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Report Highlights:

Peru is the largest fishmeal producer in the world. Fishmeal production in marketing year (MY) 2023/24 is forecast at 1.18 million metric tons, a 23 percent increase compared to the previous year's estimate. Fishmeal exports in MY 2023/24 are forecast at 1.17 MMT, recovering 18 percent compared to the previous year. Due to the development of an El Niño weather phenomenon, total catch and fishmeal production are expected to decrease significantly in calendar year 2023.

Table 1. Fish Meal Production, Supply, and Distribution

Meal, Fish Market Year Begins Peru	2021/2022		2022/2023		2023/2024	
	Jan 2022		Jan 2023		Jan 2024	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Catch For Reduction (1000 MT)	5100	5100	5100	4500	0	5200
Extr. Rate, 999.9999 (PERCENT)	0.2255	0.2255	0.2157	0.2133	0	0.2269
Beginning Stocks (1000 MT)	6	6	41	41	0	4
Production (1000 MT)	1150	1150	1100	960	0	1180
MY Imports (1000 MT)	4	4	4	4	0	5
MY Imp. from U.S. (1000 MT)	0	0	0	0	0	0
MY Imp. from EU (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	1160	1160	1145	1005	0	1189
MY Exports (1000 MT)	1109	1109	1100	995	0	1174
Industrial Dom. Cons. (1000 MT)	0	0	0	0	0	0
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0
Feed Waste Dom. Cons. (1000 MT)	10	10	10	6	0	10
Total Dom. Cons. (1000 MT)	10	10	10	6	0	10
Ending Stocks (1000 MT)	41	41	35	4	0	5
Total Distribution (1000 MT)	1160	1160	1145	1005	0	1189
(1000 MT) ,(PERCENT)						

Production

Fishmeal production in marketing year (MY) 2023/24 (beginning January 2024) is forecast at 1.18 million metric tons (MMT), a 23 percent increase compared to the previous year estimate. Peru's total catch for anchovy (*Engraulis ringes*), commonly known as *anchoveta*, in MY 2023/24 is forecasted at 5.2 MMT, increasing 16 compared to the previous year. Cooler than usual waters due to La Niña weather pattern favored the healthy growth of biomass in 2021 and 2022. However, in calendar year (CY) 2023, due to a switch to the El Niño weather phenomenon, total catch and fishmeal production are expected to decrease significantly.

In March 2023, Peru's Weather Service announced they were monitoring for the development El Niño weather patterns off Peru's coast. In April, a "coastal" El Niño was observed, and this is currently expected to continue through May. Peru's Weather Service is also monitoring for the development of a Pacific-wide El Niño to impact Peru in the last months of 2023. If El Niño does fully develop, it could pose risks for Peru's anchovy biomass and production during the second fishing season in 2023 or into 2024, depending on the strength and duration of warmer Pacific waters.

The Pacific Ocean off the Peruvian coast is extremely rich in nutrients due to the Humboldt Current, an underwater cold stream that causes an upwelling process that makes the Peruvian waters rich in plankton. Anchovy schools are mostly found at around 60 kilometers off the coast but can be as far as 160 kilometers.

Peru has two major fishing seasons. The first fishing season is April-July for the north and central coast and February-June in the southern coast. The second fishing season is November-January in the north and central coast and July-December in the southern coast. These are only "reference" fishing seasons since they can vary significantly each year depending on fish availability and size. In CY 2022, the first fishing season began on May 4 and lasted until July 24 during which time 2.8 MMT of fish were authorized to be caught. The second fishing season lasted from November 28, 2022, to February 4, 2023, and during which time 2.3MMT of fish were authorized to be caught.

Peru produces two fishmeal types or grades. Fair Average Quality (FAQ) fishmeal has a protein content ranging between 62 and 65 percent and is dried by direct heat. More valuable Prime Quality fishmeal, indirectly dried by steam, has a protein content of 66 to 67 percent. There are approximately 90 licensed fishmeal-processing plants in Peru. The country's fishing fleet numbers 984 vessels, of which 684 are steel hull boats with average storage capacity of 500 cubic meters. The remaining vessels are wooden with an average storage capacity of only 100 cubic meters. The fishing fleet's processing capacity is about 7,500 metric tons (MT) per hour, an amount that if reached, would be four times greater than the permissible catch.

The government seeks to achieve more sustainable yields by issuing individual quotas per vessel and restricting the number of fishmeal processing plant licenses issued. Peru also bans the catch of fish if ten

percent of the sampled fish is below a minimum threshold size of twelve centimeters (i.e., juveniles). One of the key reasons why anchovy stocks continue to face pressure from overfishing is due to an exemption extended to small-scale/artisanal vessels (i.e., those with tonnages of up to 10 MT) to fish year-round within ten nautical miles of the coast. The table below shows that Peru's anchovy biomass and quota amounts have remained relatively stable the past three years. A strong El Niño from 2014-16 was a primary driver in reduced biomass and a lack of quotas for the second fishing season in 2014.

The small-scale/artisanal vessel catch is intended for direct human consumption. However, despite the government's efforts, most of this catch is channeled to the more profitable fishmeal processing industry. Troubling for the long-term health of this fishery is that poorly regulated small-scale/artisanal vessels normally operate where the bulk of anchovy spawning occurs and juveniles congregate.

Table 2. Peru Anchovy Seasons and Catches

Peru's Fishing Seasons, Calendar Year (MMT)						
	First Fishing Season			Second Fishing Season		
	Biomass	Quota	Catch	Biomass	Quota	Catch
2008	9.8	3.0	3.2	6.8	2.0	2.1
2009	7.2	3.5	3.4	4.3	2.0	2.0
2010	6.2	2.5	2.5	5.3	2.1	0.8
2011	9.2	3.7	3.7	10.6	2.5	2.5
2012	9.1	2.7	2.7	5.4	0.8	0.8
2013	12.1	2.1	2.0	10.3	2.3	2.3
2014	6.1	2.5	1.7	4.4	No quota	No catch
2015	9.4	2.6	2.5	6.1	1.1	1.1
2016	7.3	1.8	0.9	6.9	2.0	2.0
2017	7.8	2.8	2.4	6.1	1.5	0.7
2018	10.9	3.3	3.2	7.2	2.1	2.1
2019	7.0	2.1	2.1	8.3	2.8	1.0
2020	10.1	2.4	2.4	8.5	2.8	1.0
2021	10.0	2.5	2.5	7.0	2.1	2.0
2022	10.0	2.8	2	6.8	2.3	1.9

* Notable El Niño cycles were reported in 2009-10, 2014-16, and 2018-19.

Consumption

Local fishmeal consumption is insignificant and primarily used for shrimp production. It therefore has little to no impact on the export market. Domestic consumption in MY 2023 is forecast at 10,000 MT.

Domestic consumption is expected to remain steady in the foreseeable future, despite growing demand from northern Peru's shrimp farms. This is due to high international prices that channel domestic

fishmeal production towards the more lucrative export market. Peru's own aquaculture feed demand is filled increasingly by more affordable, imported soybean meal.

Trade

Peru is the largest fishmeal producer in the world, accounting for roughly 30 percent of the world's production. Fishmeal exports in MY 2023/24 are forecast at 1.17 MMT, recovering 18 percent compared to the previous year. The average fishmeal price in CY 2022 was \$1,642 per MT, increasing 10 percent compared to the previous year. Fishmeal is Peru's fourth largest export in terms of value, behind gold, copper, and petroleum. Fishmeal exports accounted for \$1.8 billion in CY 2022.

China will remain Peru's leading fishmeal export market for the foreseeable future. It absorbed 78 percent of Peru's MY 2022/23 fishmeal exports. Other important export markets include Germany, receiving five percent, Japan with four percent, and Taiwan receiving 2 percent of Peruvian fishmeal exports.

Policy

The Vice Ministry of Fisheries, located within the Ministry of Production, oversees Peru's fisheries and is responsible for enforcing the fishing quota. Its inspectors monitor the coast to prevent fish from being unloaded at processing plants during the fishing ban. During fishing season, inspectors monitor boats to ensure that allotted fishing quotas are not exceeded. Despite these measures, there are still several non-registered plants and boats operating.

Overfishing has forced the Ministry of Production to reduce fishing quotas and ban large-scale industrial anchovy fishing within 10 miles of Peru's coast. The Vice Ministry for Fisheries has established boat specific quotas. Individual boat quotas are set based on the vessel's historic catch record and its proven storage capabilities.

The Peruvian Oceanic Institute (IMARPE) is responsible for monitoring the pelagic resources off the Peruvian coast. It monitors anchovy school conditions and size through satellite imagery and research vessels expeditions. Quotas are established based on biomass indicators from this monitoring program. As mentioned before, if ten percent of the sampled fish are recorded as juveniles (less than twelve centimeters long), no quotas will be issued.

Attachments:

No Attachments