

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

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Required Report - public distribution

Date: 3/8/2019

GAIN Report Number: KS1906

Korea - Republic of

Livestock and Products Semi-annual

Semi-Annual

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Report Highlights:

Higher fed cattle prices in Korea last year encouraged a herd expansion that raises questions about the continued profitability of the industry in 2019. Despite the likely higher domestic production and decline in beef prices, U.S. beef exports are expected to continue to increase. The Korean hog sector is also expanding, overcoming a summer heatwave that forced the pig crop below expectations. Nevertheless, the larger herd size will drive slaughter and pork production numbers higher with an expected decline in pork prices.

Commodities:

Animal Numbers, Cattle

Production:

Calf production numbers for 2018 increased over the 2017 level as cow inventory went up from 1,355,000 head at the beginning of 2017 to 1,380,000 head a year later. Semen sales for the period March 2017 to February 2018, which is an indicator of calf production in 2018, increased twelve percent over the previous year. However, as more farmers conduct artificial insemination directly without contracting outside technicians, semen sales are not immediately determinative as regards increased calf production. Farmers may purchase semen and hold off on conducting artificial insemination until a later date, when calf or cattle prices are more favorable. As can be seen from Table 5, calf prices in 2017 did not begin to pick up over the previous year on a month-to-month basis until August ~ September 2017. This seems to have kept farmers from inseminating their heifers until prices began to pick up again during the last quarter of 2017, resulting in lower 2018 calf production than our initial projection.

Typically, Korean farmers slaughter steers at the age of 30 months. However, as steer prices escalated by 20 percent from 4.71 million won/head in June 2018 to 5.67 million won/head in December 2018, many farmers held onto their cattle until they reached 32 months in anticipation of a further increase in cattle prices, resulting in lower steer slaughter numbers than our earlier estimate. The Korean cattle traceability system enables detailed slaughter age tracking. Cow slaughter also dropped from the previous estimate as farmers retained cows to build up their herd as live cattle prices continued to rise in 2018.

Farmers increased herd size in 2018 due to favorable cattle prices resulted in a high beef cow beginning stock number in 2019. However, given the warning by industry and research institutes and scare over a price collapse in 2019 due to record high cattle inventory, farmers reduced rates of cow insemination in the course of 2018. Semen sales jumped 12.2 percent between March 2017 and February 2018 compared to the previous year, which is reflected in the 2018 calf crop. For the March 2018 to January 2019 period however, growth in semen sales was just 2 percent vis a vis the previous year, indicating that farmers' intentions to increase herd sizes have cooled. Such a change in cattle farmers' plans has resulted in lower calf crop number for 2019. It is inevitable that high cattle inventory and subsequent increased slaughter numbers will lead to a price drop in 2019. Post is projecting that cow slaughter ratio will increase from 45.3 percent to 46.2 percent in 2019. As the increased inventory come into the market in 2019, total slaughter is projected to increase by 2.9 percent. As can be seen by the following table, farmers' intentions to increase herd size as well as reduce herd size in 2019 have both gone up, reflecting unstable market conditions for 2019. The Korean native beef cattle check-off program is planning to provide support in moving 10,000 head of heifers in 2019 to feeding and slaughter in order to limit the 2019 calf crop, which will modestly dampen future herd size to mitigate the drop in cattle prices that would otherwise occur.

Table 1: Korean Farmers' Intention for Increasing Calf Herd Size

Year	Month	Farmers' Plans		
		Maintain same level	Will Increase herd size	Will reduce herd size
2018	March	97.4	2.6	0.0
	June	94.3	5.5	0.2
	September	99.8	0.2	0.0
	December	92.8	5.1	2.1
2019	March	91.7	5.7	2.5

Source: Korea Rural Economic Institute (KREI)

Table 2: Hanwoo Semen Sales (Unit: 1,000 straws)

Month	2015	2016	2017	2018	2019	Change (Percent) 1/
Jan	120	123	141	134	138	95.0
Feb	115	99	47	119		253.2
Mar	136	149	176	166		94.3
Apr	148	145	158	55		34.8
May	138	141	160	237		148.1
Jun	222	204	211	233		110.4
Jul	229	199	229	223		97.4
Aug	162	181	170	195		114.7
Sep	202	167	214	189		88.3
Oct	162	156	180	179		99.4
Nov	153	134	148	151		102.0
Dec	140	137	122	174		142.6
Total	1,927	1,835	1,956	2,055		105.1

Source: GS&J and KREI

Note: 1/ The change is a comparison of 2018 sales over the same month in 2017.

2/ The low semen sales in Feb., 2016, Feb., 2017 and Apr., 2018 were due to low sales caused by the outbreak of FMD.

Table 3: Monthly Cattle Slaughter Trend

Year	Month	Cow		Bulls/steers		Total	
		Head	Percent of total	Head	Percent of total	Sub-total	Percent of annual
2016	Jan	55,137	46.4	63,641	53.6	118,778	13.8
	Feb	26,317	53.3	23,046	46.7	49,363	5.7
	Mar	33,887	51.0	32,503	49.0	66,390	7.7
	Apr	34,406	51.8	31,980	48.2	66,386	7.7
	May	33,947	52.9	30,228	47.1	64,175	7.4
	Jun	32,134	52.9	28,641	47.1	60,775	7.1
	Jul	30,267	53.0	26,888	47.0	57,155	6.6
	Aug	44,764	49.0	46,519	51.0	91,283	10.6
	Sep	37,026	51.9	34,252	48.1	71,278	8.3
	Oct	31,374	46.4	36,206	53.6	67,580	7.8
	Nov	30,998	46.5	35,635	53.5	66,633	7.7
	Dec	36,129	44.2	45,562	55.8	81,691	9.5
	Total	426,638	49.5	435,101	50.5	861,487	100.00
2017	Jan	45,257	43.9	57,946	56.1	103,203	11.8
	Feb	22,137	43.4	28,819	56.6	50,956	5.8
	Mar	30,878	47.0	34,794	53.0	65,672	7.5
	Apr	33,938	47.5	37,489	52.5	71,427	8.2
	May	31,097	48.1	33,493	51.9	64,590	7.4
	Jun	30,405	48.3	32,482	51.7	62,887	7.2
	Jul	30,483	49.4	31,224	50.6	61,707	7.1
	Aug	36,606	47.1	41,117	52.9	77,723	8.9
	Sep	55,394	47.5	61,200	52.5	116,594	13.3
	Oct	24,123	43.9	30,773	56.1	54,896	6.3
	Nov	31,127	44.2	39,227	55.8	70,354	8.1
	Dec	33,216	45.2	40,258	54.8	73,474	8.4
	Total	404,661	46.3	468,822	53.7	873,483	100.0
2018	Jan	45,429	42.4	61,777	57.6	107,206	12.4
	Feb	30,020	45.0	36,772	55.0	66,792	7.7
	Mar	26,613	46.0	31,248	54.0	57,861	6.7
	Apr	32,132	46.0	37,788	54.0	69,920	8.1
	May	32,467	47.7	35,604	52.3	68,071	7.9
	Jun	28,381	47.8	30,960	52.2	59,341	6.8
	Jul	31,488	49.1	32,667	50.1	64,155	7.4
	Aug	33,441	44.8	41,195	55.2	74,636	8.6
	Sep	41,441	46.6	47,515	53.4	88,956	10.3
	Oct	29,796	43.3	39,060	56.7	68,856	7.9
	Nov	28,653	44.1	36,260	55.9	64,913	7.5
	Dec	33,146	43.5	42,992	56.5	76,138	8.8
	Total	393,007	45.3	473,838	54.7	866,845	100.0

Source: Quarantine Inspection Agency

Table 4: Farm Income per Head of Beef Cattle (estimate based on 600 Kg. cattle)

Description			Carcass Grade				
			1++	1+	1	2	3
Income	Thousand won	2011	1,420	672	169	-830	-1,764
		2012 a/	1,339	683	108	-998	-1,941
		2013 a/	1,553	750	194	-676	-1,444
		2014 a/	1,906	1,247	776	102	-466
		2015 a/	2,221	1,640	1,197	466	-162
		2016 a/	2,260	1,489	1,037	145	-711
		2017 a/	1,622	675	194	-1,662	-3,300
		2018	N/A	N/A	N/A	N/A	N/A
Ratio of carcass in each grade	Percent	2011	9.2	22.6	30.6	25.5	11.6
		2012	8.1	17.8	25.5	26.7	22.0
		2013	9.2	21.0	31.0	27.1	11.2
		2014	9.5	22.8	32.7	25.2	9.5
		2015	10.0	26.4	31.4	24.0	8.0
		2016	8.3	26.2	25.7	22.8	17.1
		2017	8.6	28.5	25.2	21.4	16.3
		2018	10.4	26.1	26.7	20.4	16.5

a/ Estimate

Source: KREI and Korea Institute of Animal Products Quality Evaluation

Table 5: Live Hanwoo Beef Cattle Prices (Thousand won / head)

Month	Calf						Cow			Steer		
	Female			Male								
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Jan	2611	2114	2563	3106	2681	3105	5775	5341	5599	5741	4995	4696
Feb	2676	2390	2292	3198	2578	3206	5769	5456	5546	5559	5018	4675
Mar	2364	2348	2577	3281	3160	3233	5839	5475	5729	5642	4997	4640
Apr	2603	2587	2712	3561	3444	3129	5859	5342	5720	5808	4690	4517
May	2812	2821	2836	3735	3708	3361	5915	5293	5655	5623	4561	4711
Jun	2930	2480	2903	3907	3739	3502	5972	5330	5608	5653	4504	4712
Jul	2923	2445	2791	4008	3601	3278	5996	5271	5551	5715	4582	4814
Aug	2811	2409	2667	3691	3445	3064	5862	5438	5654	5707	4610	4893
Sep	2779	3116	2860	3727	3563	3287	5777	5378	5608	5577	4721	4913
Oct	2642	2715	2656	3475	3589	3463	5839	5537	5792	5723	4604	5368
Nov	2196	2675	2858	2913	3424	3350	5522	5574	5750	5522	4915	5551
Dec	2387	2799	2779	3046	3296	3014	5580	5581	5691	5650	4899	5670

Source: National Agricultural Cooperative Federation

Exchange rate US\$1 = 1,118.3 won (As of January 8, 2019)

Production, Supply and Demand Data Statistics:

Animal Numbers, Cattle	2017			2018			2019		
	Jan 2017			Jan 2018			Jan 2019		
Market Begin Year	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post
Total Cattle Beg. Stks	3381	3381	3381	3429	3429	3428	3488	3488	3497
Dairy Cows Beg. Stocks	327	327	327	319	319	319	315	315	320
Beef Cows Beg. Stocks	1355	1355	1355	1380	1380	1380	1385	1385	1433
Production (Calf Crop)	932	932	932	955	955	947	980	980	966
Total Imports	0	0	0	0	0	0	0	0	0
Total Supply	4313	4313	4313	4384	4384	4375	4468	4468	4463
Total Exports	0	0	0	0	0	0	0	0	0
Cow Slaughter	404	404	404	399	399	393	407	407	412
Calf Slaughter	0	0	0	0	0	0	0	0	0
Other Slaughter	469	469	469	487	487	474	496	496	480
Total Slaughter	873	873	873	886	886	867	903	903	892
Loss	11	11	12	10	10	11	11	11	12
Ending Inventories	3429	3429	3428	3488	3488	3497	3554	3554	3559
Total Distribution	4313	4313	4313	4384	4384	4375	4468	4468	4463

Commodities:

Meat, Beef and Veal

Production:

As farmers retained their herd in 2018 and even extended the marketing age from the average of 30 months to 32 months at the end of 2018, total 2018 beef production dropped from the level projected earlier. The PS&D numbers have been revised to reflect this change and the official slaughter number. Imports increased to make up for this shortfall in domestic beef production.

Given that the average slaughter age is 30 months, cattle that are over 18 months at the end of 2018 will be harvested in 2019. Cattle in this age category at the end of 2018 increased 3 percent compared to the level at the end of 2017. The total 2019 slaughter number was lowered from the earlier projection to reflect the number of cattle that will be slaughtered in 2019.

Consumption:

Despite a slight drop in 2018 beef production, total beef consumption increased further than our earlier projection. Most of the increased consumption came from imported beef. The popularity of imported beef is attributable to the following reasons:

1. Major discount stores have increased their display counters for imported meat.
2. The number of franchise restaurants specializing in imported meat dishes has increased.
3. U.S. beef prices have become more price competitive as average Bulgogi cut prices have continued to drop since 2016 (Table 8). Although domestic Hanwoo beef prices have also dropped slightly in 2018 over the previous year's level, it was still 2.6 times higher than imported U.S. beef.
4. Average household purchase amount of imported beef increased 6.2 percent in 2018 over the 2017 level. Not only did the average purchase amount increase, the purchase frequency also increased 7.2 percent (Table 6).

5. The Home Meal Replacement (HMR) market has been one of the leading sectors in terms of growth as the number of single-family households increases in Korea. HMR is largely composed of ready-to-cook dishes that only require heating versus lunch box sets that are being sold in convenience stores. The competition in the lunch box market has become so severe that lunch box manufacturers are using popular chefs to market their products. Also, as more married couples tend to both work, HMR has become popular not only with single-family but also with married couples as well. TV home-shopping channels are actively promoting HMR products to meet consumers' demand for these products.
6. The processed meat market continues to grow due to its convenience. Most of the meat used for producing HMR and processed meat products use imported meat to increase its price competitiveness.

The expansion in terms of consumption through HMR and processed meat products is expected to continue in 2019. Therefore, despite increased domestic Hanwoo beef production, imported beef is projected to continue to grow and to be used in these HMR and processed meat products, due to price competitiveness.

Table 6: Consumers purchase pattern of imported beef

Description		2017 a/	2018 b/	Change
Quantity bought per purchase (kg)	U.S. Beef	1.13	1.16	2.7
	Australian Beef	0.96	0.92	- 4.2
	Average	1.05	1.04	- 0.5
Frequency of purchase (times)	U.S. Beef	2.78	2.94	5.8
	Australian Beef	3.61	3.91	8.3
	Average	3.20	3.43	7.2
Average purchase amount per household (kg)	U.S. Beef	3.15	3.42	8.6
	Australian Beef	3.47	3.61	4.0
	Average	3.31	3.52	6.2

1/ Ten periods (each period is 4 weeks) during the period of October 2016 – September 2017.

2/ Ten periods (each period is 4 weeks) during the period of October 2017 – September 2018.

Source: KREI

Two cases of FMD in February 2019 had little impact on the consumption of beef in Korea. The response by the Ministry of Forestry, Rural Administration and Agriculture (MAFRA) to these incidents in coordination with provincial-level officials was quick in order to control the FMD from spreading nationwide. Moreover, Korean consumers, having experienced previous occurrences of FMD, are less rattled when cases are reported publicly. In fact, the wholesale price for domestic Hanwoo beef in Choongchung province, where there was an FMD case, increased 6.6 percent after the FMD outbreak. Such an increase could be attributed to major hypermarkets trying to secure supply to counteract a possible spread in FMD, but also demonstrates that the mere occurrence of FMD has had little impact on domestic consumption of beef.

Table 7: Experience in Purchasing U.S. Beef (Percent)

Year	Have experience in purchasing U.S. Beef	Do not have experience in purchasing U.S. Beef
2013	51.6	48.4
2014	52.2	47.8
2015	50.1	49.9
2016	64.8	35.2
2017	65.9	34.1

Source: KREI

Table 8: Comparison of Average Retail Price for Bulgogi Cut Beef and Korean Pork (Won per 100 gram)

Origin	Quality	2016	2017	2018	Change in price		Price ratio over U.S. chilled beef		
					2017 over 2016	2018 over 2017	2016	2017	2018
Korean Hanwoo	Grade 1	4575	4622	4377	1.01	0.95	2.59	2.70	2.63
	Grade 3	3092	3160	N/A	1.02	N/A	1.75	1.85	N/A
U.S. Beef	Chilled	2500	2217	N/A	0.89	N/A	1.42	1.29	N/A
	Frozen	1765	1712	1659	0.97	0.97	1.00	1.00	1.00
Australian Beef	Chilled	2218	1962	1839	0.88	0.94	1.26	1.15	1.10
	Frozen	1500	1520	1519	1.01	1.00	0.85	0.89	0.91
Korean Chilled Pork Belly		1974	2095	1935	1.06	0.92	1.12	1.22	1.16

Source: KAMIS

Exchange rate US\$1 = 1,118.3 won (As of January 8, 2019)

Table 9: Retail Prices for Beef Short Ribs (2016 – 2018)

Unit: Won per 100 gram

Year	Month	Domestic Hanwoo (chilled)		U.S. A.		Australia	
		#1 Grade	#3 Grade	Chilled	Frozen	Chilled	Frozen
2016	January	4,991	-	1,518	2,251	2,308	1,800

	February	5,091	-	2,389	2,249	2,448	1,800
	March	4,974	-	1,786	2,249	2,309	1,800
	April	4,957	-	2,003	2,249	1,965	1,797
	May	4,930	-	1,795	2,249	2,220	1,796
	June	4,976	-	1,918	2,257	2,257	1,823
	July	4,988	-	1,781	2,264	2,137	1,850
	August	5,016	-	1,701	2,265	2,174	1,850
	September	5,007	-	2,269	2,237	2,289	1,881
	October	5,053	-	2,028	2,251	2,287	1,898
	November	5,100	-	2,249	2,266	2,248	1,867
	December	5,063	-	2,114	2,264	2,145	1,878
	2017	January	5,167	-	1,769	2,269	2,374
February		5,034	-	2,187	2,290	2,413	1,918
March		5,151	-	2,384	2,305	2,144	1,950
April		5,202	-	2,299	2,313	2,361	1,999
May		5,053	-	2,265	2,313	2,105	1,979
June		5,144	-	2,291	2,338	2,144	2,014
July		5,182	-	2,046	2,353	1,907	1,986
August		5,056	-	2,326	2,361	2,038	1,986
September		5,256	-	2,292	2,369	2,096	2,006
October		5,020	-	2,358	2,379	2,325	2,002
November		4,977	-	2,224	2,386	2,175	2,004
December		4,988	-	1,740	2,398	2,098	1,995
2018	January	5,181	-	2,100	2,407	2,177	1,972
	February	5,211	-	1,800	2,445	2,144	1,961
	March	5,262	-	1,729	2,443	2,331	1,956
	April	5,243	-	2,157	2,451	2,283	2,036
	May	5,239	-	1,715	2,454	2,229	2,082
	June	5,069	-	-	2,456	2,211	2,085
	July	5,087	-	-	2,401	2,222	1,956
	August	5,170	-	-	2,384	2,270	1,981
	September	5,224	-	-	2,407	2,334	1,989
	October	5,260	-	-	2,435	2,399	2,000
	November	5,464	-	-	2,436	2,323	2,001
	December	5,254	-	-	2,436	2,284	2,005

Source: KAMIS

Exchange rate US\$1 = 1,118.3 won (As of January 8, 2019)

Trade:

The U.S. continued to be the largest supplier of imported beef in 2018. This is largely due to the U.S. meat industry's efforts to increase consumers' confidence level in U.S. beef and competitive U.S product pricing coupled with a shortage of Australian beef supplies. Australia is also subject to an

Agricultural Safeguard (ASG) under the Korea-Australia FTA. In 2018, the trigger level for beef was set at 167,327 MT, with a safeguard duty of 40 percent, compared to the FTA duty of 26.6 percent. This will be loosened in 2019, with the trigger level set at 170,673 MT, with a safeguard duty of 30 percent, compared to the FTA duty of 24 percent. Once it reaches the trigger level, Australia focuses on exporting chilled products that can be somewhat price competitive after paying the high safeguard duty. Normally, Australia reaches its ASG level in November.

As explained in the consumption section, the popularity of HMR and processed beef products made from imported meat will foster increased beef imports in 2019. As the United States is expected to increase its 2019 beef production by 3.6 percent over the 2018 level, American suppliers will continue to be competitive in the Korean HMR market as price is a major determinant in the decision to purchase imported beef instead of domestic beef. Increased beef production in the United States, coupled with lower duties coming from the KORUS Free Trade Agreement, will further enhance the competitiveness of U.S. beef in 2019.

Table 10: Korea: Beef Imports (Thousand dollars and metric tons)

Country	Annual 2016		Annual 2017		Annual 2018	
	Value	Volume	Value	Volume	Value	Volume
United States	967,020	156,077	1,177,257	177,445	1,548,038	210,613
Australia	997,673	179,904	957,885	172,803	1,012,539	176,335
New Zealand	91,488	22,535	84,585	18,810	90,520	19,732
Mexico	2,295	623	7,126	1,932	15,322	3,665
Canada	21,244	4,485	24,364	5,174	18,390	3,457
Uruguay	10,641	2,134	11,753	2,559	6,937	1,417
Chile	3,319	828	2,469	604	2,405	555
Others	226	58	273	88	436	106
Total	2,093,906	366,644	2,265,712	379,415	2,694,587	415,880

Source: GTA

Product equivalent basis

Includes HS 0201 (fresh/chilled), HS 0202 (frozen), HS 021020 and 160250 (processed beef products)

Table 11: Comparison of Beef Import Duties Among Free Trade Agreements

Commodity		KORUS FTA	Korea – Australia FTA	Korea – Canada FTA
Beef	Content of Free Trade Agreement	Duty phased out in 15 years plus Agricultural Safeguard (Already in 7 th year of phase out)	Duty phased out in 15 years plus Agricultural Safeguard (Already in 5 th year of phase out)	Duty phased out in 15 years plus Agricultural Safeguard (In its 4 th year of phase out)

	Base duty	40%	40%	40%
	Applicable duty in 2018	21.3%	26.6%	29.3%
	Applicable duty in 2019	18.6%	24.0%	26.6%

Production, Supply and Demand Data Statistics:

Meat, Beef and Veal	2017			2018			2019		
	Jan 2017			Jan 2018			Jan 2019		
Korea, Republic of	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post
Slaughter (Reference)	873	873	873	886	886	867	903	903	892
Beginning Stocks	13	13	13	7	7	7	11	11	15
Production	281	281	281	285	285	279	290	290	287
Total Imports	531	531	531	560	555	582	565	560	585
Total Supply	825	825	825	852	847	868	866	861	887
Total Exports	0	1	0	0	1	0	0	1	0
Human Dom. Consumpt	818	817	818	841	835	853	851	845	875
Other Use, Losses	0	0	0	0	0	0	0	0	0
Total Dom. Consumptio	818	817	818	841	835	853	851	845	875
Ending Stocks	7	7	7	11	11	15	15	15	12
Total Distribution	825	825	825	852	847	868	866	861	887

Commodities:

Animal Numbers, Swine

Production:

Sow numbers continued to increase in 2018 as farmers increased herd sizes in response to high pork prices. Although average wholesale prices have been below the level of 4,000 won/kg. since October 2018, total inventory has continued to increase. Given that the average pregnancy period of sows is 114 days and it takes about 6 months to raise the piglet to slaughter weight, the effect of a price drop on total inventory does not surface until approximately 10 months later. Thus, any drop in inventory numbers caused by the drop in hog prices during the last quarter of 2018 will not take place until the second half of 2019. According to the most recent data for hog production costs, the average outlay in 2017 was 2,840 won/kg. However, the production costs for farms raising under 1,000 head was 3,450 won/kg. These small-sized farms were on the cusp of negative profit margins as wholesale prices dropped to 3,597 won/kg. in December 2018 (Table 17). Please see Table 11 for hog production costs by farm size. Smaller operations will gradually stop raising hogs unless the price turns upward. The total number of farms that raise less than 1,000 head accounts for 45 percent of total swine farms.

Table 12: Hog production costs in 2017 by farm size

	Farm size (Unit: heads, won/kg.)				
	Under 1,000	1,000~1,999	2,000~2,999	Over 3,000	Average
Production Cost	3,445	3,023	2,987	2,668	2,836

Source: Statistics Korea

In order to support pork prices, the Korean Swine Association used the check-off program to procure 1,549 MT of ham (equivalent to hams from 103,270 head of swine) during January – February 2019 to mitigate falling pork prices. The association secured 3 billion won (about \$3 million) for this project that provides 24,850 won (about \$22) per head of swine purchased and held in cold storage, away from the market. Participating companies are obliged to retain the hams in storage for at least 2 months. The association hopes to stabilize the market price by directing into cold storage about 3.4 percent of the hams that were produced during the first two months of 2019. It will also provide support worth 280 won/Kg. (\$0.25) for meat processors that purchase domestic pork for ingredient use in processed meat products. This support will be provided to meat processors that used over 50 MT of domestic pork per month during the period of September to December 2018.

The cause for the drop in hog prices can be attributed to the following factors:

1. Increased inventory
2. Increased pork imports due to low export prices from major trading partners
3. Lower demand in the restaurant business caused by shorter mandatory work hours (52 hours per week) that have virtually erased after-work party customers
4. High pork stocks
5. Increasing popularity of restaurants selling *iberico* pork from Spain, and
6. Increased use of price-competitive imported pork for producing both home meal replacement (HMR) dishes and processed meat products

Table 13: Farm Gate Hog Prices (Thousand Won/Head, 110 kg./head)

Month	2017	2018	2019
January	358	325	273
February	362	347	
March	374	343	
April	415	375	
May	425	391	
June	485	438	
July	456	432	
August	476	408	
September	457	414	
October	361	330	

November	380	310	
December	367	303	
Annual average	417	368	

Source: NACF

Exchange rate US\$1 = 1,118.3 won (As of January 8, 2019)

The pig crop numbers have dropped as 2018's unusually hot summer kept piglet numbers low. Also, the swine industry had a total of 178 cases of PED during the first nine months of 2018, compared to 77 cases for all of 2017. Increased PED and the extreme heat wave that lasted over a month in the July-August 2018 period increased the rate of piglet loss. So far, the African Swine Fever (ASF) outbreak in China and other nations has not made its way to Korea. The two FMD cases in 2019 were both on cattle farms and were controlled within a couple weeks, with no impacts seen on swine farms.

Due to the month-long heat wave and increased PED cases, total number of hogs slaughtered in 2018 dropped slightly from previous projections.

Higher 2019 beginning stocks and sow numbers will result in higher piglet production in 2019. If Korea can maintain better control over PED in 2019, the piglet loss should come down. The increased swine inventory will cause the slaughter numbers to go up in 2019, resulting in higher competition against imported pork.

Table 14: Number of Porcine Disease Outbreak Cases

Disease	2011	2012	2013	2014	2015	2016	2017	2018.9
	Number of Cases							
PED	5	1	12	169	94	82	77	178
PRRS	44	47	69	47	44	40	20	16 a/

a/ The number of cases for PRRS is up to November 2018. Final PED case numbers is only available up to September 2018.

Source: www.kahis.go.kr

Table 15: Number of Sows and Swine by Age (Thousand head)

Year	Month	Sow 1/	Number of swine by age				
			Under 2 month	2-4 month	4-6 month	6-8 month	Over 8 month
2013	Mar	973	3089	3109	2882	112	914
	Jun	952	3116	3161	2904	98	902
	Sep	897	3078	3196	2972	88	854
	Dec	895	2940	3130	2900	99	844
2014	Mar	910	2921	3000	2805	112	859
	Jun	925	2934	2980	2789	113	864
	Sep	925	3011	3102	2876	115	861
	Dec	937	3043	3108	2949	120	869
2015	Mar	940	3094	2992	2898	110	877

	Jun	948	3116	3085	2827	111	879
	Sep	943	3155	3191	2993	118	876
	Dec	958	3110	3128	2957	105	886
2016	Mar	968	3210	3183	2922	105	896
	Jun	981	3238	3124	2980	108	905
	Sep	984	3313	3238	3100	104	914
	Dec	974	3216	3099	3041	109	901
2017	Mar	1045	3422	3284	3215	120	963
	Jun	1062	3473	3391	3222	135	966
	Sep	1052	3534	3508	3365	118	969
	Dec	1058	3438	3362	3374	124	974
2018	Mar	1058	3488	3279	3302	113	974
	Jun	1069	3545	3411	3252	116	981
	Sep	1063	3619	3598	3313	139	971
	Dec	1063	3508	3474	3248	131	972

Source: Korea Statistic Administration

1/ Swine over eight months are sows and part of the swine herd that are 6-8 months old are sows.

2/ Sow numbers are based on the first day of each month and may not match with PS&D sow numbers, which are based on Dec, 31.

3/ The Korea Statistic Administration changed the data basis from sampling basis to traceability numbers from April 2018 and swine numbers have been updated based on traceability numbers from the March 2017 data.

Table 16: Monthly Swine Slaughter

Year	Month	Slaughter number (heads)		
		Total	Gilt/Sows	Boar
2016	Jan	1,411,936	709,898	702,038
	Feb	1,299,040	656,112	642,928
	Mar	1,510,625	763,038	747,587
	Apr	1,353,123	687,036	666,087
	May	1,350,794	688,440	662,354
	Jun	1,246,641	637,255	609,386
	Jul	1,219,703	624,704	594,999
	Aug	1,288,178	663,228	624,950
	Sep	1,310,488	667,176	643,312
	Oct	1,456,715	739,418	717,297

	Nov	1,570,371	793,119	777,252
	Dec	1,528,139	775,497	752,642
	Total	16,545,753	8,404,921	8,140,832
2017	Jan	1,371,397	662,551	708,846
	Feb	1,392,944	677,071	715,873
	Mar	1,508,216	728,723	779,493
	Apr	1,344,793	646,629	698,164
	May	1,369,589	663,190	706,399
	Jun	1,303,829	633,238	670,591
	Jul	1,165,254	567,688	597,566
	Aug	1,336,378	645,334	691,044
	Sep	1,567,964	747,909	820,055
	Oct	1,309,810	629,713	680,097
	Nov	1,602,937	782,337	820,600
	Dec	1,454,771	710,141	744,630
	Total	16,727,882	8,094,524	8,633,358
2018	Jan	1,600,818	776,285	824,533
	Feb	1,358,197	658,318	699,879
	Mar	1,467,841	710,139	757,702
	Apr	1,465,140	696,957	768,183
	May	1,443,726	677,326	766,400
	Jun	1,300,789	607,232	693,557
	Jul	1,292,104	607,214	684,890
	Aug	1,300,137	636,012	664,125
	Sep	1,263,318	609,171	654,147
	Oct	1,687,322	813,605	873,717
	Nov	1,663,459	799,285	864,174
	Dec	1,526,181	735,134	791,047
	Total	17,369,032	8,326,678	9,042,354

Source: APQA

Table 17: Pork Wholesale Prices

Month	Year	2013	2014	2015	2016	2017	2018
		Won per kilogram					
January		3003	3462	4590	4396	4582	3853
February		2881	3903	4717	3920	4536	4114
March		2812	4653	4657	4246	4710	4063
April		3512	4692	5044	4461	5153	4439
May		3549	4902	5845	4969	5222	4635
June		4374	5771	5623	5437	5751	5192
July		3891	5064	5664	4881	5528	5120
August		4166	5150	5472	4829	5643	4838
September		3929	4936	4840	4970	5421	4909

October	3270	4755	4313	4415	4281	3911
November	3934	5415	4745	4540	4507	3675
December	3868	4890	4361	4335	4345	3597

Source: KMTA

1/ The price dropped further to 3241 in January 2019

Exchange rate US\$1 = 1,118.3 won (As of January 8, 2019)

Production, Supply and Demand Data Statistics:

Animal Numbers, Swine Market Begin Year	2017			2018			2019		
	Jan 2017			Jan 2018			Jan 2019		
	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post
Korea, Republic of									
Total Beginning Stocks	11487	10366	11487	11273	10600	11273	11800	0	11333
Sow Beginning Stocks	1030	974	1030	1058	998	1058	1079	0	1063
Production (Pig Crop)	18191	18801	18191	20478	19200	19118	20880	0	19707
Total Imports	5	3	5	5	3	2	5	0	3
Total Supply	29683	29170	29683	31756	29803	30393	32685	0	31043
Total Exports	0	0	0	0	0	0	0	0	0
Sow Slaughter	0	0	0	0	0	0	0	0	0
Other Slaughter	16728	16880	16728	17950	17200	17369	18500	0	17700
Total Slaughter	16728	16880	16728	17950	17200	17369	18500	0	17700
Loss	1682	1690	1682	2006	1726	1691	1900	0	1723
Ending Inventories	11273	10600	11273	11800	10877	11333	12285	0	11620
Total Distribution	29683	29170	29683	31756	29803	30393	32685	0	31043

Commodities:

Meat, Swine

Production:

As total swine inventory continues to rise in 2019, total swine slaughter is projected to increase throughout 2019. Despite efforts by the Korean swine industry to support domestic pork prices by withholding hams from the marketplace, pork production is projected to increase further in 2019, as a reflection of the large swine inventory carried in from 2018. Cumulative swine feed production in 2018 was 3 percent higher than the same period in 2017.

Consumption:

The increased supply of domestic pork in 2018 enhanced the price competitiveness of Korean pork compared to Hanwoo beef and other proteins in 2018. The price ratio of domestic chilled pork bellies against U.S. frozen beef dropped from 1.22 to 1.16, meaning that domestic pork has become more

competitive against U.S. frozen beef but is still 16 percent higher. As domestic pork production expands, prices will soften in 2019.

A notable trend in pork consumption has been generated by the demographic change in Korea. The number of single-person households substantially exceeds the traditional 3-4 member households, which tend to prepare food at home. Single-person households tend to seek convenience in preparing their food and do not want to prepare foods that would result in leftovers. As a result, this change in demographics has increased the demand for Home Meal Replacement (HMR) dishes. TV dinner style lunch boxes have become increasingly popular among these single-person households. However, as beef is not a highly price competitive ingredient for HMR, the use of pork, especially processed pork, has increased in this market.

Table 18: Number of households based on number of family members

Year	Total households	Number of person(s) per household						
		1	2	3	4	5	6	7 or more
2015	19,111,030	5,203,440	4,993,818	4,100,979	3,588,931	940,413	217,474	65,975
2017	19,673,875	5,618,677	5,260,332	4,178,641	3,473,897	886,479	197,517	58,332

Source: Statistics Korea

Television home shopping channels are aggressively promoting premium HMR products. The advanced home delivery system in Korea has now allowed for consumers to order HMR products in the evening and receive it the next morning.

Processed meat products have also grown rapidly, outpacing the increase in the overall pork consumption level. Whereas overall pork consumption increased 2.3 percent in 2017 over the 2016 level, processed meat production increased 5.2 percent during the same period. Although data for processed meat production is only available up to 2017, the trend for increased production of processed meat continued in 2018 and is projected to further increase in 2019.

Table 19: Sale of lunch boxes in convenience stores (Unit: 100 million won)

Year	2014	2015	2016	2017	2018
Total sale amount	944	1,329	2,168	2,500	3,500

Source: MAFRA and aT (Forecast for 2019 Dining Trend)

Exchange rate US\$1 = 1,118.3 won (As of January 8, 2019)

Table 20: Production of Processed Meat Products (Unit: Metric tons)

Year	Sausage	Ham	Bacon	Canned meat and other processed meat products
2012	56,470	61,425	5,856	39,483
2013	65,667	62,332	6,710	46,637
2014	67,512	59,778	7,268	50,885
2015	65,447	61,345	8,440	47,230

2016	70,597	64,660	9,265	56,270
2017	77,542	64,620	10,325	58,713

Source: Korea Meat Industry Association

Aside from the increased demand for pork coming from HMR, lunch boxes and processed meat products, Korean consumers prefer domestic pork over imported pork, due to concerns over the safety of imported pork, such as the ASF outbreak in China. When consumers purchase HMR, lunch boxes, and processed meat products, the country of origin is not as noticeable as when purchasing fresh or frozen raw pork. Thus, Korean consumers have preferred domestic pork over imported pork when purchasing raw pork. However, consumers are becoming more familiar with imported pork as well as is evidenced by steady imports of retail cuts, such as single rib pork bellies, collar butt, and ribs. A new popular pork item in the retail market is Spanish black hog meat, called iberico. Apparently, this is due to the taste similarity to Korea's black hog meat from swine raised on Jeju Island, which enjoys name recognition and a higher price. Many franchise restaurants have been established that serve iberico pork dishes. Due to its popularity, according to a consumer group survey, about 10 percent of iberico pork is not genuine iberico, but pork that is passed off as iberico pork.

Trade:

Despite increased domestic production, pork imports soared in 2018. As can be seen from the following table, the increased imports mainly came from cuts used for processed meat products. The price of cuts like picnics and hams that are used for producing processed meat products dropped significantly in 2018. Some meat processors built up a year's worth of inventory in order to procure additional meat when international market pricing was especially favorable. This pattern was in effect throughout 2018, as domestic meat processors added to their warehouse stock of frozen hams and picnics, the average import price of which dropped from \$4,373/MT in 2017 to \$3,385/MT in 2018. Korea so far has suspended imports from China, Mongolia, Vietnam, Hungary and Belgium due to ASF.

Table 21: Import Price per MT of Frozen Hams, Shoulder and Cuts Thereof, with bone-in (HS 0203.22)

Month	2017	2018
	U.S. dollars per metric ton	
January	4,260	3,808
February 1/	13,316	4,381
March	4,549	4,350
April	4,229	3,482
May 1/	17,881	3,294
June	4,799	3,609
July	4,202	4,158
August	4,393	2,854
September 1/	1,550	2,275
October 1/	2,946	2,208
November	4,327	2,638
December	4,225	3,559

Average (excluding the months marked with 1/)	4,373	3,385
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1/ There were small sample sized imports in these months and therefore the average price is not commercially valid.

Source: GTA

The following table shows the cuts that account for the highest increase in pork imports. Tenderloin and loins are used for producing pork cutlets and sweet and sour pork. Picnic and ham is for producing processed meat products, and collar butt, single rib belly, and ribs are used for household sales. As can be seen from the table, the lion's share of the increase (57 percent of the total increase) came from increases in picnic and ham imports. Imports of cuts (collar butt, single rib belly and ribs) used for retail sales also went up in 2018 over the same period in 2017. Given that meat processors have added to inventory along with the efforts by the Korean Swine Industry to support the purchase of domestic hams to control pork prices, it is projected that the demand coming from this segment will drop in 2019, causing an overall drop in pork imports.

Table 22: Pork Imports by Cuts

Unit: MT and percent

	Cut	2017	2018	Change (%)
Chilled	Tenderloin	0	0	N/A
	Loin	3	1	-33.3
	Collar butt	7,228	7,130	-98.6
	Picnic	195	440	225.6
	Ham	0	6	N/A
	Single rib belly	14,831	16,264	109.7
	Rib	7	0	N/A
Frozen	Tenderloin	13	8	61.5
	Loin	1,951	13,858	710.3
	Collar butt	30,401	42,715	140.5
	Picnic	147,332	197,047	133.7
	Ham	1,952	5,645	289.2
	Single rib belly	157,300	168,564	107.2
	Rib	6,375	10,081	158.1
	Other	1	23	2,300.0
TOTAL		367,589	461,782	125.6

Source: Ministry of Food and Drug Safety (The above data is based on inspection conducted for imported pork.)

Table 23: Price competitiveness of U.S. Pork against EU Pork

Category	Country	Unit	2017	2018	2022	2027
Exchange rate			Won / US dollar	1,139	1,104	1,171
Import duty	U.S.A.	Percent	0.0	0.0	0.0	0.0
	EU		9.1	6.8	0.0	0.0
	Other		14.4	10.5	6.6	6.6
Import price	U.S.A.	U.S. dollar / Kg.	2.74	2.52	2.51	2.61
	EU		3.28	3.41	3.66	4.05
	Other		2.70	2.79	2.98	3.30
Wholesale price	U.S.A.	Won / Kg.	3,600	3,208	3,401	3,542
	EU		4,693	4,635	4,953	5,486
	Other		4,037	3,918	4,289	4,750

Source: KREI

Table 24: Korea: Pork Imports

Unit: Thousand dollars and Metric Tons

Country	Annual 2016		Annual 2017		Annual 2018	
	Value	Volume	Value	Volume	Value	Volume
United States	377,478	141,273	430,925	157,087	563,547	202,419
Germany	245,127	86,813	380,223	110,451	363,025	117,694
Spain	174,432	71,655	178,065	60,936	240,033	76,405
Chile	116,197	32,979	115,196	27,410	127,532	31,528
Canada	81,311	35,237	96,666	35,090	118,711	39,440
Netherlands	53,674	17,097	83,809	22,243	89,239	26,410
Austria	57,936	18,122	65,284	17,058	58,642	16,869
Mexico	48,382	13,762	57,044	15,340	52,024	14,535
Denmark	45,958	18,384	47,002	17,228	50,137	17,915
Belgium	38,430	12,617	36,807	9,626	38,998	10,758
France	28,102	7,480	31,149	7,285	34,305	8,111

Hungary	15,647	4,466	17,508	4,358	11,647	3,223
Others	28,194	13,306	30,935	12,330	35,846	14,129
Total	1,310,868	473,191	1,570,613	496,442	1,783,686	579,436

Source: GTA

Product Weight Equivalent basis

Includes: HS 020311, 020312, 020319 (fresh/chilled), HS 020321, 020322, 020329 (frozen), 021011, 021012, 021019, 160241, 160242, and 160249 (processed pork products)

Production, Supply and Demand Data Statistics:

Meat, Swine	2017			2018			2019		
	Jan 2017			Jan 2018			Jan 2019		
Market Begin Year	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post	USDA Official	Old Post	New Post
Korea, Republic of									
Slaughter (Reference)	16728	16728	16728	17950	17956	17369	18500	18500	17700
Beginning Stocks	103	103	103	100	100	100	199	251	180
Production	1280	1280	1280	1375	1373	1329	1415	1415	1354
Total Imports	645	645	645	735	740	753	685	680	700
Total Supply	2028	2028	2028	2210	2213	2182	2299	2346	2234
Total Exports	2	2	2	1	2	1	2	2	2
Human Dom. Consumpt	1926	1926	1926	2010	1960	2001	2122	2000	2080
Other Use, Losses	0	0	0	0	0	0	0	0	0
Total Dom. Consumptio	1926	1926	1926	2010	1960	2001	2122	2000	2080
Ending Stocks	100	100	100	199	251	180	175	344	152
Total Distribution	2028	2028	2028	2210	2213	2182	2299	2346	2234