



# Agri-Food Outlook

2022





# Alltech® Agri-Food Outlook 2022



Despite a year of challenges, feed production grew 2.3% globally over the past year, with an estimated 1,235.5 million metric tons produced in 2021, versus 1,207.9 million metric tons in 2020.

The pig sector rebounded from African swine fever (ASF) with a feed tonnage increase of more than 6%. Aquaculture continues to grow steadily around the world, with a global increase of 3.7%. The pet sector experienced the largest growth, however, with an impressive 8.2% increase in feed production.

China remains the largest feed-producing country and also reported the biggest growth since 2020. Production exceeded expectations in many countries, mainly due to recovery from COVID-19 lockdowns.

Many sectors continue to focus on innovation and partnerships, which proved essential to sustaining business over the last year. As we look ahead to the future of agriculture, there are many reasons to be optimistic. The resilience of the agri-food sector against the challenges of COVID-19, as well as disease and supply chain disruptions, along with its continued growth, modernization and increased sustainability in the midst of those challenges are proof positive of an industry on the right track.

Region	2020 (MMT*)	2021 (MMT)	Growth MMT	Growth (%)
Africa	43.201	44.221	1.020	2.4%
Asia-Pacific	433.610	458.121	24.511	5.7%
Europe	270.205	266.840	(3.365)	-1.2%
Latin America**	177.572	178.382	0.811	0.5%
Middle East	24.791	24.592	(0.199)	-0.8%
North America***	248.123	252.928	4.805	1.9%
Oceania	10.359	10.433	0.074	0.7%
<b>Grand Total</b>	<b>1,207.861</b>	<b>1,235.517</b>	<b>27.656</b>	<b>2.3%</b>

\*Million metric tons

\*\*Latin America includes all Central-American countries, including Mexico.

\*\*\*North America includes Canada and the U.S.



## Top Ten Countries

The top ten feed-producing countries around the world produced 799.1 MMT of feed, representing 65% of the total global feed production.

Combined, feed production in these countries increased by 4.4%, compared to 2.3% global growth.

2021 Top Ten Feed-Producing Countries	2020 Total Feed Production (MMT)	2021 Total Feed Production (MMT)	Var. 2020 to 2021 (MMT)	Var. (%)
China	239.980	261.424	21.444	8.9%
USA	226.753	231.538	4.785	2.1%
Brazil	78.413	80.094	1.681	2.1%
India	39.256	44.059	4.803	12.2%
Mexico	37.925	38.857	0.932	2.5%
Spain	34.841	35.580	0.739	2.1%
Russia	32.531	33.000	0.469	1.4%
Turkey*	26.300	25.300	(1.000)	-3.8%
Japan	24.821	24.797	(0.024)	-0.1%
Germany	24.930	24.506	(0.424)	-1.7%
<b>Grand Total</b>	<b>765.75</b>	<b>799.16</b>	<b>33.405</b>	<b>4.4%</b>

\*Turkey increased in rank, entering the list of top ten feed-producing countries. As a result, Argentina dropped out of the top ten.

## Feed Production Estimations by Sector and Region

Sector	2020 (MMT)	2021 (MMT)	Growth (MMT)	Growth (%)
Broiler	343.098	350.921	7.823	2.3%
Pig	290.904	310.214	19.310	6.6%
Layer	161.073	158.789	(2.285)	-1.4%
Dairy	130.433	132.946	2.513	1.9%
Beef	117.758	115.486	(2.271)	-1.9%
Aquaculture	49.530	51.355	1.826	3.7%
Pet	31.587	34.165	2.578	8.2%



# Global Feed

## Production and Trends

**Global** feed production increased by

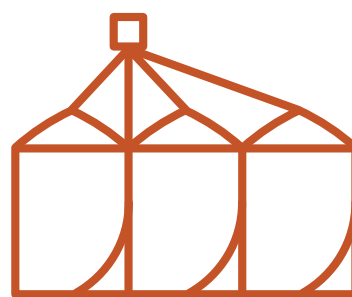
**2.3%**



Supply chain issues and inflated feed prices were cited as creating the biggest impact, with **33% of countries** reporting that high material prices were the biggest challenge for agriculture

**Africa, the Middle East and countries neighboring Russia**

reported export disruptions due to geopolitical issues



Total feed production:

**1,235.5 MMT**

While many regions are still grappling with COVID-19, the focus has returned to sustainability

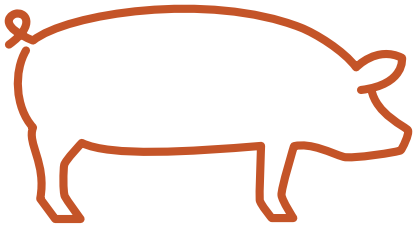


The industry continues to lean into technology, with

**56% of countries**

reporting on the trend toward tech, including digitization and IOT devices





## PIG

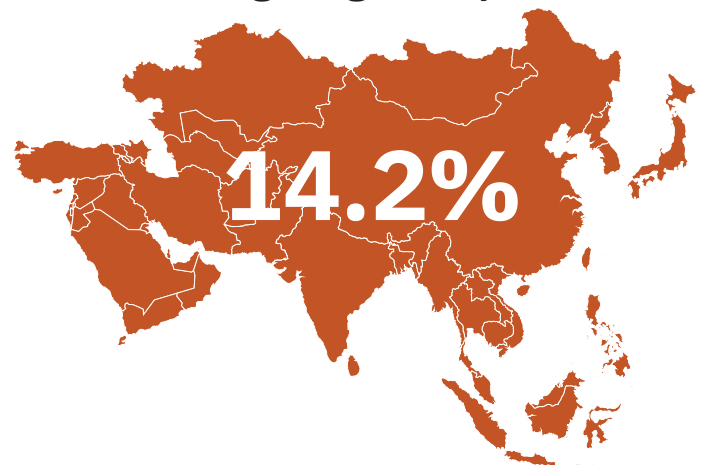
The pig sector displayed a significant comeback, with a feed tonnage increase of 6.6%, which was primarily boosted by Asia-Pacific's recovery from ASF. Japan, South Korea, Malaysia and China demonstrated just such a recovery from ASF, but Indonesia, Myanmar, the Philippines, Thailand and Vietnam continued to feel the impact of the disease. In Europe, countries where ASF is not or is no longer a problem were still impacted by a pork surplus due to a reduced demand from China.

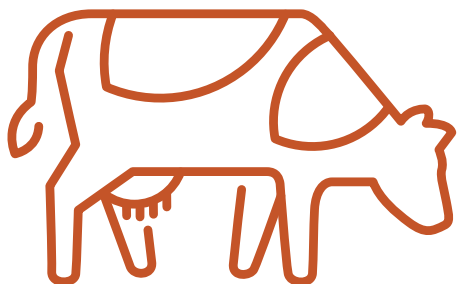
Region	Sum of 2020 Feed Tonnage: Pigs (MMT)	Sum of 2021 Feed Tonnage: Pigs (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	2.480	2.465	(0.015)	-0.6%
Asia-Pacific	121.667	138.921	17.254	14.2%
Europe	72.939	75.211	2.273	3.1%
Latin America	35.220	35.050	(0.170)	-0.5%
North America	57.247	57.161	(0.087)	-0.2%
Oceania	1.347	1.401	0.054	4.0%
<b>Grand Total</b>	<b>290.904</b>	<b>310.214</b>	<b>19.310</b>	<b>6.6%</b>

**The Asia-Pacific**  
region grew by

**Pig feed** increased

**6.6%**  
globally





## DAIRY

Globally, dairy feed tonnage increased slightly, by 1.9%. Asia-Pacific saw the biggest increase, which is mostly attributed to growth in India. As COVID-19 lockdowns eased around the world, the reopening of the hospitality industry and in-person classroom education helped boost milk consumption overall. In Australia and New Zealand, dairy feed tonnages were down 6.7% and 2.5%, respectively.

Region	Sum of 2020 Feed Tonnage: Dairy (MMT)	Sum of 2021 Feed Tonnage: Dairy (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	5.798	5.580	(0.218)	-3.8%
Asia-Pacific	23.584	25.619	2.036	8.6%
Europe	43.856	44.374	0.518	1.2%
Latin America	21.014	20.954	(0.060)	-0.3%
Middle East	6.260	6.201	(0.059)	-0.9%
North America	28.300	28.700	0.400	1.4%
Oceania	1.621	1.518	(0.103)	-6.4%
Grand Total	130.433	132.946	2.513	1.9%

**Dairy feed** production saw an increase of

# 1.9%

globally



**Asia-Pacific** had the largest increase, with

# 8.6%

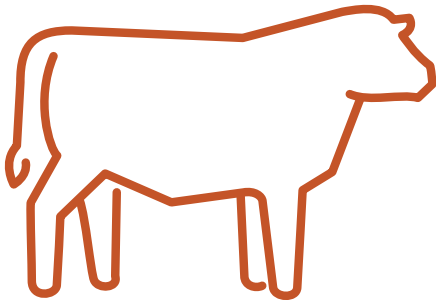


**U.S. dairy farmers** continue to grapple with low milk prices



**Oceania** decreased by

# 6.4%



## BEEF

Beef feed production saw a reduction of 1.9% globally due, in part, to challenges incurred through greenhouse gas (GHG) regulations. European markets are especially focused on reducing GHG emissions in an effort to align with COP26, the EU Green Deal and the FEFAC Feed Sustainability Charter 2030. The U.S. experienced an increased steer and heifer harvest due to carryover from 2020, as well as a record demand for beef exports. Argentina saw a significant reduction due to reduced exports, and high inflation and the devaluation of the local currency are also affecting Argentinians' purchasing power. Turkey experienced a 15% reduction in tonnage as the result of an increase in the price of raw materials and due to the high cost of importing livestock.

Region	Sum of 2020 Feed Tonnage: Beef (MMT)	Sum of 2021 Feed Tonnage: Beef (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	2.546	2.479	(0.067)	-2.6%
Asia-Pacific	13.013	13.724	0.711	5.5%
Europe	19.557	16.869	(2.688)	-13.7%
Latin America	16.365	13.446	(2.920)	-17.8%
Middle East	1.471	1.456	(0.015)	-1.0%
North America	64.106	66.772	2.666	4.2%
Oceania	0.700	0.740	0.040	5.7%
<b>Grand Total</b>	<b>117.758</b>	<b>115.486</b>	<b>(2.271)</b>	<b>-1.9%</b>

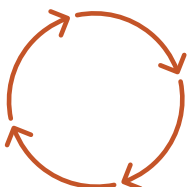
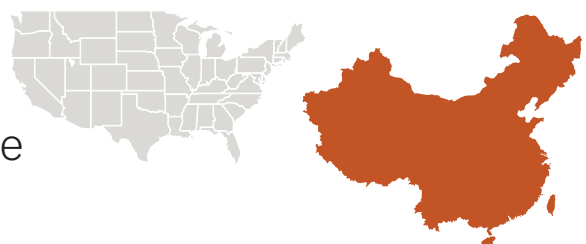
**Beef feed** decreased by

# 1.9%

globally

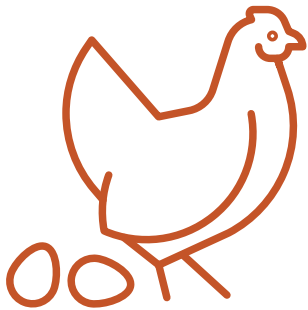


The U.S. has seen a record demand for beef exports due, in part, to the high demand from Mainland China



Sustainability concerns continue to present both challenges and opportunities





## LAYERS

The layer sector saw a slight reduction in feed tonnage, which was down 1.4%. Several countries experienced challenges due to the high costs of raw materials, combined with flat or reduced retail prices for eggs. In Europe, the most significant decreases occurred in Norway, Russia, Ukraine and Poland. Asia-Pacific also saw a decrease, while tonnage in Australia grew by 4%.

Region	Sum of 2020 Feed Tonnage: Layers (MMT)	Sum of 2021 Feed Tonnage: Layers (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	8.206	8.261	0.055	0.7%
Asia-Pacific	77.473	75.865	(1.607)	-2.1%
Europe	31.409	30.466	(0.943)	-3.0%
Latin America	23.499	23.739	0.240	1.0%
Middle East	4.418	4.365	(0.053)	-1.2%
North America	15.120	15.120	(0.000)	0.0%
Oceania	0.949	0.972	0.023	2.4%
<b>Grand Total</b>	<b>161.073</b>	<b>158.789</b>	<b>(2.285)</b>	<b>-1.4%</b>

Layer feed decreased

**1.4%**

globally



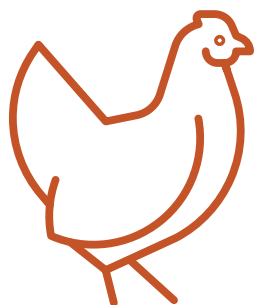
Feed production in **Australia** increased by

**4%**



The high cost of materials and low retail prices are among the biggest challenges for layer production





## BROILERS

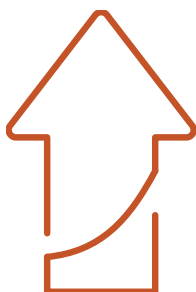
Broiler feed production increased by a solid 2.3% over the last year. A range of factors may have helped boost the broiler business, including an increase in home cooking during the pandemic and being a relatively affordable option compared to other proteins. The opposite effect was seen in the Philippines, however, where production decreased due to COVID-19. China and India accounted for the most significant increases in Asia-Pacific. In Latin America, Peru, Brazil, Paraguay and Mexico contributed significantly to the region's 5% increase.

Region	Sum of 2020 Feed Tonnage: Broilers (MMT)	Sum of 2021 Feed Tonnage: Broilers (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	11.595	11.724	0.129	1.1%
Asia-Pacific	143.428	148.340	4.913	3.4%
Europe	55.653	54.727	(0.926)	-1.7%
Latin America	62.779	65.917	3.138	5.0%
Middle East	8.109	8.056	(0.053)	-0.6%
North America	57.645	58.200	0.555	1.0%
Oceania	3.889	3.956	0.067	1.7%
Grand Total	343.098	350.921	7.823	2.3%

Broiler feed production increased by

# 2.3%

globally



In **Ireland**, consumers are driving a demand for slower-growing broilers

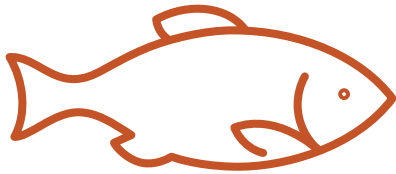
**Mainland China**

saw an increase of nearly

# 3.8%

MMT





## AQUACULTURE

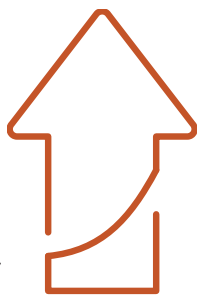
The aquaculture industry continues to thrive across all regions, leading to an impressive global increase of 3.7%. Recirculating aquaculture systems (RAS) are becoming more prevalent, and consumer demand for fish is on the rise. Markets with ASF challenges saw additional growth due to their reduced pork supply. India saw a significant increase, of 9%, in its aquaculture feed tonnage; additionally, Indonesia accounted for 10% of Asia-Pacific's growth. In Latin America, Chile, Brazil, Honduras and Ecuador contributed to the regional growth of 5.6%.

Region	Sum of 2020 Feed Tonnage: Aqua (MMT)	Sum of 2021 Feed Tonnage: Aqua (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	1.492	1.496	0.005	0.3%
Asia-Pacific	36.437	37.639	1.202	3.3%
Europe	4.322	4.485	0.163	3.8%
Latin America	4.889	5.327	0.438	8.9%
Middle East	0.500	0.500	-	0.0%
North America	1.710	1.730	0.020	1.2%
Oceania	0.180	0.190	0.010	5.6%
Grand Total	49.530	51.367	1.837	3.7%

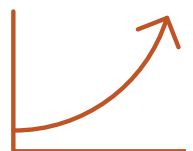
The aqua industry saw continued growth of

# 3.7%

globally

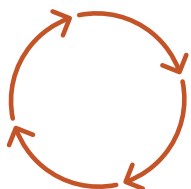


Nearly all regions reported either flat or increased production numbers



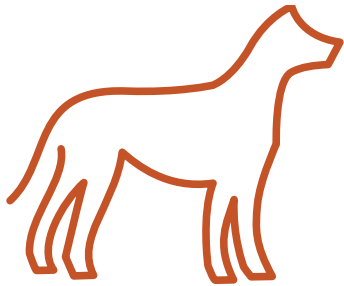
Latin America had the highest growth at

# 8.9%



Sustainability is a key factor in the success of this sector





## PET

Pet feed production had the highest increase among all of the sectors, with an 8.2% rise in production. This significant increase is largely due to the rise in pet ownership amid the COVID-19 pandemic. While some regions remained flat, there were no reported decreases in any region around the world.

Region	Sum of 2020 Feed Tonnage: Pet (MMT)	Sum of 2021 Feed Tonnage: Pet (MMT)	Var. 2020 to 2021 (MMT)	Growth (%)
Africa	0.444	0.454	0.009	2.1%
Asia-Pacific	3.256	3.813	0.557	17.1%
Europe	11.280	11.587	0.307	2.7%
Latin America	6.671	7.184	0.513	7.7%
Middle East	0.075	0.075	-	0.0%
North America	9.409	10.600	1.191	12.7%
Oceania	0.452	0.452	-	0.0%
<b>Grand Total</b>	<b>31.587</b>	<b>34.165</b>	<b>2.578</b>	<b>8.2%</b>

The pet food sector  
grew by

# 8.2%

globally



Pet ownership rose during  
the pandemic, giving a  
boost to the global industry