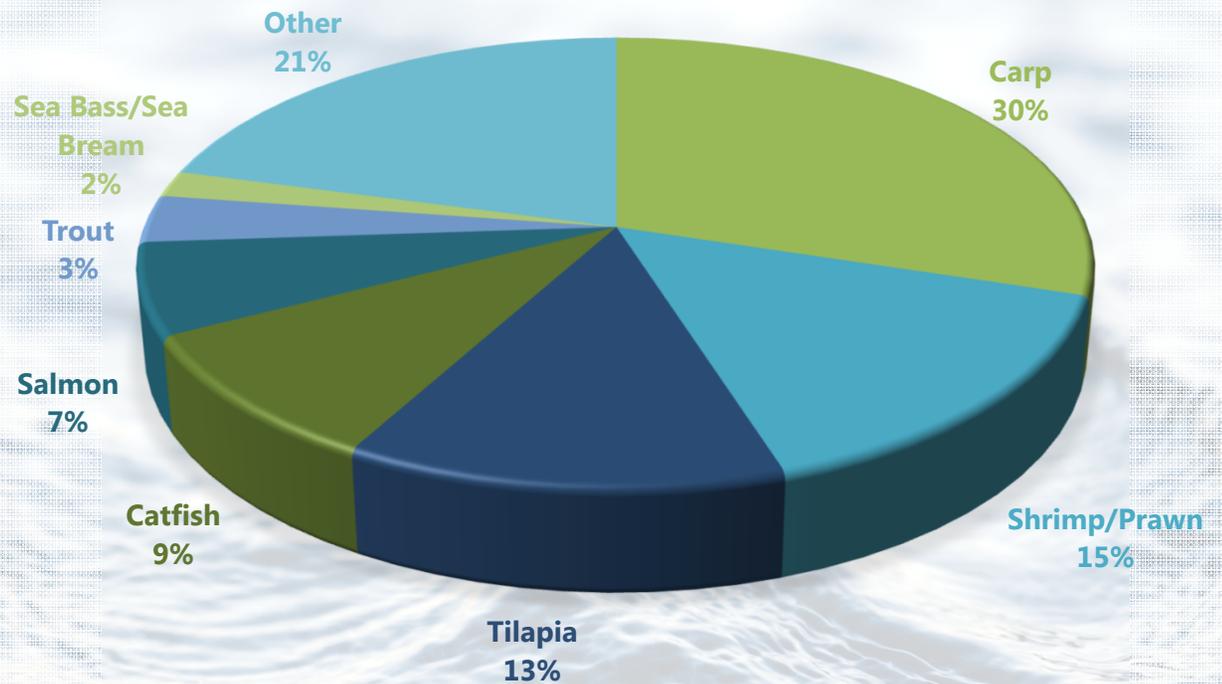
Aqua treads water

- Little global growth: 0.29%
- Big Story Asia: China, Vietnam, Indonesia, Taiwan, Japan all down
- Latin America up: Brazil, Chile & Peru
- Africa down slightly
- Middle East up, especially Iran

Aqua feed production by region



Top 7 Aquaculture Species of 2017



Value of the Feed Industry: **\$430 billion**

	Pigs	Layers	Broilers
Global Average	\$363	\$363	\$418
Percent Change	2%	-1.7%	-14%

*This is based off of countries that reported a finisher diet price

Feed Costs: Regional Averages

	Pig	Layer	Broiler
Africa	\$ 539.29	\$ 470.22	\$ 564.63
Asia-Pacific	\$ 419.22	\$ 401.40	\$ 467.53
Europe	\$ 312.98	\$ 304.93	\$ 353.02
Latin America	\$ 355.86	\$ 370.43	\$ 414.07
Middle East	NA	\$ 408.25	\$ 498.25
North America	\$ 247.50	\$ 252.50	\$ 281.50

Feed costs reflect food costs

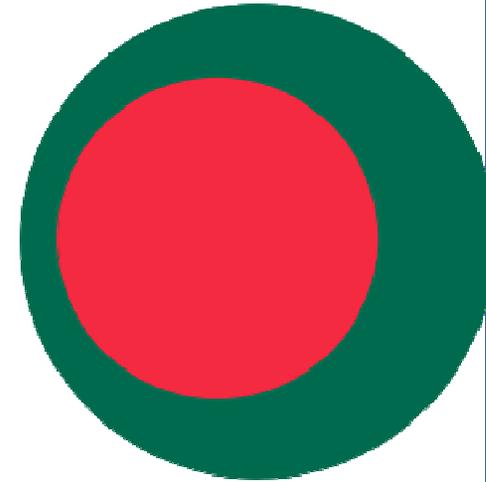
- Feed costs expected to stay low for the foreseeable future.
- Farmers & growers improving their response to disease & drought.
- Improved yields, bountiful harvests for cereals, proteins.
- Food prices are at historical low.

South Asia Five Year Growth MT

	2017 Production	2012 Production*	Growth
India	34.243	26.837	28%
Bangladesh	5.610	2.730	105%
Sri Lanka	0.884	0.615	44%
Nepal	0.881	0.739	19%

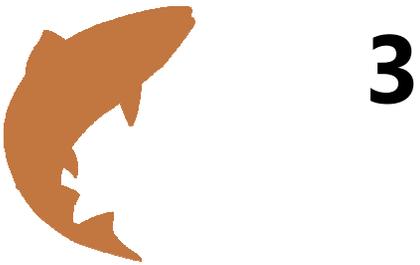
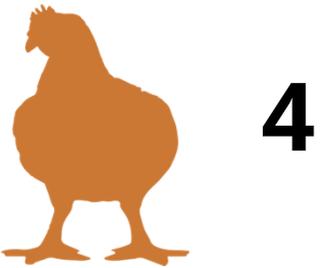
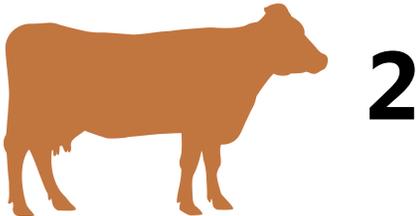
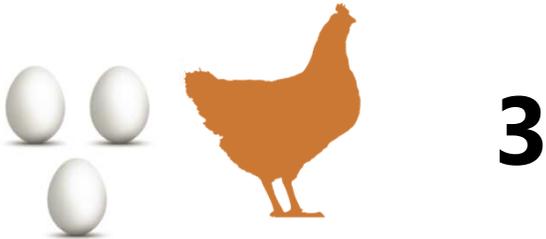
*Based off 2013 survey estimates

Feed Production MT



	2014	2017	% Variance
Layer	0.35	1.60	357%
Broiler	1.50	2.50	67%
Dairy	0.20	0.25	20%
Aqua	0.60	1.20	100%

INDIA no. 6 from Alltech Global Feed Survey #7



Species Million Metric Tons

Dairy 10.01

Layer 10.12

Broiler 12.3

Aqua 1.84

Pet 0.0375

Equine 0.014

India total 34.243 MT



Feed Production MT

Species	2016	2017	% Variance
Dairy	9.478	10.01	5.31
Layer	9.652	10.12	4.62
Broiler	11	12.3	10.57
Aqua	1.7	1.84	7.61





India Broiler Feed:

- Integration 70%
- Commercial 30%

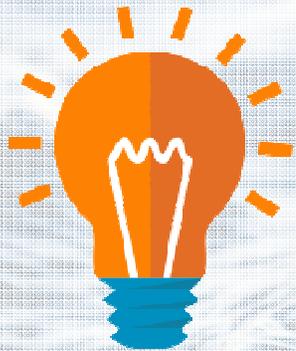
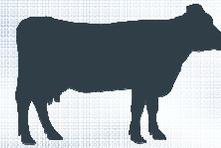
Indian Dairy Feed :

Co-operative 25%

OPPORTUNITY

Dairy 65 MT

Fish > 2 MT



?



- **Model of growing chicken – is there any impact on chicken consumption (feed production)?**
- **What is the future for commercial feed manufacturers in India?**
- **Why integrators/contract growers not buy feed from commercial feed manufacturers?**
- **Why there is resistance for species diversification by feed millers?**
- **Why horse feed/raw material/ornamental fish feed should be imported in India?**
- **Are we selling our food industry which means feed industry to consumers?**

