2020 Sheep Industry Review

Prepared by the

American Sheep Industry Association

March 2021

Contents

Executive Summary

- The impacts of COVID-19 were challenging for the sheep and lamb industry.
- Disruptions from the pandemic occurred during the peak spring holiday demand and supply season.
- The closure of the 2nd largest slaughter facility in July plagued the industry for most of 2020.
- Additional slaughter plant capacity has alleviated slaughter disruptions.
- The global pandemic will continue to be at the forefront for the sheep and lamb industry going into 2021.
- Recovery of the economy will be critical for the industry to recoup demand.

Executive Summary

- The live lamb market saw volatility, but then surprise strength under COVID-pandemic.
  - Weekly feeder lamb prices started off 2020 at above 2019 levels but quickly declined and remained low through most of the summer due to the pandemic.
  - 3-Market Average (CO, SD, TX) feeder lamb price was 8% higher than 2019.
  - Slaughter lamb prices down 10% from a year ago.
  - Weekly slaughter lamb prices at auctions strengthened during the fourth quarter, surpassing 2019 suggesting strong demand.
- The wholesale market saw record highs as retail demand rose and supplies tightened – freezer inventory rose as did lamb and live lamb exports.
  - Leg, Loin & Shoulder higher but Rib lower in 2020,
  - Lamb availability at retail lower as direct to consumer and ethnic market demand rose.

Executive Summary

- Commercial slaughter was down 4% in 2020 to 2.20 million head.
  - Disruptions from the pandemic led to lower slaughter levels during the second quarter.
  - Federally Inspected (FI) slaughter was down 6% in 2020 to 1.89 million head.
  - Non-Federally Inspected slaughter (i.e., state inspected plants) was 324,000 head, up 8% from 2019.
- Total lamb & mutton imports up 11% in 2020.
  - Most of the gain in imports came from large increases in mutton shipments.
  - Lamb imports down 2%.
  - Mutton imports up 63%.

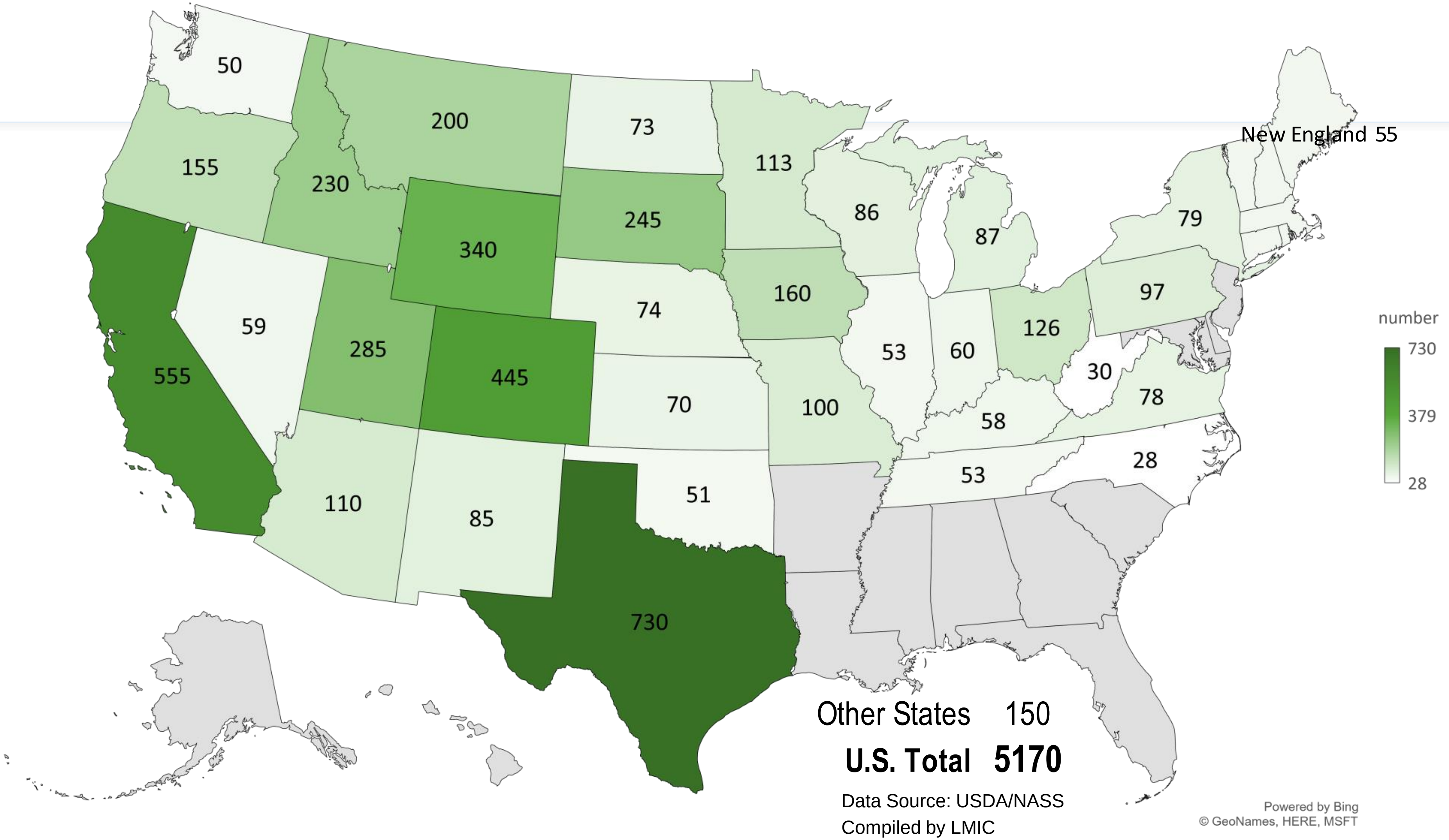
I. Inventory

January 1 Inventory Trends

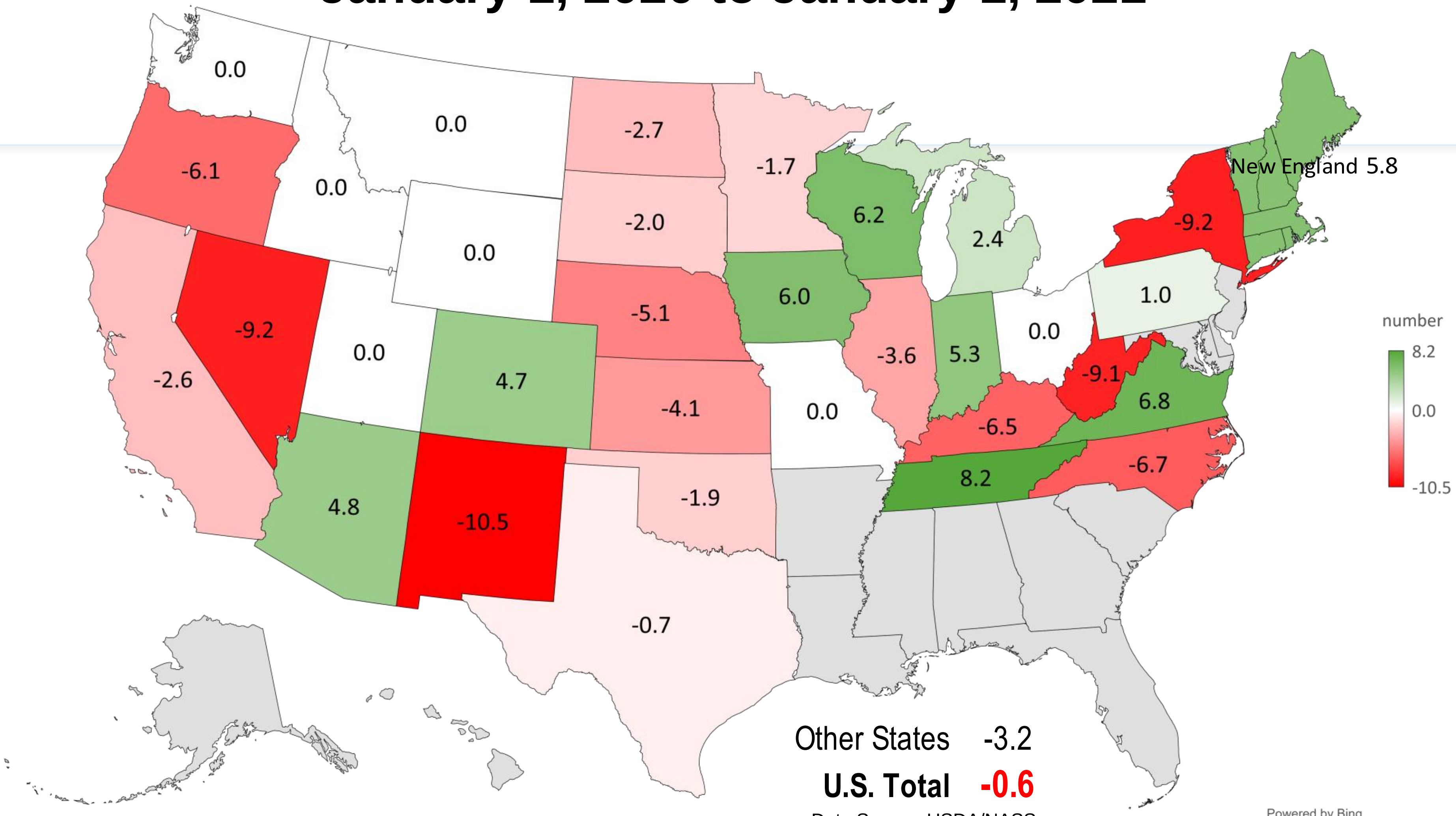
- Total sheep & lambs inventory totaled 5.20 million head, down 1% from 2019.
- Breeding sheep inventory at 3.81 million head, slight decrease from 3.82 million head on January 1, 2019.
- Texas ranks #1 in inventory; ewe numbers stabilized to 445,000 head.
- Colorado posted largest increase in ewe numbers at 8.3% or 13,000 head.

Sheep & Lamb Numbers January 1, 2021

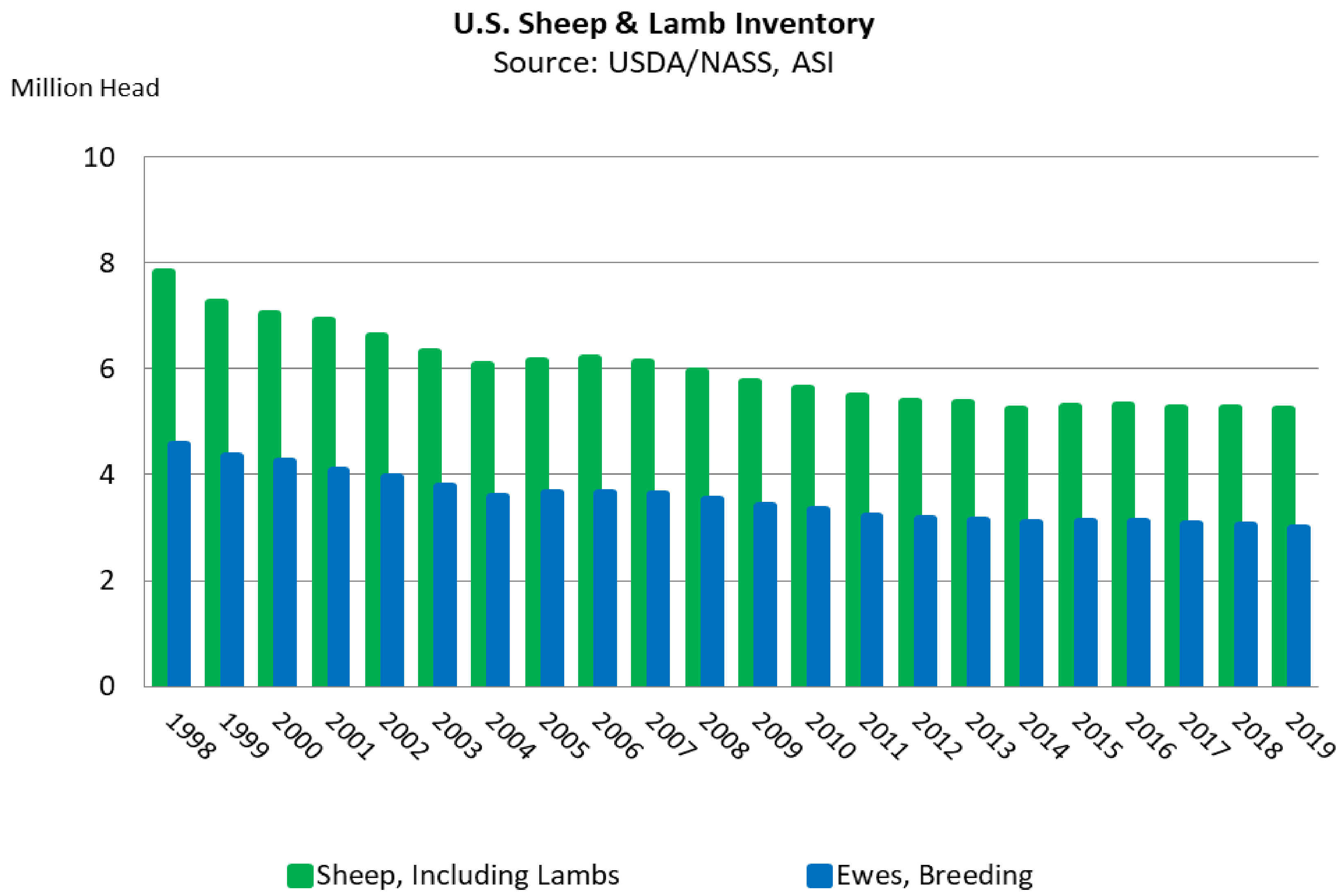
(1000 Head)



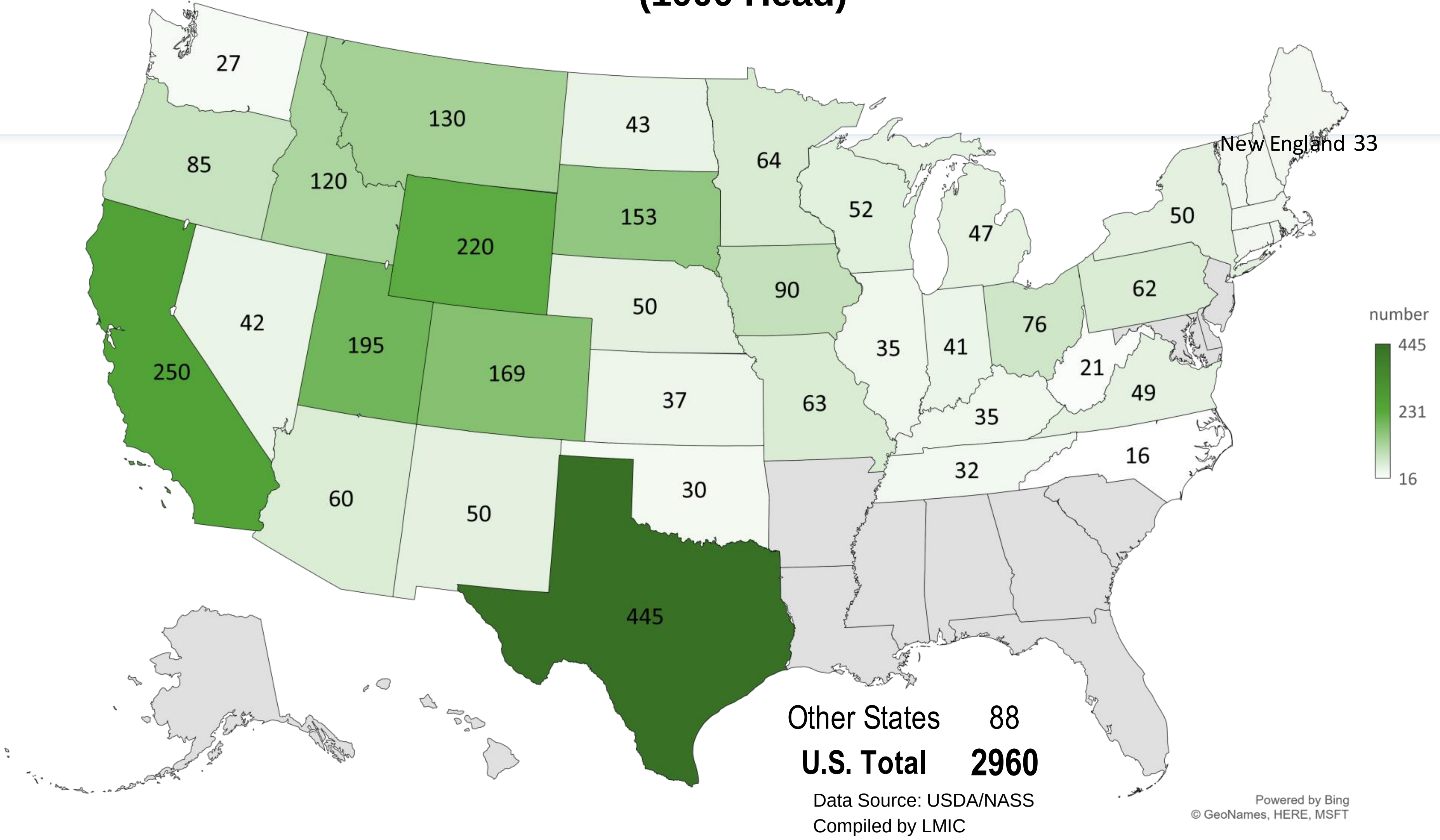
Percent Change Sheep & Lamb Inventory
January 1, 2020 to January 1, 2021



Data Source: USDA/NASS
Compiled by LMIC


U.S. Sheep & Lamb Inventory
Source: USDA/NASS, ASI
Million Head
10
8
6
4
2
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Sheep, Including Lambs
Ewes, Breeding

Breeding Ewes One Year & Older January 1, 2021
(1000 Head)



Breeding Ewes
Top Ten States
(1,000 Head)

	2017	2018	2019	2020	2021	Year-to-Year % Change
Texas	440,000	465,000	455,000	445,000	**445,000**	**0.0%**
California	275,000	260,000	250,000	260,000	**250,000**	**-3.8%**
Wyoming	225,000	210,000	215,000	215,000	**220,000**	**2.3%**
Utah	205,000	200,000	210,000	195,000	**195,000**	**0.0%**
Colorado	160,000	156,000	150,000	156,000	**169,000**	**8.3%**
South Dakota	146,000	153,000	157,000	152,000	**153,000**	**0.7%**
Montana	159,000	150,000	141,000	131,000	**130,000**	**-0.8%**
Idaho	138,000	141,000	130,000	125,000	**120,000**	**-4.0%**
Iowa	95,000	91,000	80,000	85,000	**90,000**	**5.9%**
Oregon	101,000	94,000	95,000	89,000	**85,000**	**-4.5%**

Data Source: USDA/AMS

Breeding Ewes
Top Growth States
(1,000 Head)

	2017	2018	2019	2020	2021	Year-to-Year % Change
Colorado	160,000	156,000	150,000	156,000	**169,000**	**8.3%**
Indiana	38,000	38,000	40,000	38,000	**41,000**	**7.9%**
Tennessee	29,000	29,000	29,000	30,000	**32,000**	**6.7%**
Iowa	95,000	91,000	80,000	85,000	**90,000**	**5.9%**
North Dakota	42,000	39,000	36,000	41,000	**43,000**	**4.9%**
Michigan	44,000	41,000	45,000	45,000	**47,000**	**4.4%**
Virginia	49,000	45,000	48,000	47,000	**49,000**	**4.3%**
Wisconsin	48,000	48,000	48,000	50,000	**52,000**	**4.0%**
Wyoming	225,000	210,000	215,000	215,000	**220,000**	**2.3%**
Pennsylvania	59,000	60,000	60,000	61,000	**62,000**	**1.6%**

Data Source: USDA/AMS

II. Feeder and Slaughter Lamb Market

Feeder Lamb Prices
(60 – 90 lbs.)

- 3-Market Average (CO, SD, TX) price was 8.2% higher than 2019.
- Stronger prices due to:
    - Increased direct to consumer demand
    - Real and perceived disruptions in commercial lamb supplies
    - Ethnic demand
    - Smaller supplies

	San Angelo, TX ($/cwt.)	Ft. Collins, CO ($/cwt.)	Sioux Falls, SD ($/cwt.)	3-Mkt Avg. (CO, SD, TX) ($/cwt.)
2011	215.88	207.02	216.74	213.21
2012	151.05	144.67	150.95	148.89
2013	138.81	146.51	140.08	141.07
2014	196.19	201.75	216.82	204.92
2015	190.47	189.45	197.32	192.38
2016	180.45	182.71	191.81	184.99
2017	191.27	182.26	204.60	192.71
2018	171.09	154.35	186.94	177.46
2019	178.09	165.22	184.77	177.33
2020	**191.47**	**176.08**	**202.28**	**191.84**
Year-to-Year % Change	**7.5%**	**6.6%**	**9.5%**	**8.2%**

Data Source: USDA/AMS

Slaughter Lamb Prices

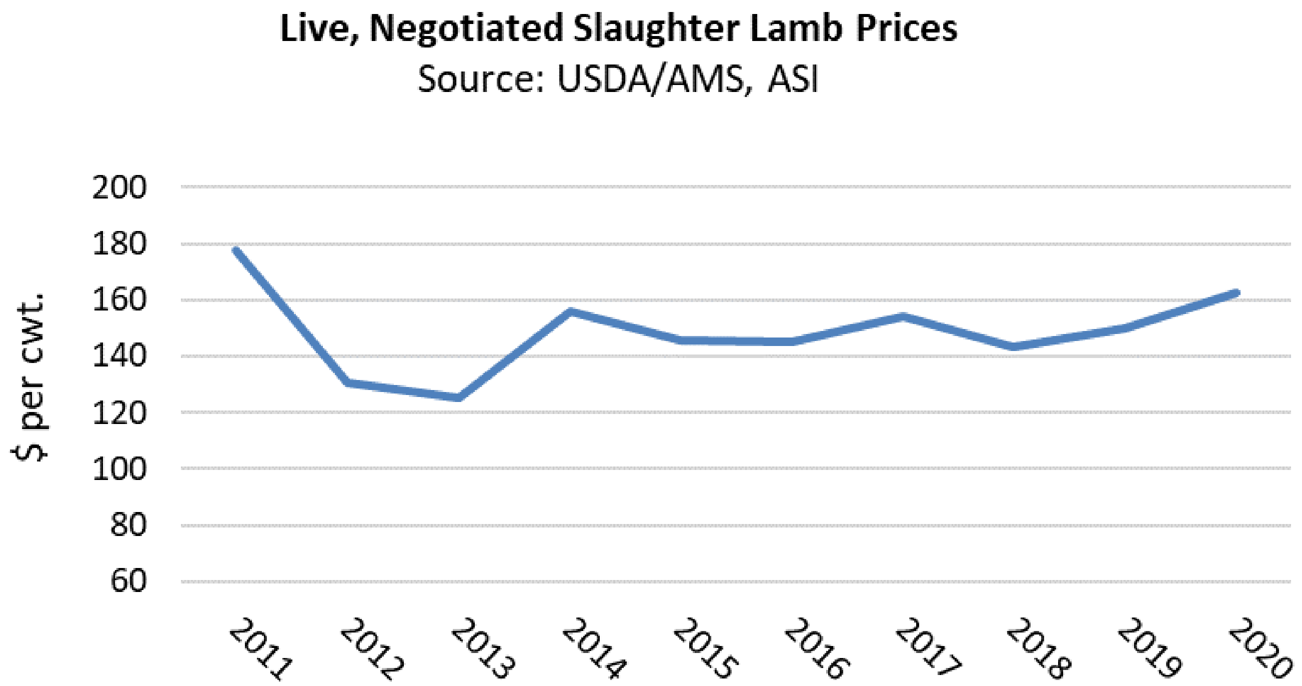
- Slaughter lamb prices down 10% from a year ago.
- Prices impacted by:
  - Food service demand down precipitously
  - Incomes lower
- Reported prices represent a smaller share of the total market due to USDA/AMS reduced price reporting due to confidentiality concerns.
- Formula/grid slaughter lamb prices – about one-third of commercial market – not reported for August-December 2020.

	Carcass Basis ($/cwt.)	Year-to-Year % Change	Live-Equivalent ($/cwt.)	Year-to-Year % Change
2011	353.12	43.2%	177.94	43.2%
2012	275.80	-21.9%	139.59	-21.6%
2013	239.37	-13.2%	120.05	-14.0%
2014	300.86	25.7%	151.10	25.9%
2015	299.55	-0.4%	150.60	-0.3%
2016	NA	NA	NA	NA
2017	309.13	NA	155.57	NA
2018	272.75	-11.8%	137.56	-11.6%
2019	287.46	5.4%	143.99	4.7%
2020	**259.99**	**-9.6%**	**129.03**	**-10.4%**

Data Source: USDA/AMS

Slaughter Lamb Prices

- Live, negotiated slaughter lamb prices averaged $162.65 per cwt. in 2020, up 9% annually.
- Carcass prices reported for January-July only, due to USDA/AMS confidentiality concerns.



Light-Weight Lamb Market Trends

- Also called the ‘Non-traditional’ or ‘Ethnic Market’
- Characterized by a lighter-weight lamb, around 100 lbs., but very variable depending upon customer.
- Lambs mainly sold direct to consumers.
- Lambs are processed by state inspected plants & some FI plants.
- The largest auction markets are New Holland, PA & San Angelo, TX, but light-weight markets exists across most auctions.

Light-Weight Slaughter Lamb Prices

- Prices very strong in 2020
- Prices supported by:
  - Smaller supplies
  - Increased ethnic demand
  - Increased direct to consumer demand

New Holland, PA Sales Barn – Choice and Prime 1-3

	60-70 lbs. ($/cwt.)	**70-80 lbs.** ($/cwt.)	**80-90 lbs.** ($/cwt.)	**90-100 lbs.** ($/cwt.)
2019	210.20	201.07	193.42	181.86
2020	**240.27**	**225.40**	**213.77**	**209.39**
Year-to-Year % Change	**14.3%**	**12.1%**	**10.5%**	**15.1%**

Data Source: USDA/AMS

III. Pelts

Pelt Prices

- Prices remained depressed due to weak demand for leather goods.
- Negative prices indicate producers had to pay for disposal of pelts.
- Reports of improvement in prices for high quality pelts in late 2020.

Unshorn	**Low Price** ($/piece)	**High Price** ($/piece)	**Avg.** ($/piece)
Supreme	-3.00	1.36	0.60
Premium	-3.00	0.02	-0.70
Standard	-3.00	-1.30	-1.63
Fair	-3.00	-1.63	-1.55
Mixed Class	-3.00	-0.20	-1.28
Damaged/Pulled	-3.00	-0.28	-1.74
Shorn			
Supreme	-3.00	1.36	-0.07
Premium	-3.00	0.21	-0.80
Standard	-2.97	-2.09	-1.87
Fair	-3.00	-1.18	-1.83
Mixed Class	-3.00	-2.18	-2.42
Damaged/Pulled	-3.17	-2.29	-2.43

Data Source: USDA/AMS

IV. Replacement Sheep Prices

Replacement Prices

- Overall prices stronger than a year ago.
- Largest year-to-year gains posted for aged ewes.

	Ewe Lambs	Yearling Ewes	Young Ewes 2-4 years	Middle Aged Ewes 5-6 years	Aged Ewes	Rams (Under 12 months)
2016	NA	225.99	186.36	151.34	96.30	NA
2017	294.50	256.00	181.37	147.60	95.40	NA
2018	212.05	242.07	189.30	141.10	92.09	NA
2019	164.97	234.33	178.25	141.36	95.83	NA
2020	**185.26**	**193.06**	**181.83**	**160.03**	**127.13**	**409.37**
Year-to-Year % Change	**12.3%**	**-17.6%**	**2.0%**	**13.2%**	**32.7%**	**NA**

Data Source: USDA/AMS

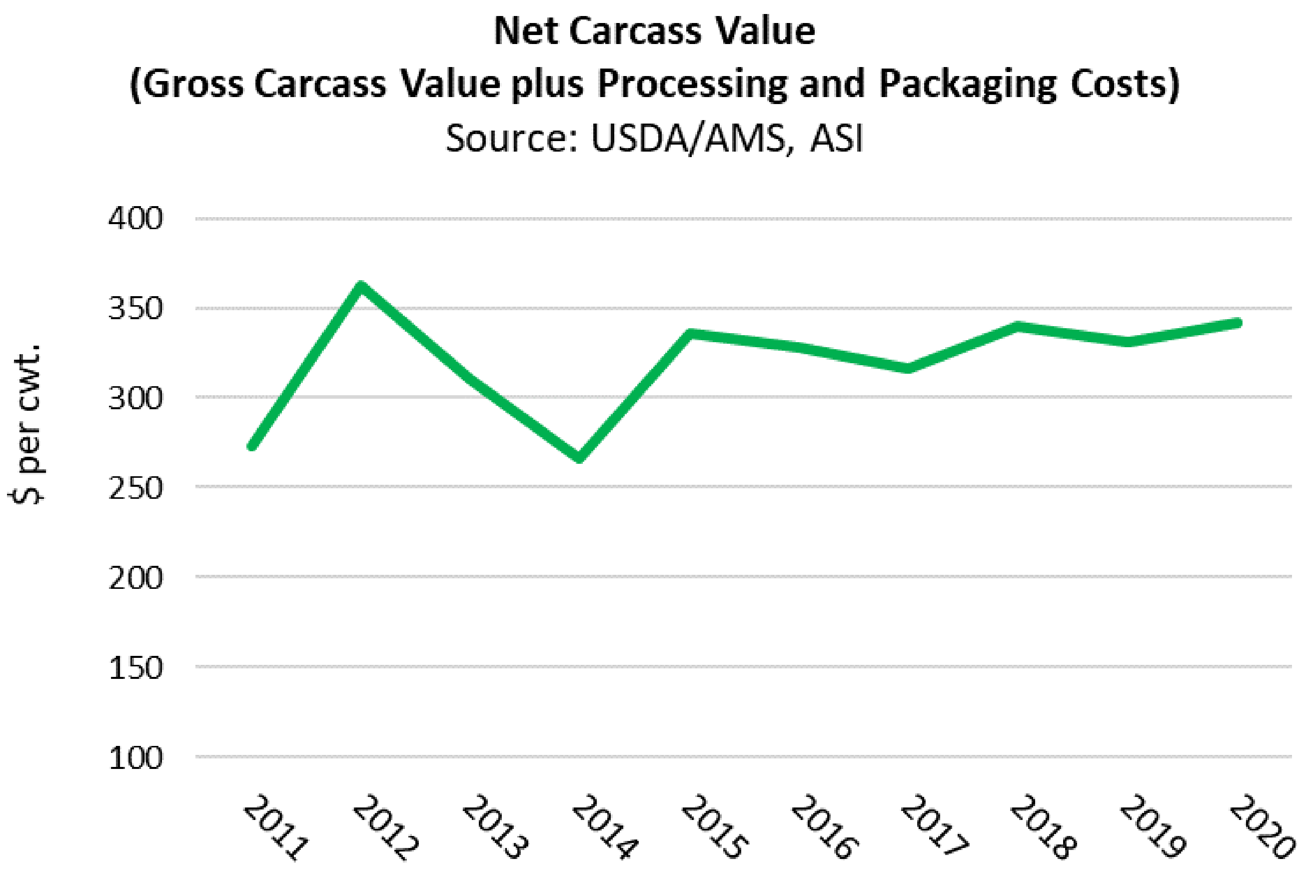
V. Wholesale Lamb Market

Wholesale Lamb Market Trends

- Leg, Loin & Shoulder Higher in 2020, Rib Lower
- Wholesale market supported by:
  - Stronger retail demand
  - While food service sales slowed, lamb was repositioned at retail.
  - Lamb muscle cut exports to Mexico increased

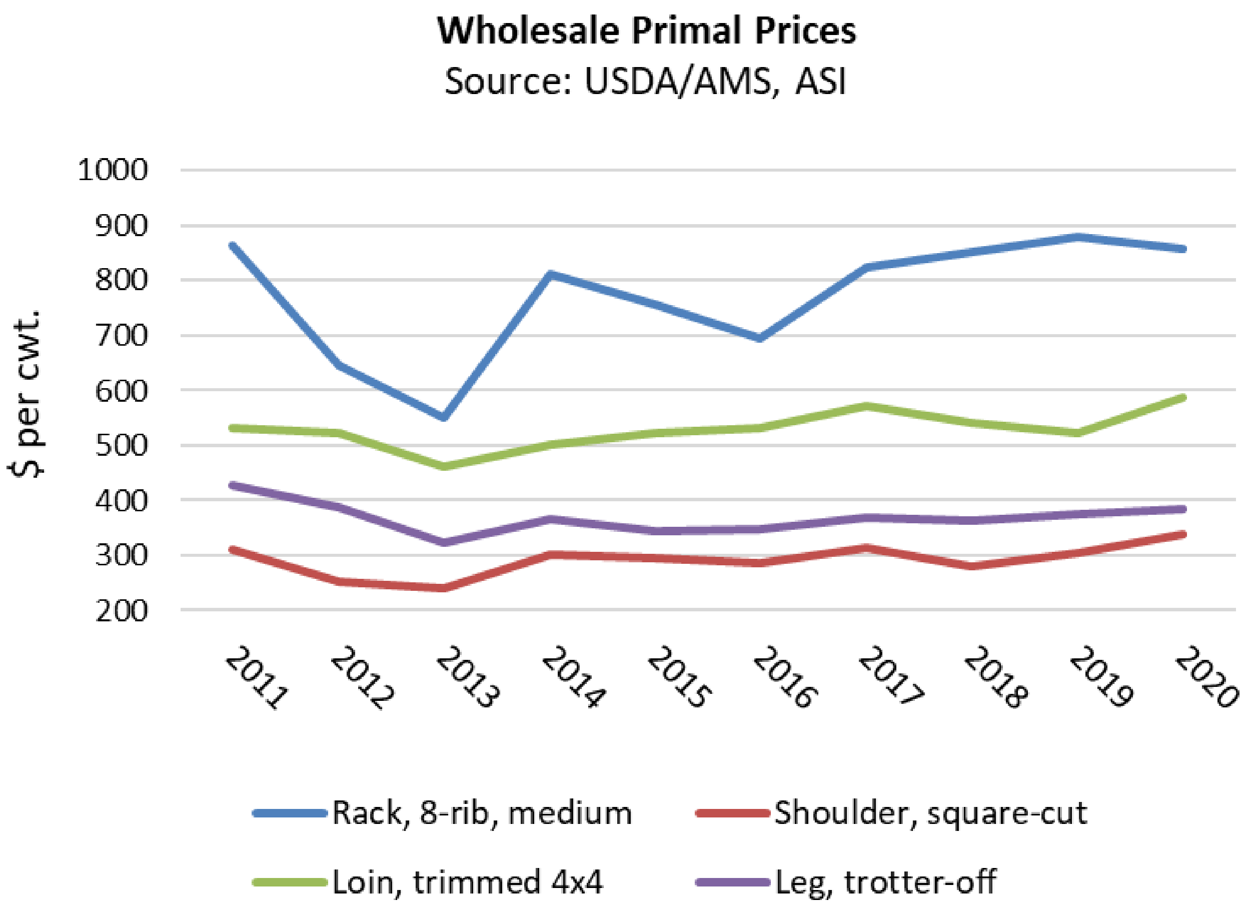
Carcass Cutout Value

- The cutout value is an approximate value of a carcass calculated using the prices paid for wholesale cuts of lamb.
- Gross carcass value averaged $427.48 per cwt. in 2020, up 9% year-on-year.
- Net carcass value is the gross cutout after processing and packaging.
- Net carcass value averaged $340.88 per cwt., down 0.4% annually.



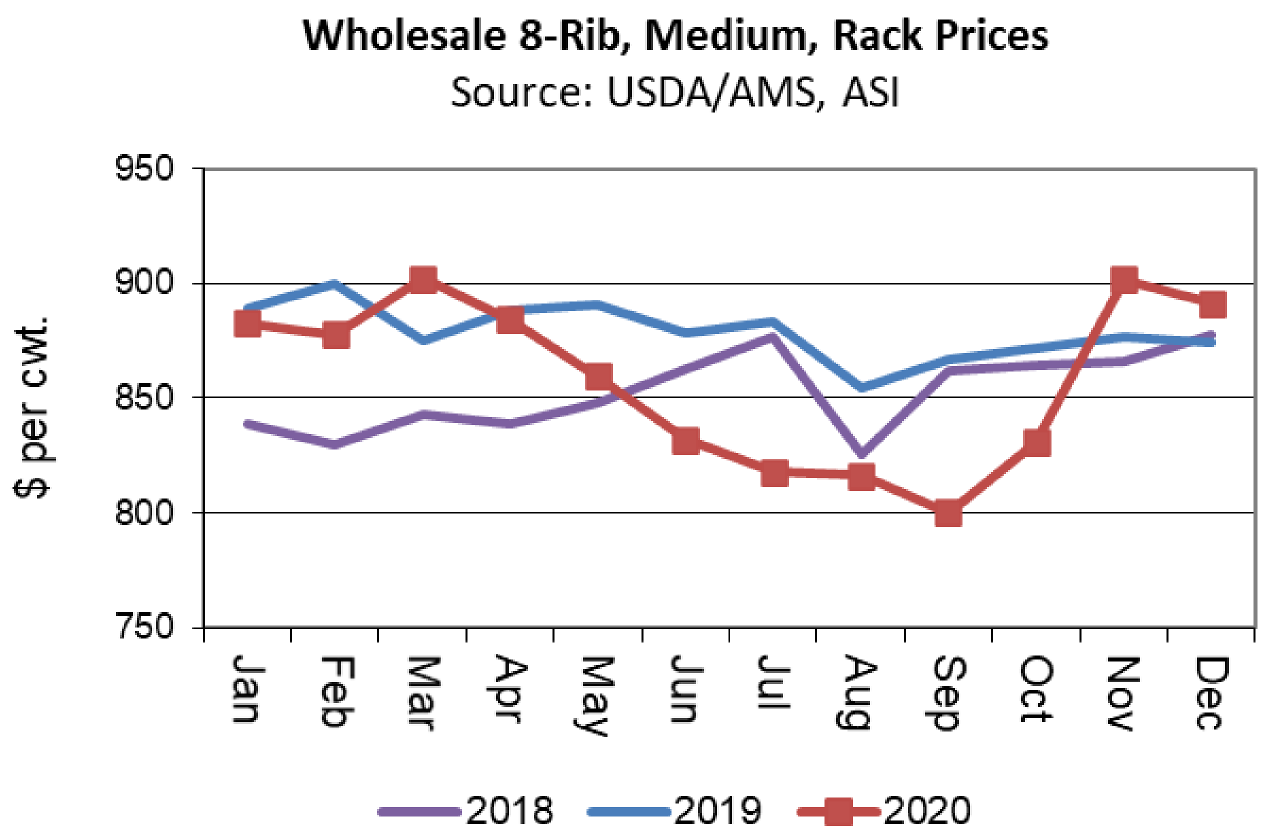
Carcass Cutout Value

- Leg, Loin & Shoulder higher in 2020.
- Rib lower in 2020.



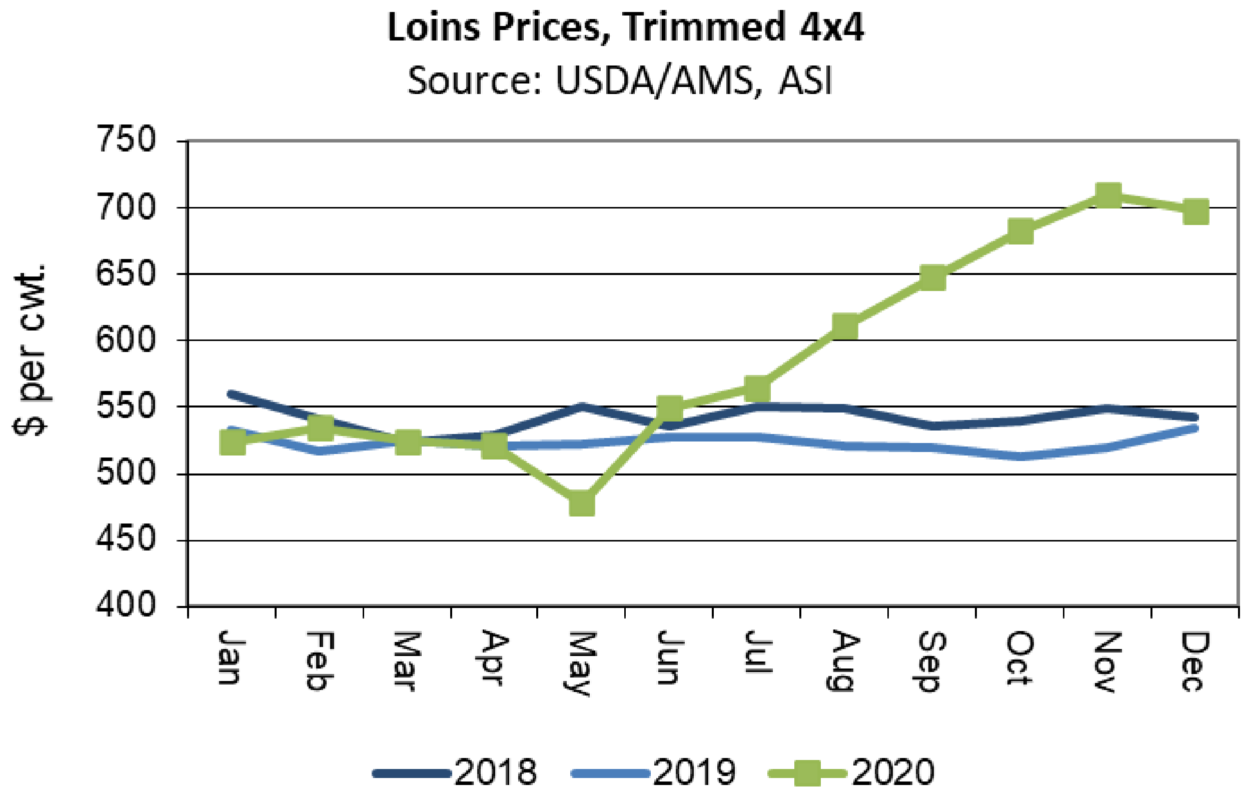
Rack Prices

- Rack, 8-Rib medium price averaged $858.07 per cwt. in 2020.
- Prices down 2% annually.



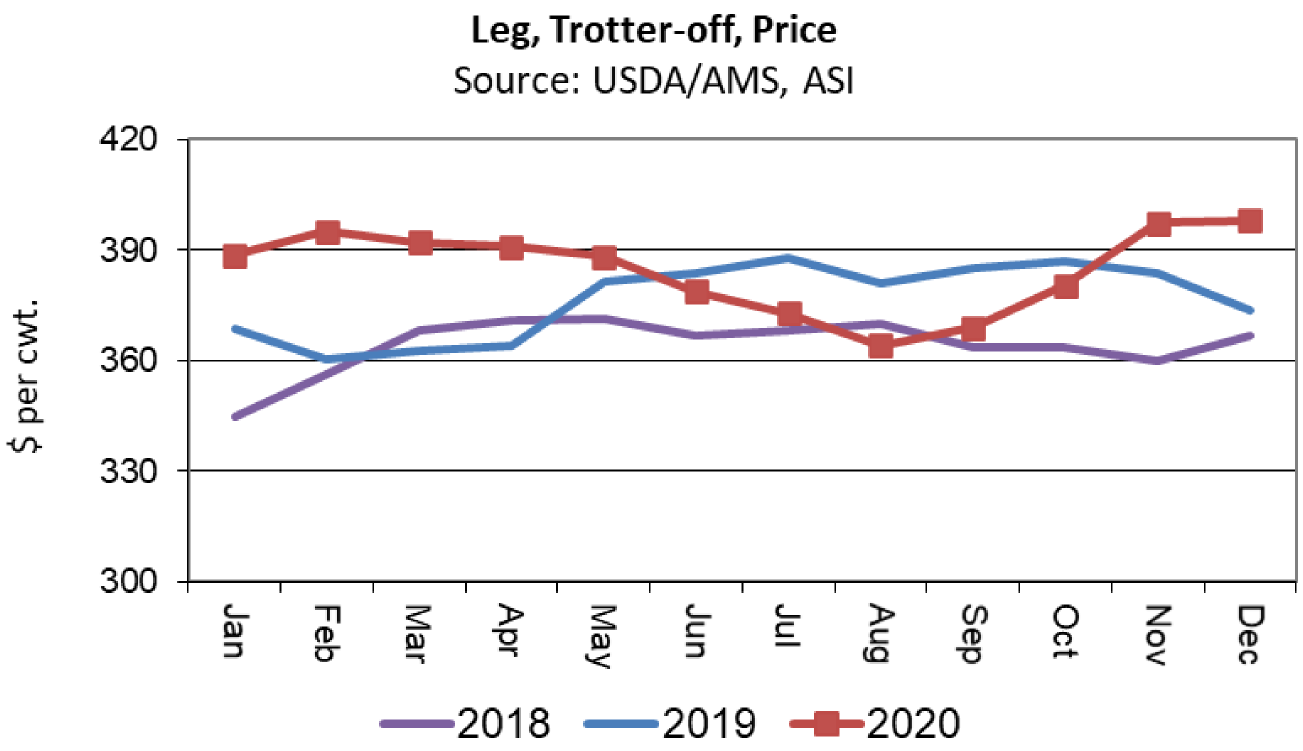
Loin Prices

- Loin prices averaged $587.31 per cwt. in 2020.
- Prices up 12% annually.



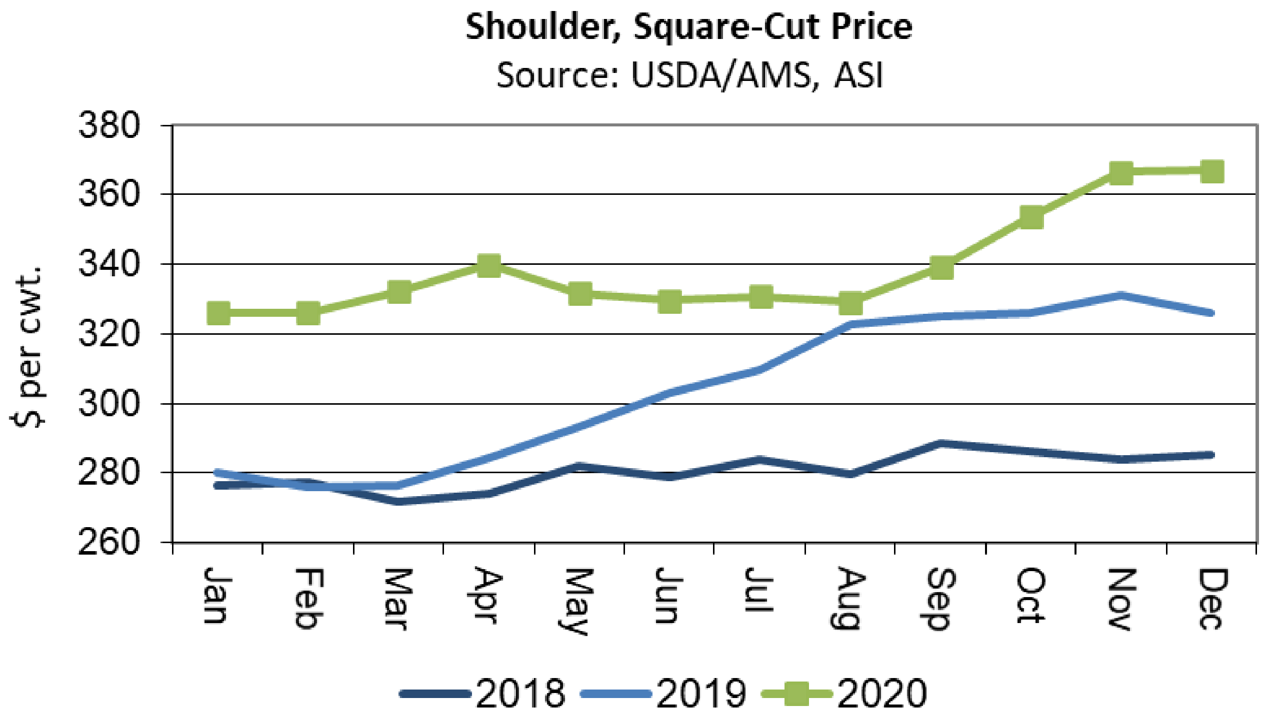
Leg Prices

- Leg, Trotter-Off, price averaged $384.60 per cwt. in 2020.
- Prices up 2% annually.



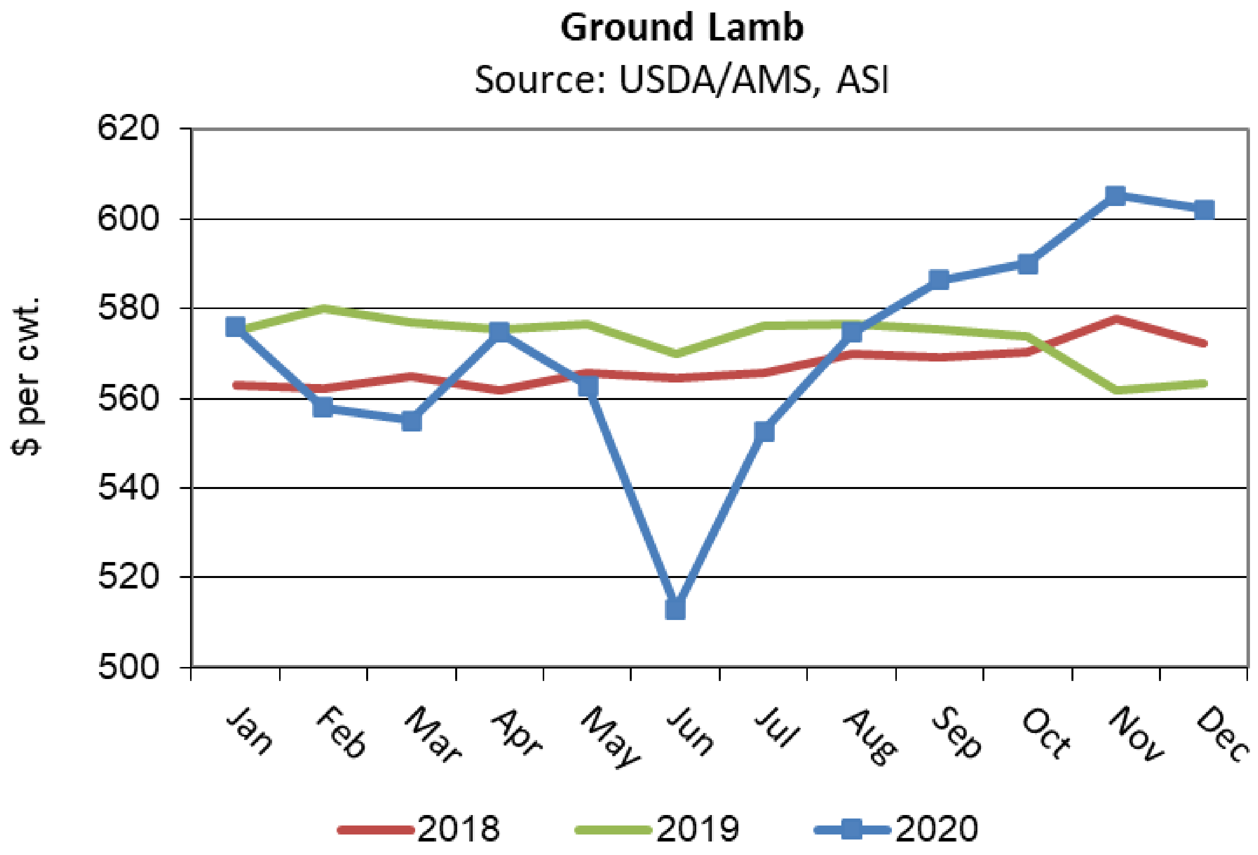
Shoulder Prices

- Shoulder price averaged $339.37 per cwt.
- Prices up 11 annually.



Ground Lamb Prices

- Ground lamb averaged $570.90 per cwt. in 2020.
- Prices down 0.4% annually.



FI Lamb & Mutton Yield Grades

- YG 4s & 5s down in 2020.
- Percentages derived from yield grade by pounds.

	YG1 %	YG2 %	YG3 %	YG4 %	YG5 %	% of FI Lamb Slaughtered
2011	5.7	32.7	42.7	15.7	3.3	74.0%
2012	5.1	28.7	36.2	17.4	12.6	72.7%
2013	7.2	36.4	35.3	13.6	7.5	66.9%
2014	5.3	33.0	42.1	14.3	5.3	68.2%
2015	5.2	28.7	41.5	16.5	8.1	64.2%
2016	5.2	28.7	41.5	16.5	8.1	61.3%
2017	5.5	30.4	42.0	15.2	6.9	58.6%
2018	5.0	27.1	39.3	17.9	10.7	57.3%
2019	4.6	26.1	42.3	19.1	7.9	55.8%
2020	**4.5**	**29.8**	**44.7**	**16.0**	**5.0**	**50.4%**

Data Source: USDA/AMS

VI. Retail Lamb

Retail Feature Activity

- Store featuring for racks was higher, but prices were lower due to COVID impacts on foodservice.
- Retail feature activity mostly lower in 2020 as COVID-induced demand was strong.

Number of Stores with Feature Activity

	Rack	Loin Chops	Shoulder Blade Chops	Bone-in Leg	Boneless Leg
2019	280.89	1117.88	642.31	780.50	575.16
2020	**392.19**	**568.65**	**463.96**	**565.88**	**336.39**
Year-on-year % Change	**39.6%**	**-49.1%**	**-27.8%**	**-27.5%**	**-41.5%**
Feature Weighted Avg. Price, $ per cwt.					
2019	14.34	8.19	5.75	6.10	7.95
2020	**12.29**	**8.46**	**5.92**	**6.03**	**7.73**
Year-on-year % Change	**-14.3%**	**3.3%**	**2.9%**	**-1.1%**	**-2.8%**

Data Source: USDA/AMS

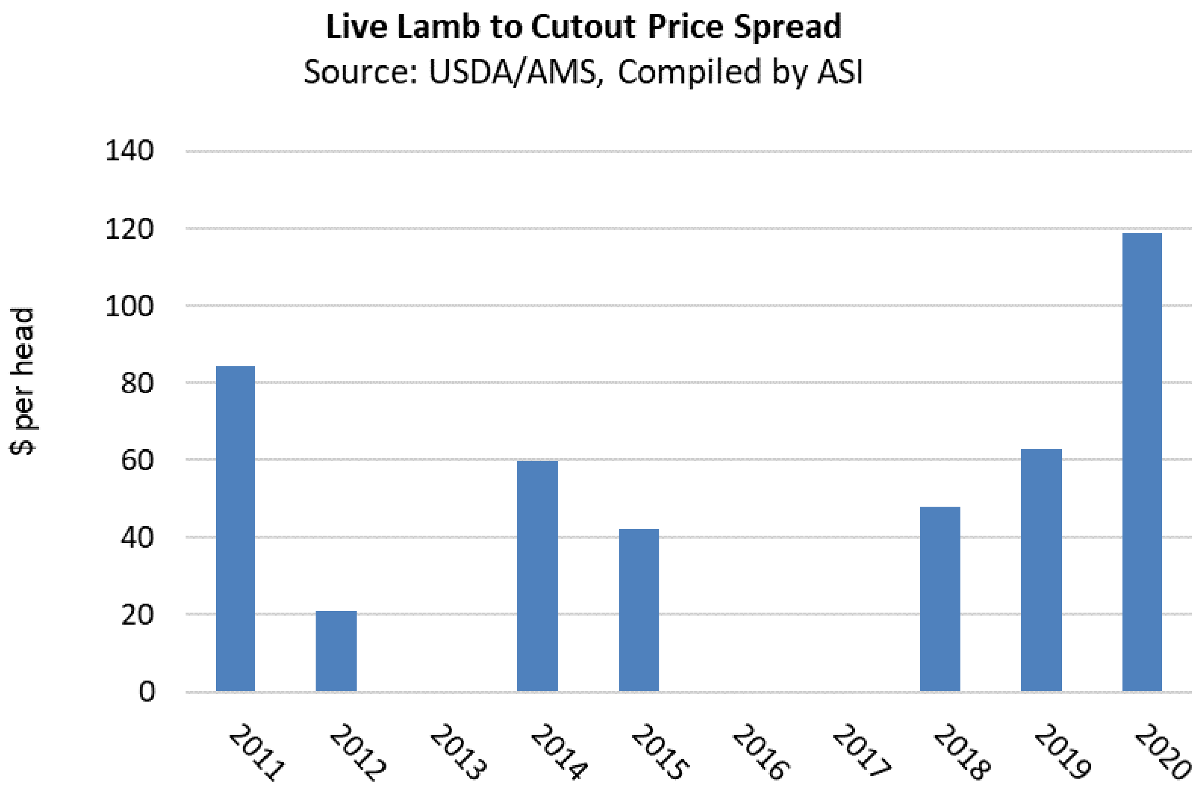
VII. Price Spreads

Understanding Price Spreads

- Packer price spreads do not include processing costs or overhead.
- Packers sell wholesale primals (cuts) which are combined & called the carcass cutout.
- Packers also sell carcasses, to the processing industry and to one another.
- The price spreads assume that all that is processed sells & no allowance is made for cold storage tonnage.
- Packer spreads do not represent profitability.

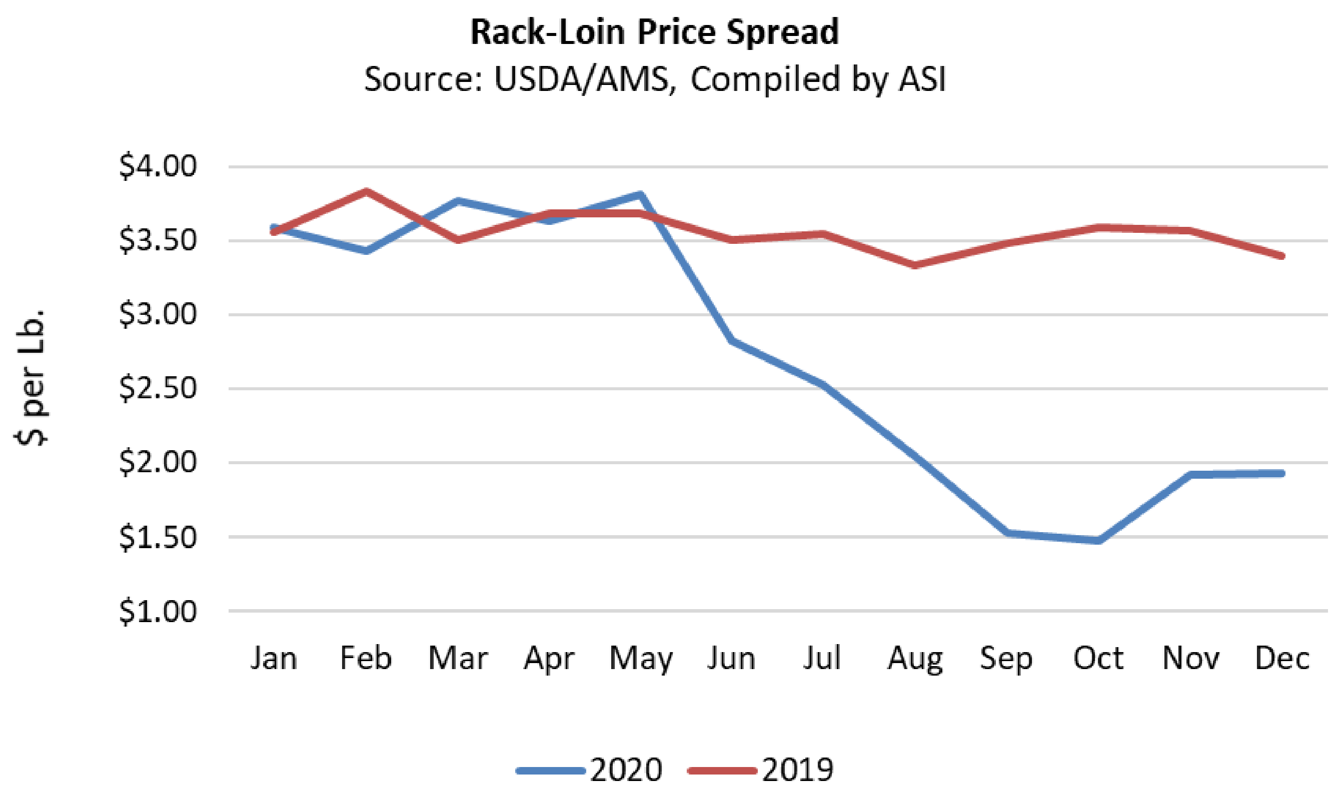
Live to Cutout Spread

- Wholesale-Live Lamb Price Spread sharply higher in 2020
- Wholesale composite (cutout) value rose 8% and live lamb value fell 12%.
- Note: Lack of reporting due to confidentiality limited spread estimates.



Rack to Loin Price Spread

- The Rack to Loin Spread narrowed 24% to $2.71 per lb.
- The rack lost 2% year-to-year & the loin increased 12% .
- Comparing wholesale cuts: rack, medium, 8-rib & 4x4 trimmed loins.



VIII. Production and Supply

Slaughter

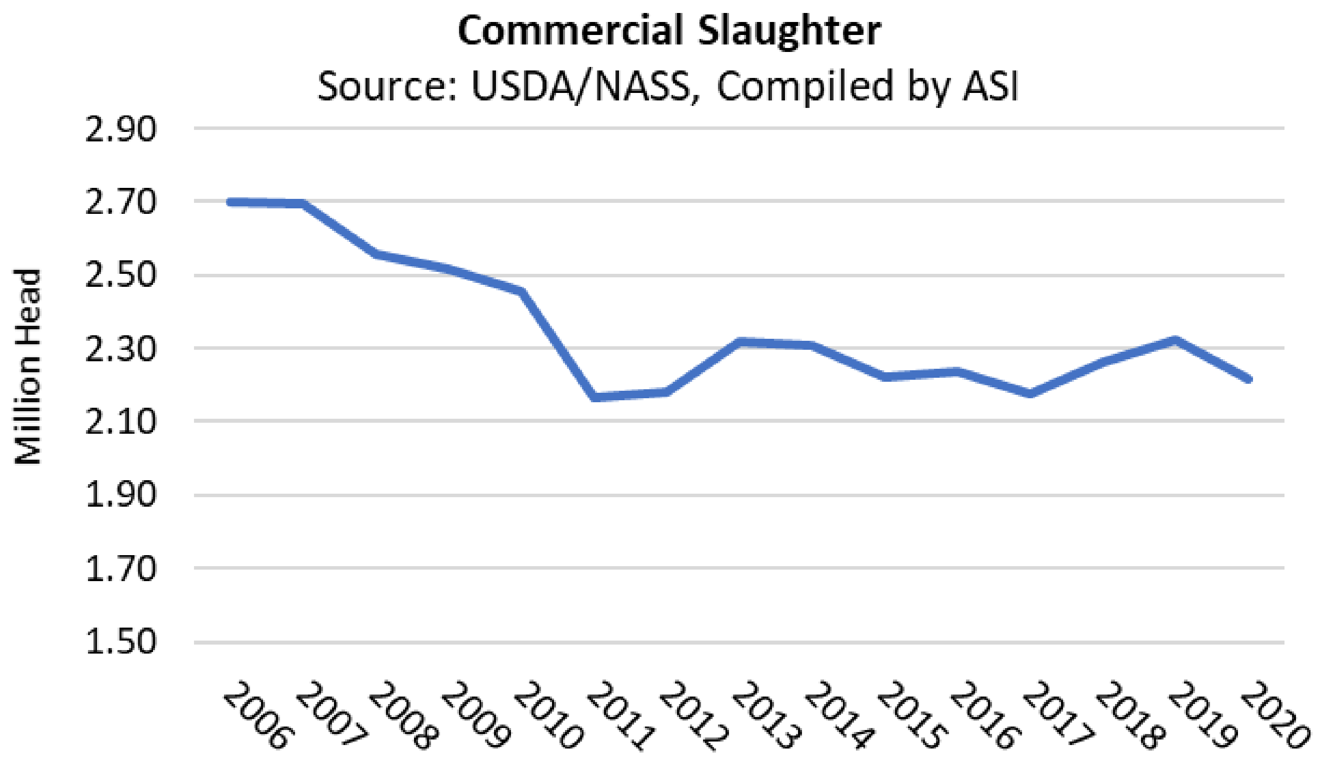
- Commercial slaughter was down 4% in 2020 to 2.20 million head
- Federally Inspected (FI) slaughter was down 6% in 2020 to 1.89 million head.
- FI and Non-Federally Inspected slaughter equal commercial slaughter

	Commercial Slaughter (Head)	Year-to-Year % Change	Federally Inspected Slaughter (Head)	Year-to-Year % Change
2011	2,164,300	-11.9%	2,000,200	-11.5%
2012	2,182,900	0.9%	2,012,100	0.6%
2013	2,318,700	6.2%	2,120,100	5.4%
2014	2,309,700	-0.4%	2,104,600	-0.7%
2015	2,223,500	-3.7%	1,998,400	-5.0%
2016	2,237,800	0.6%	2,009,600	0.6%
2017	2,178,100	-2.7%	1,937,200	-3.6%
2018	2,265,000	4.0%	1,999,800	3.2%
2019	2,321,700	2.5%	2,020,400	1.0%
2020	**2,219,100**	**-4.4%**	**1,894,800**	**-6.2%**

Data Source: USDA/AMS

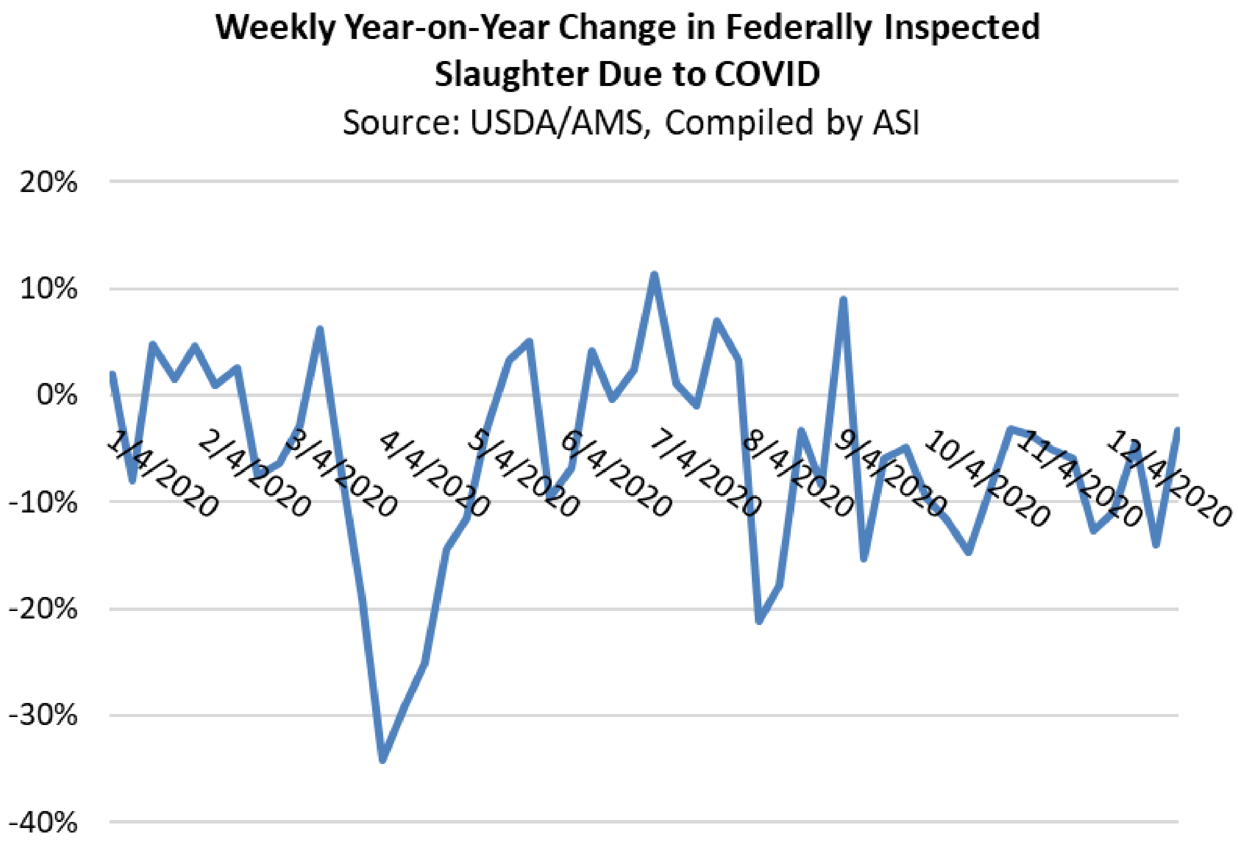
Commercial Slaughter

- Non-Federally Inspected slaughter (i.e., state inspected plants) was 324,000 head, up 8% from 2019.



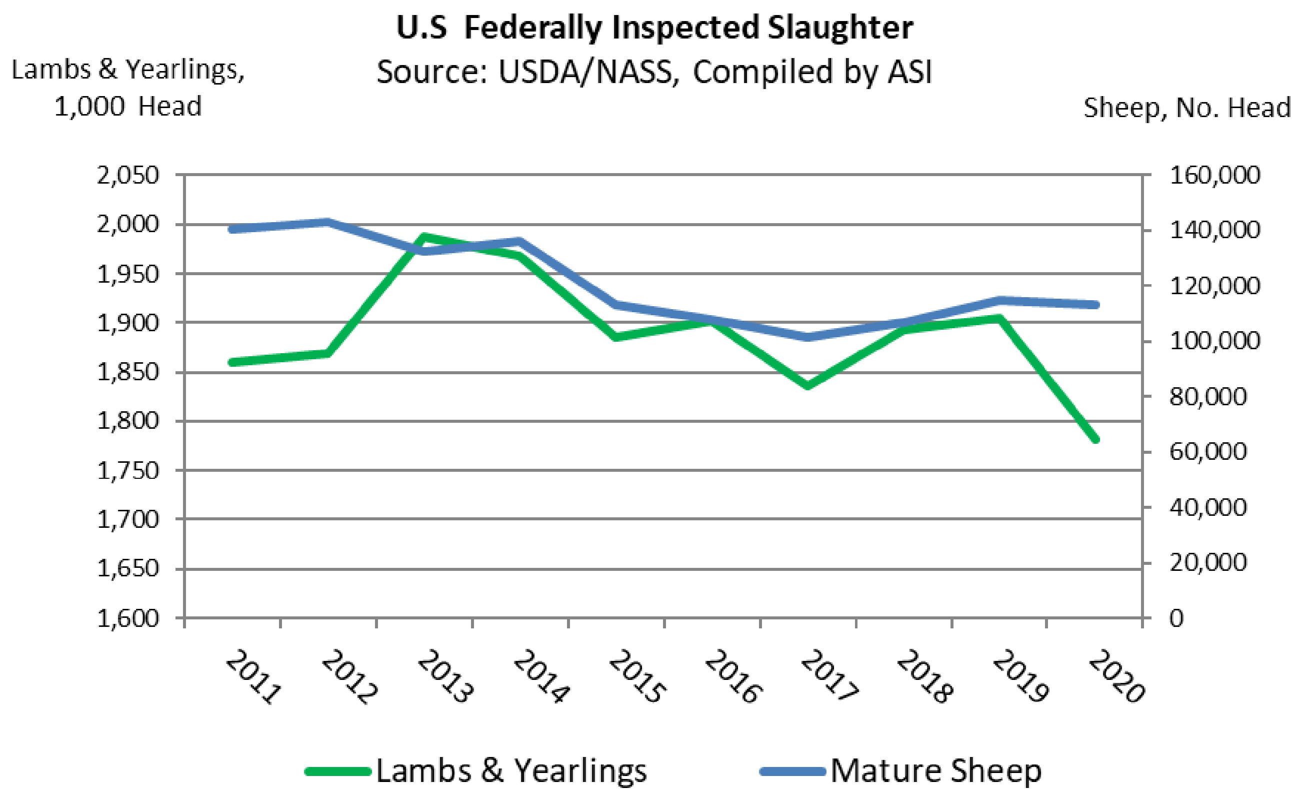
Federally Inspected Slaughter

- Impacts of COVID-19 during April & the closure of the Mountain States Lamb Cooperative on July 31st can be easily seen.
- April FI Harvest dropped over 30% year-on-year.
- Industry was able to manage supplies & did not see a backlog develop.



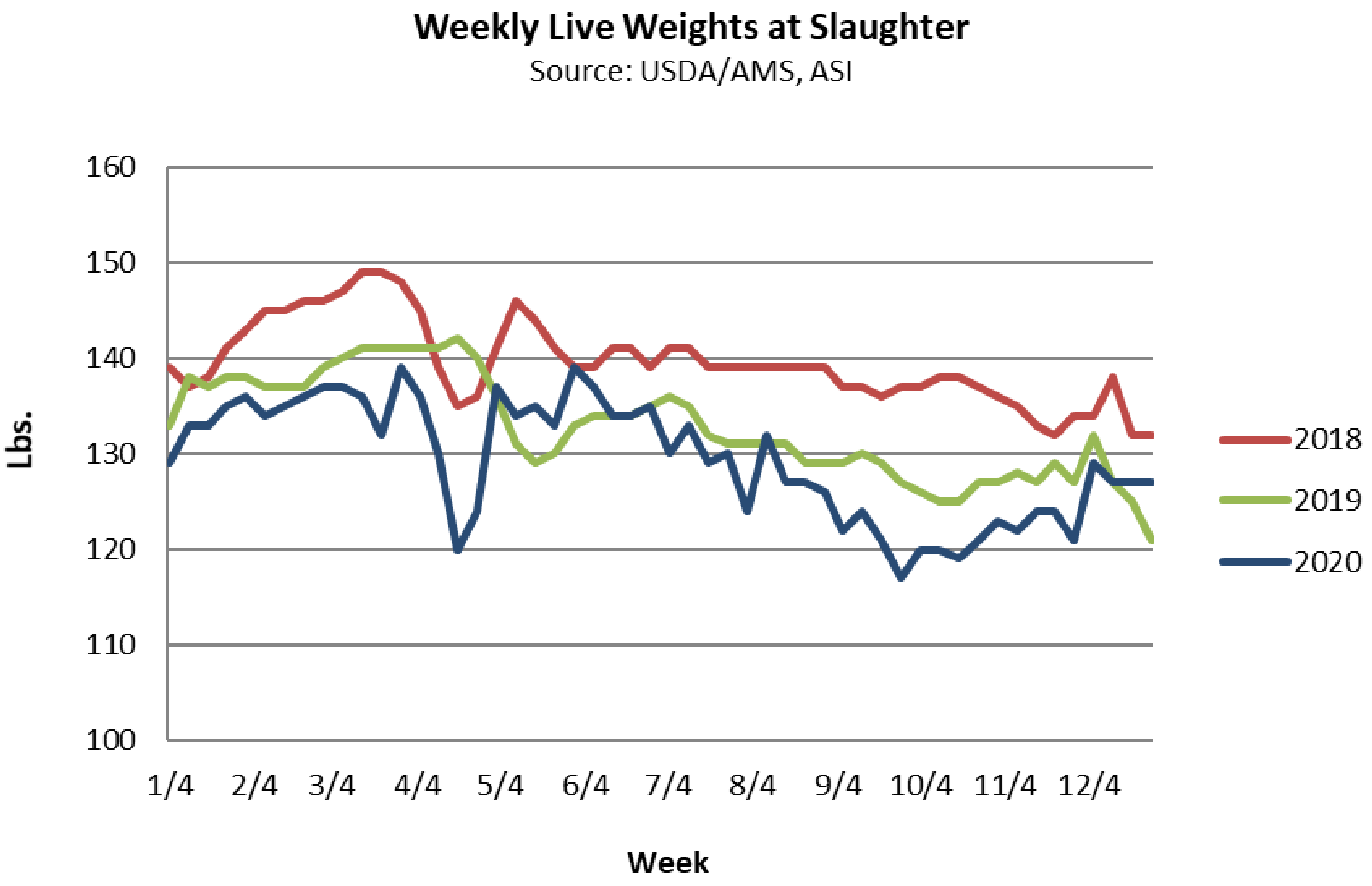
Federally Inspected Slaughter

- In 2020, lamb and yearling slaughter was down 7%.
- Mature sheep slaughter was down 1%.



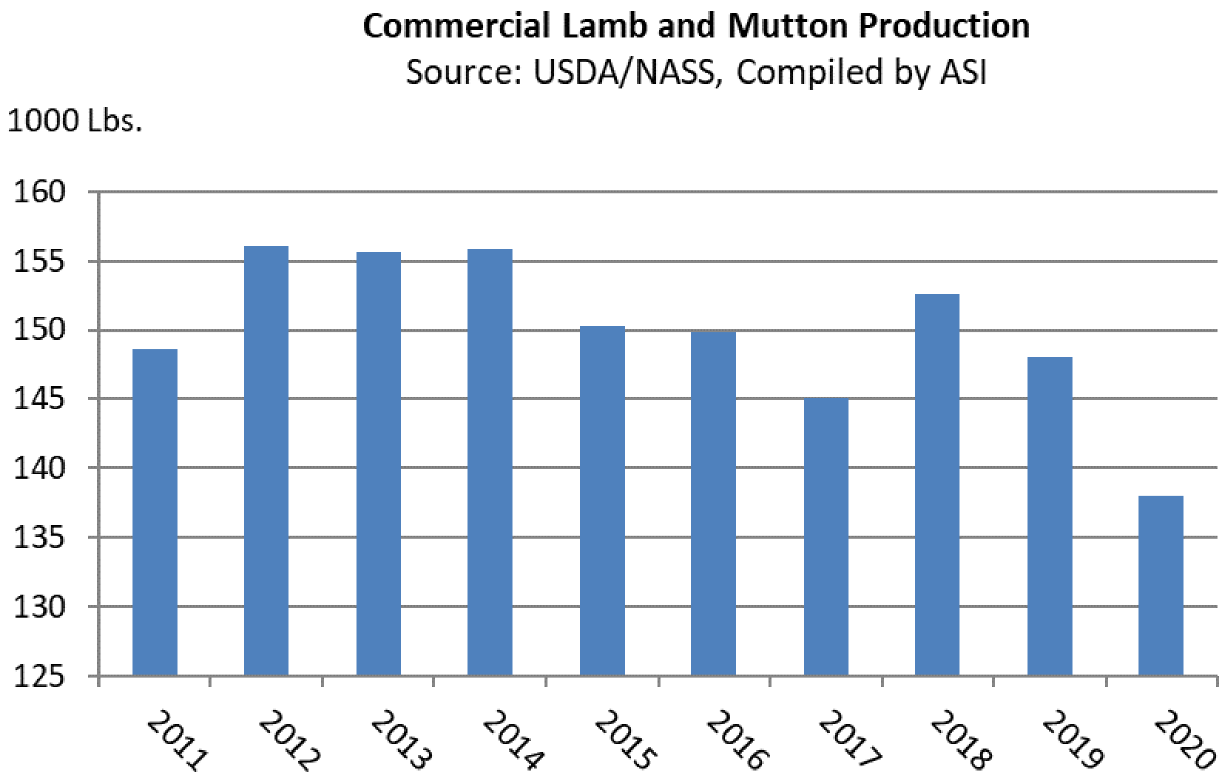
Live Weights

- Average live weights lower than a year ago as industry remained current.
- Industry able to manage supplies.



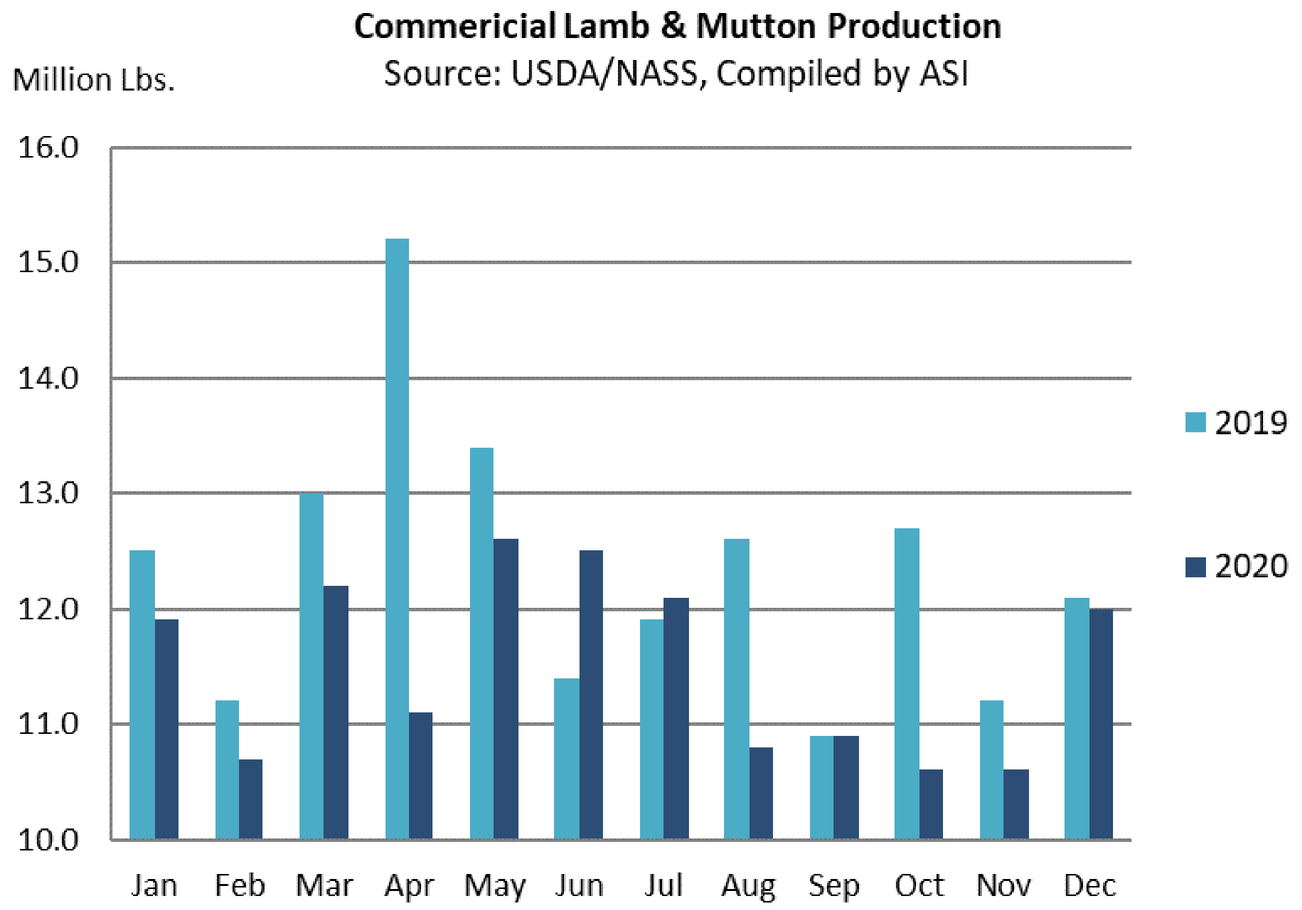
Commercial Production

- Commercial lamb & mutton production was down 7% in 2020.



Commercial Production

- Production levels impacted by a variety of factors in 2020 including:
  - COVID-pandemic
  - Disruptions in packing sector



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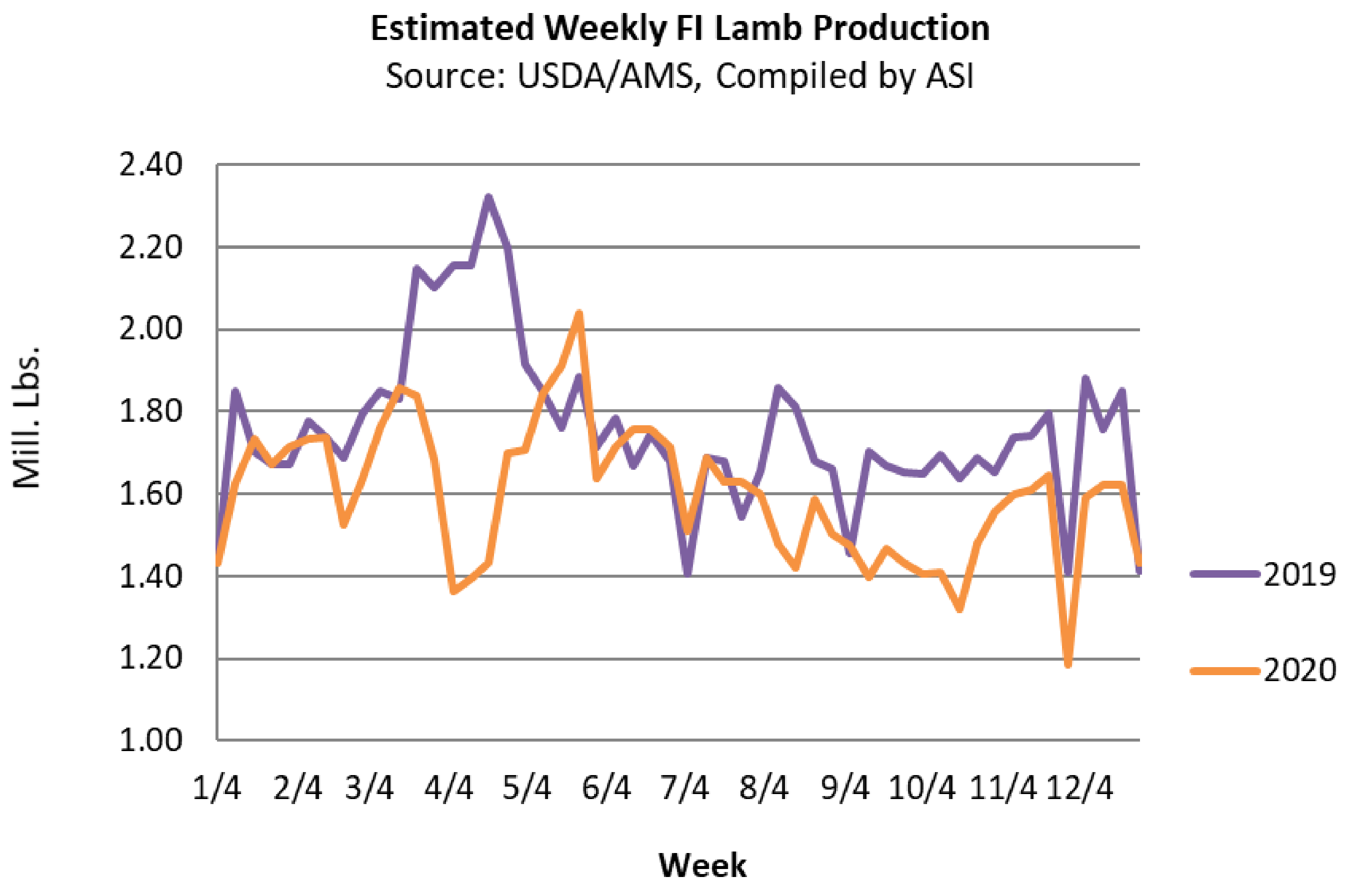
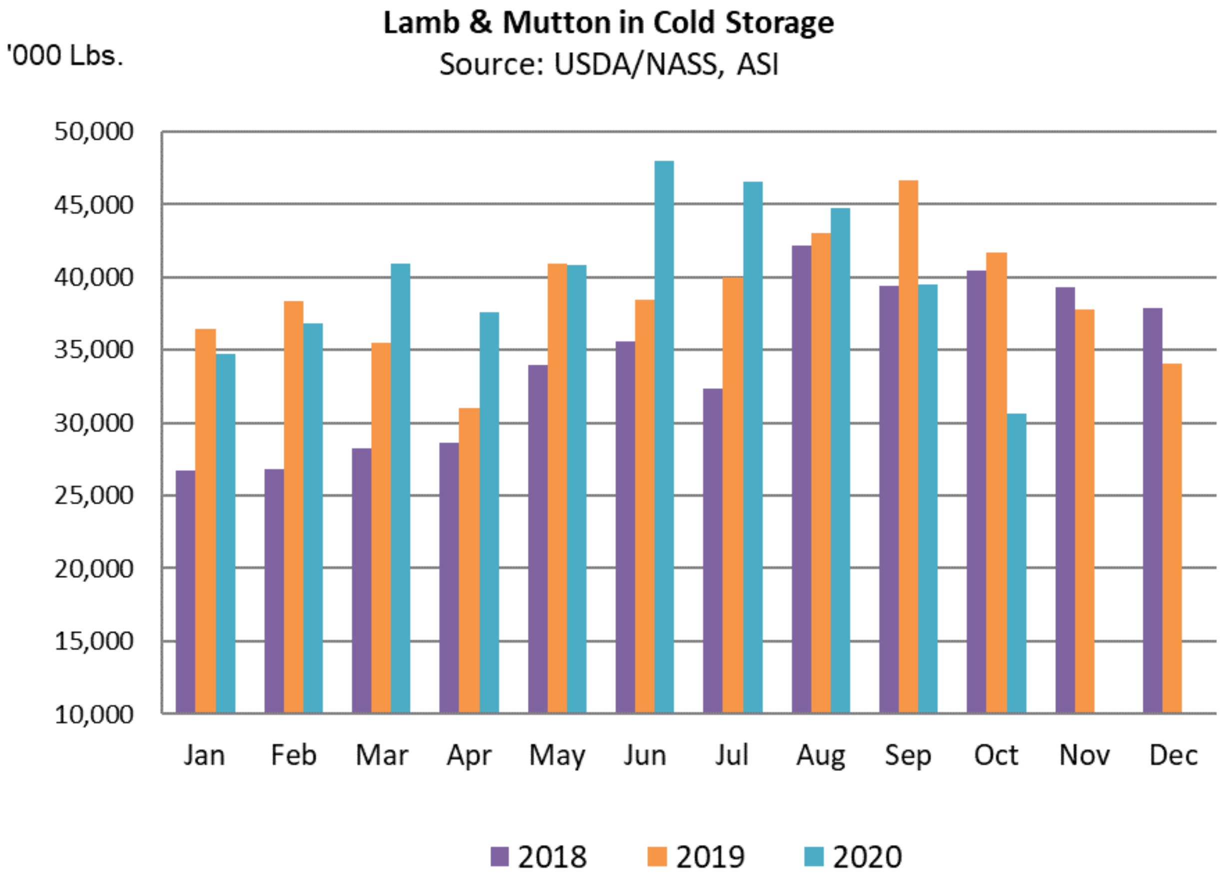


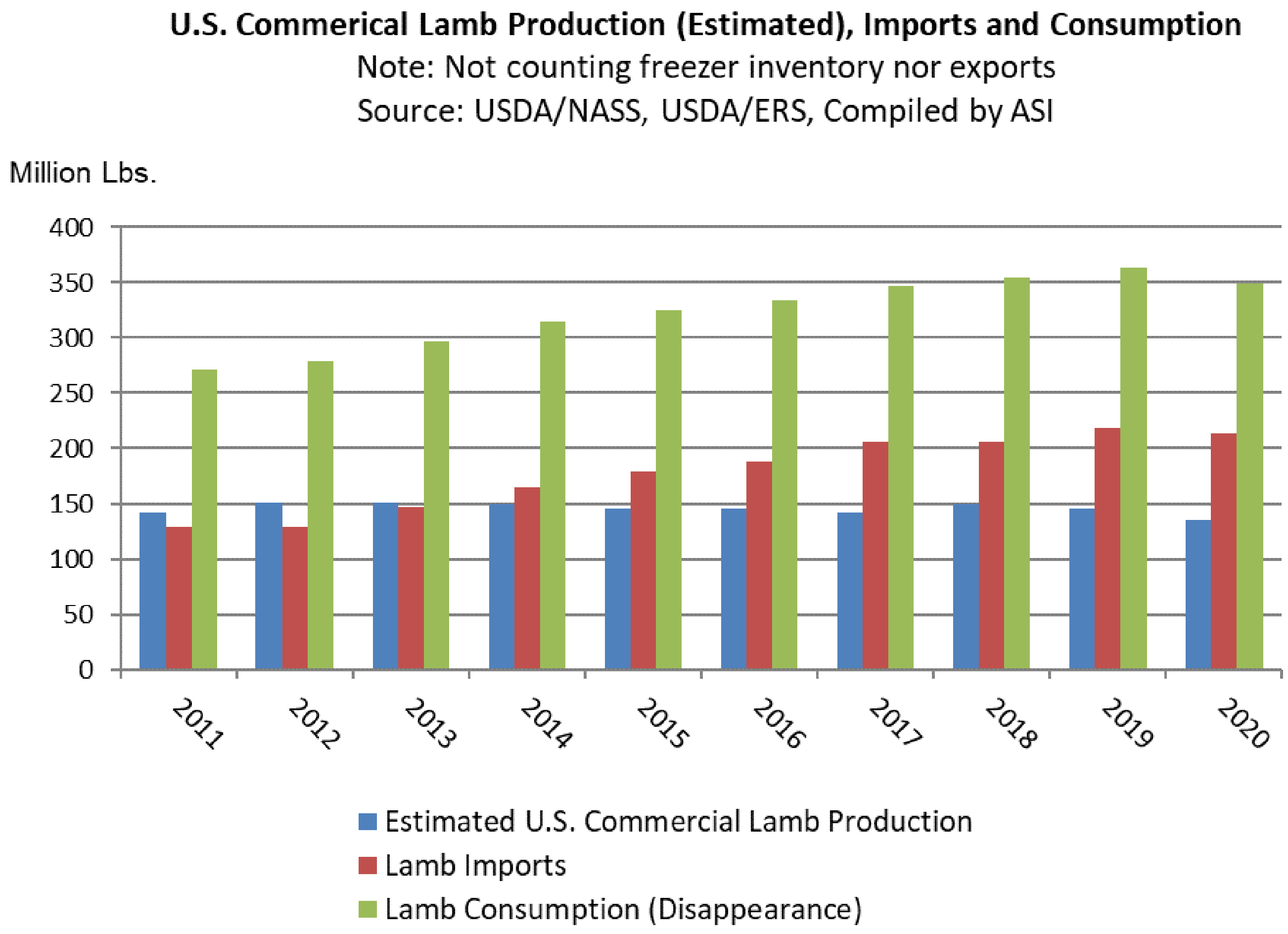
Cold Storage

- Lamb & Mutton in Cold Storage down sharply in 2020 – 24%.
- Since we don't know what portion is bone-in, boneless, domestic or imported, domestic production & imports help assess cold storage data.



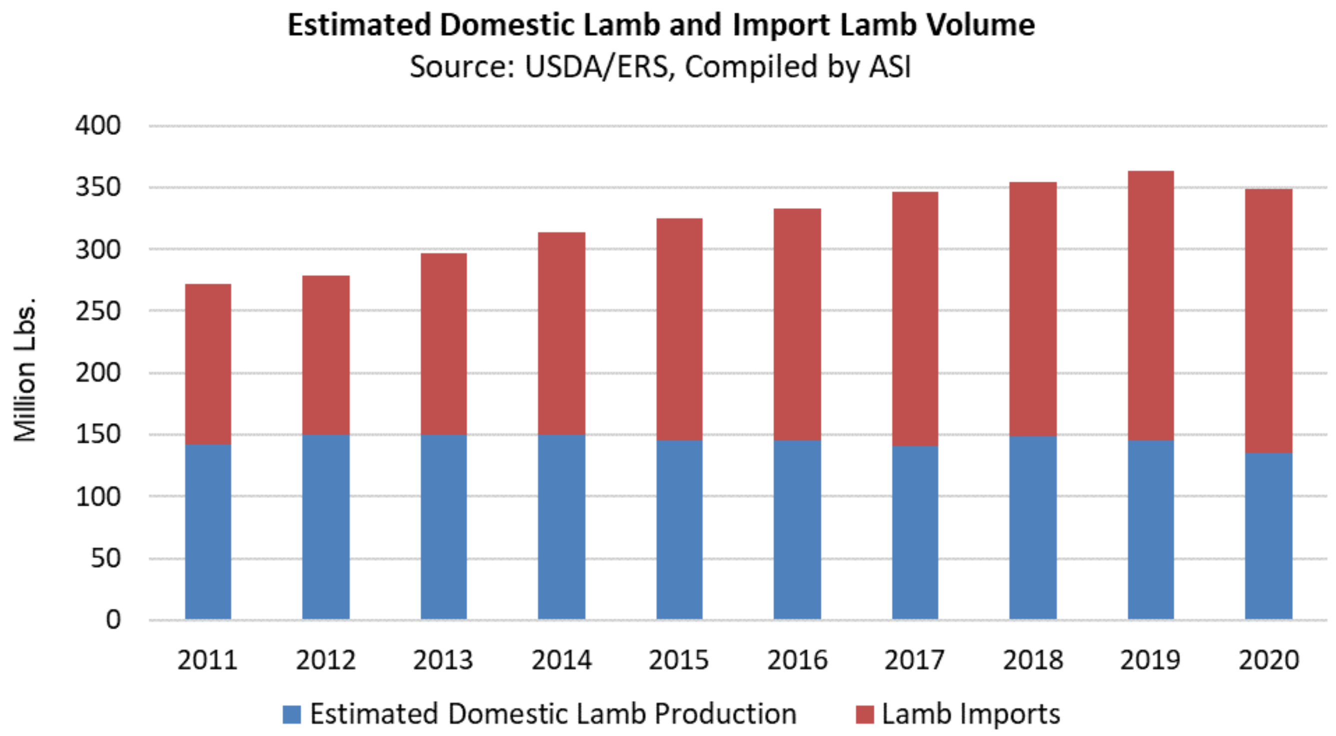
Lamb Supply

- Total lamb consumption or disappearance was 348.9 million lbs. in 2020, down 4% annually.
- Disappearance accounts for exports and ending stocks (cold storage).



Lamb Supply

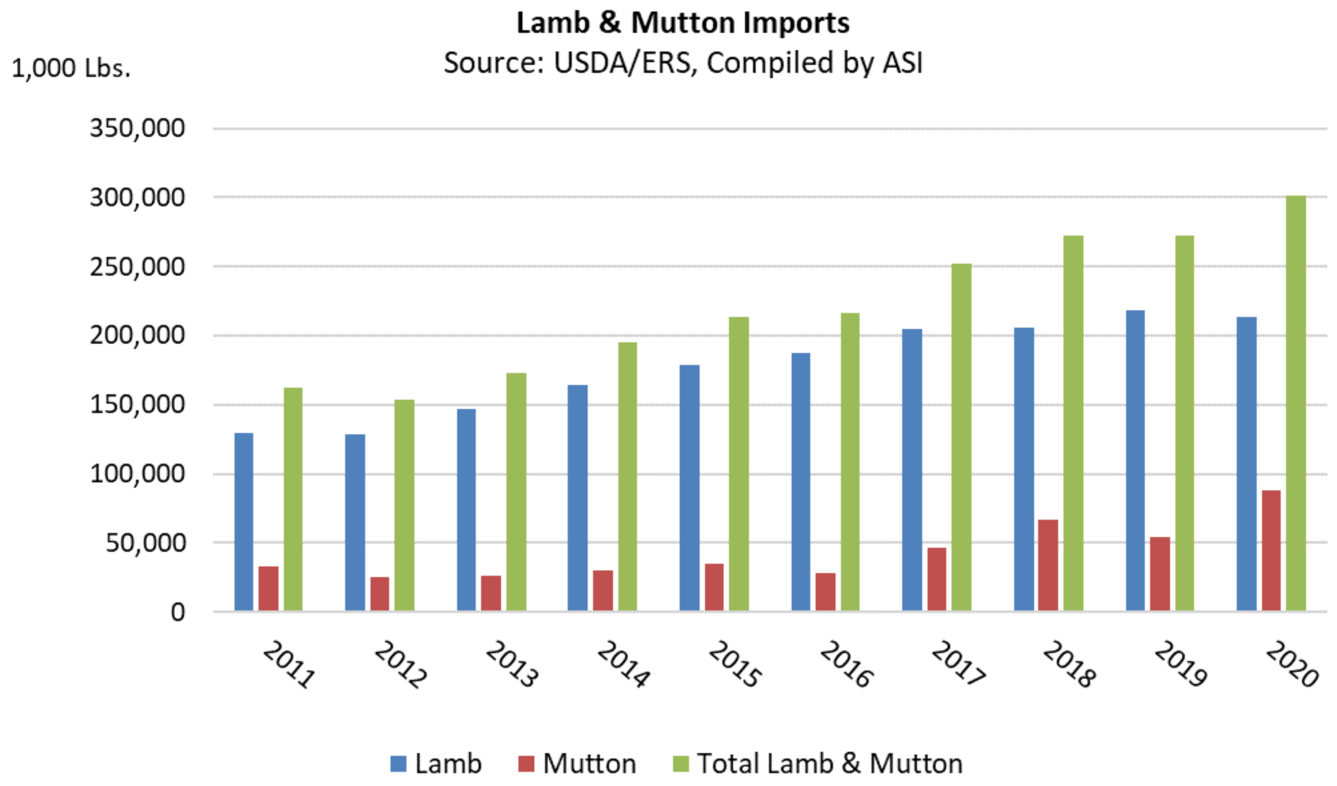
- Imports accounted for about 61% of total lamb supply in 2020.



IX. International Trade

Lamb & Mutton Imports

- Total lamb & mutton imports up 11% in 2020.
- Lamb imports down 2%.
- Mutton imports up 63%.



Lamb & Mutton Imports

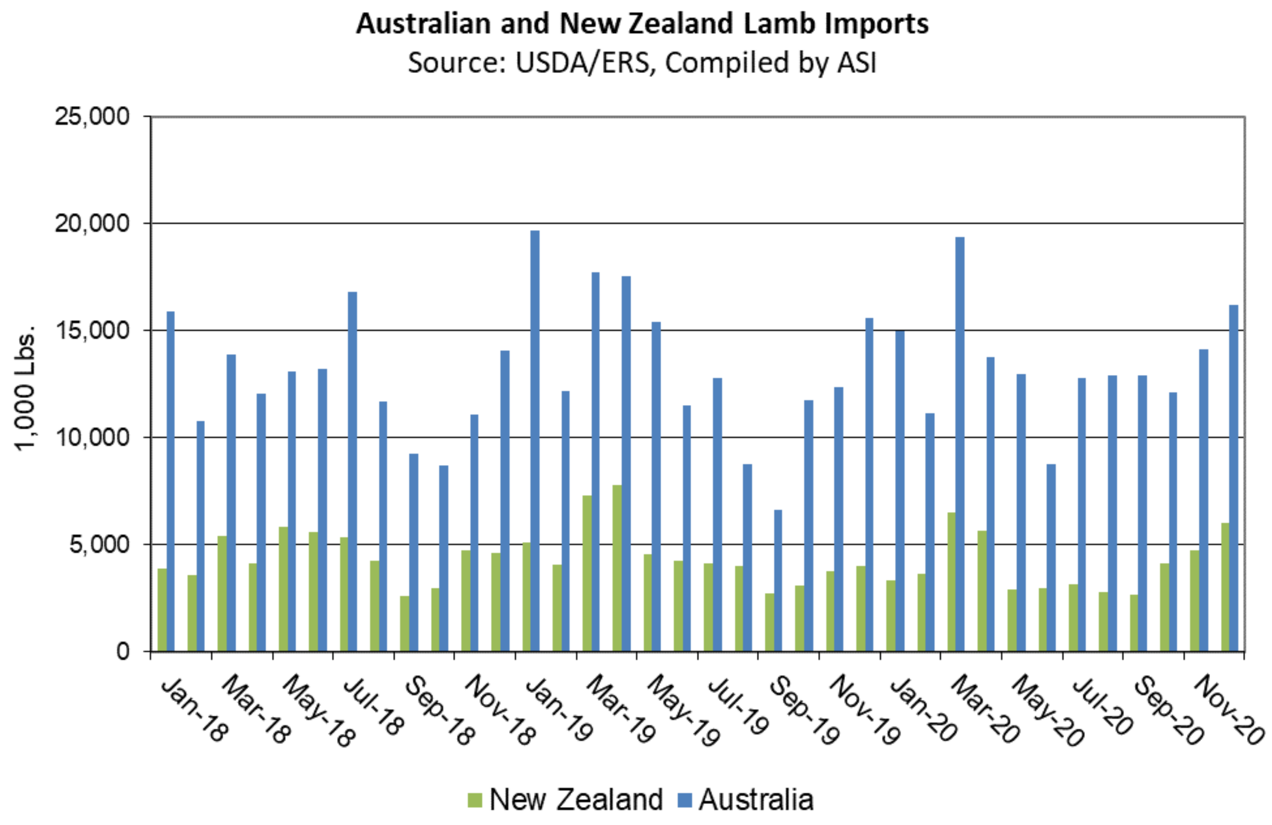
(1,000 lbs. carcass weight basis)

	Lamb	Year-to-year % change	Mutton	Year-to-year % change	Total Lamb & Mutton	Year-to-year % change
2011	129,370	-3.9%	32,681	5.4%	162,694	-1.8%
2012	128,640	-0.6%	25,045	-23.4%	153,597	-5.6%
2013	146,927	14.2%	26,199	4.6%	173,251	12.8%
2014	164,504	12.0%	30,368	15.9%	194,816	12.4%
2015	178,740	8.7%	34,983	15.2%	213,594	9.6%
2016	187,896	5.1%	28,024	-19.9%	216,079	1.2%
2017	205,214	9.2%	46,494	65.9%	251,716	16.5%
2018	205,676	0.2%	66,961	44.0%	272,637	8.3%
2019	218,507	6.2%	53,911	-19.5%	272,418	-0.1%
2020	**213,685**	**-2.2%**	**87,916**	**63.1%**	**301,601**	**10.7%**

a Source: USDA/ERS

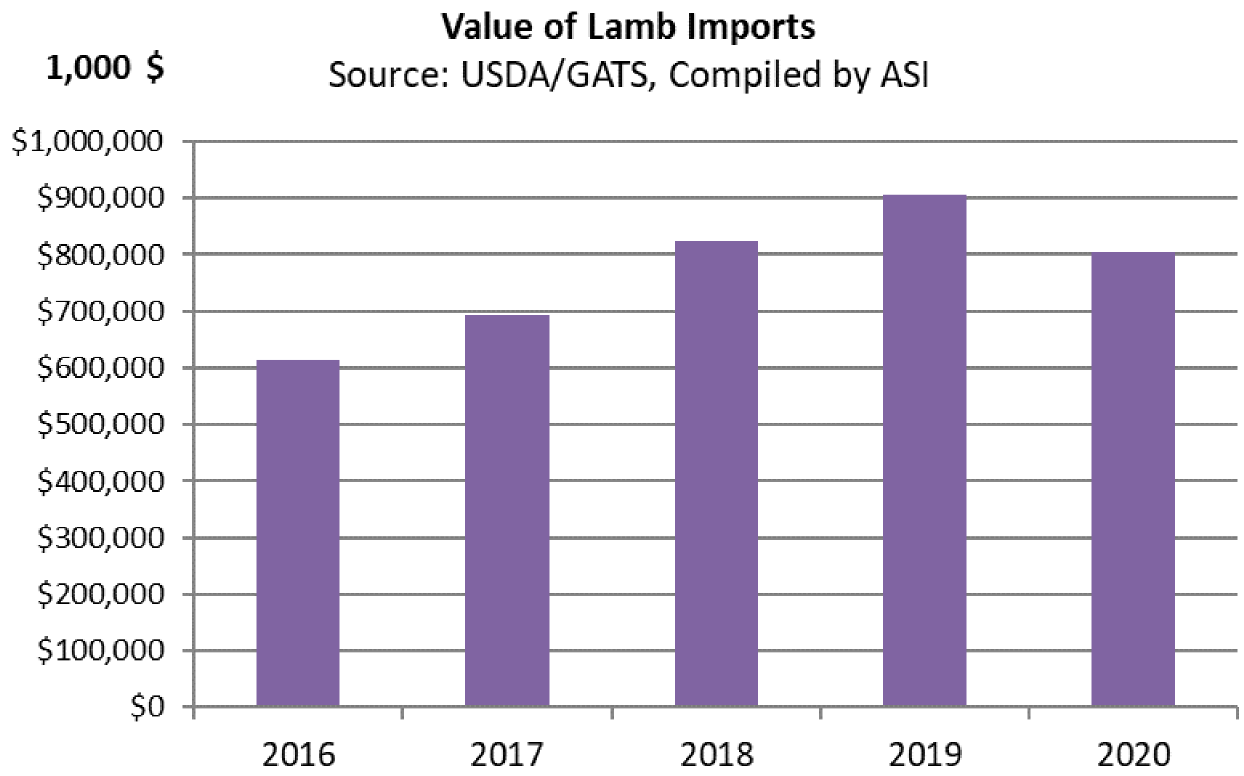
Lamb & Mutton Imports

- Australian lamb imports remained steady in 2020 at 162.0 million lbs.
- New Zealand lamb imports down 11% annually to 48.5 million lbs.



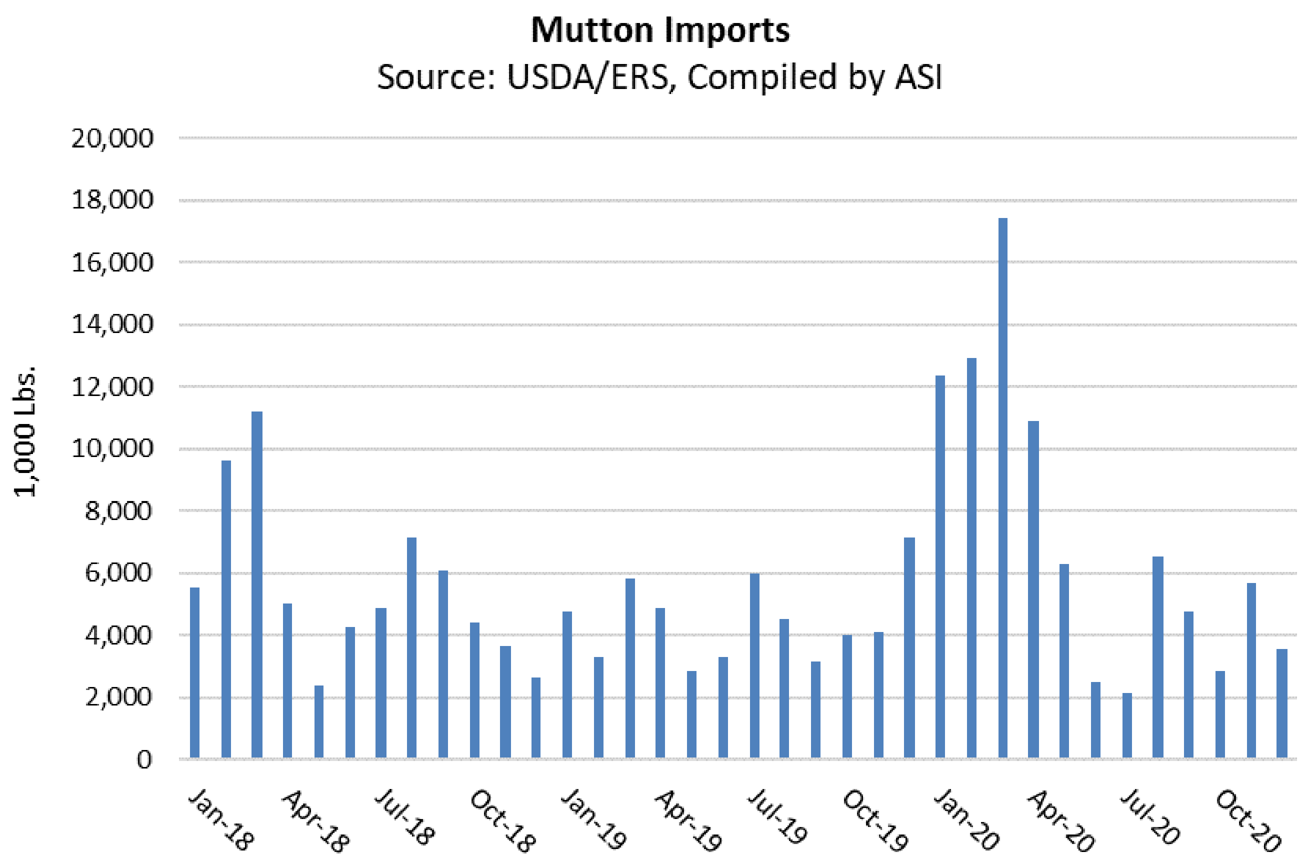
Lamb & Mutton Imports

- The value of lamb imports was down 11% in 2020 at $802.9 million.



Lamb & Mutton Imports

- Mutton imports surged in the first quarter of 2020.



Import Prices

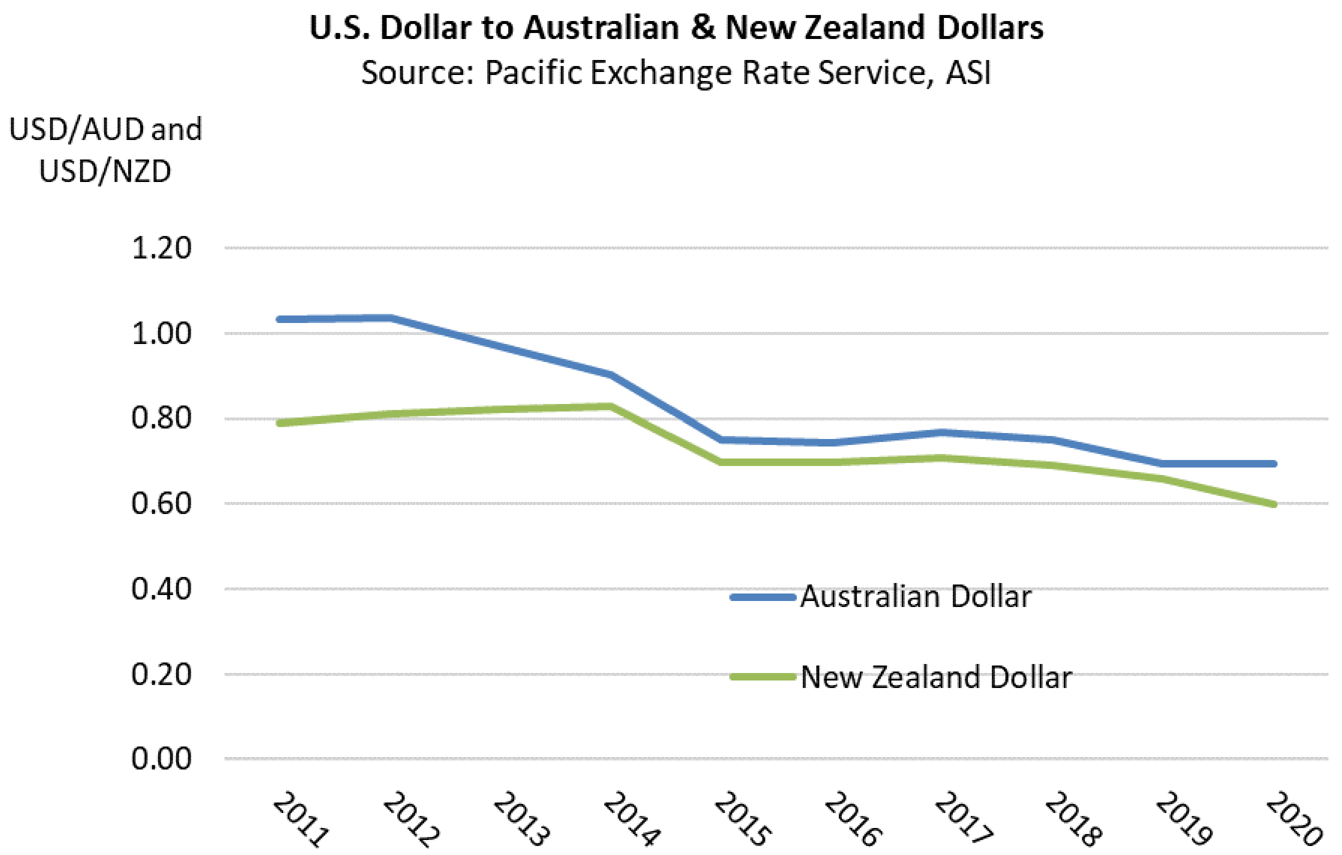
- US fabricated wholesale prices mixed compared to wholesale Australian prices.
- US shoulder is 104% of Australian shoulder.
- US rack is 86% of Australian rack.
- US loin is 118% of Australian loin.

	Shoulder, Square Cut		Rack		Loin	
	U.S. ($/cwt.)	Australia ($/cwt.)	U.S. ($/cwt.)	Australia ($/cwt.)	U.S. ($/cwt.)	Australia ($/cwt.)
2019	304.63	301.92	878.80	1206.15	523.23	493.70
2020	334.29	321.63	857.82	998.30	583.94	496.36
Year-on-Year % Change	9.7%	6.5%	-2.4%	-17.2%	11.6%	0.5%

Data Source: USDA/AMS

Exchange Rate

- Australian dollar steadied against US dollar
- In 2020 the Australian/US rate remained mostly steady, at 0.70 (1 AUD = 70 US cents)
- In 2020 the NZ/US rate lost 9% to 0.60 cents



Exports

- Mexico – Volume up 38% to 18,927 mt, value up 25% to $17.4 million; Muscle cut exports up dramatically, with variety meat exports trending lower.
- Caribbean – Down 42% in volume (484 mt), value also down 42% to $3.75 million.
- Canada – Down 2% to 254 mt, value down 10% to $825,000.
- Hong Kong – Up from minimal exports in 2019 to 81 mt in 2020, valued at $295,000.
- Japan – Up 7% to 64 mt, valued at $199,000 (up 8%).
- Middle East – Down 75% in volume (80 mt) and value ($206,000).
- Central America – Down 67% to 71 mt, value down 55% to $458,000.
- ASEAN – Down 40% to 24 mt, valued at $298,000 (down 39%)
- *USDA statistics compiled by US Meat Export Federation; all totals include muscle cuts & variety meat.*

Lamb & Mutton Exports

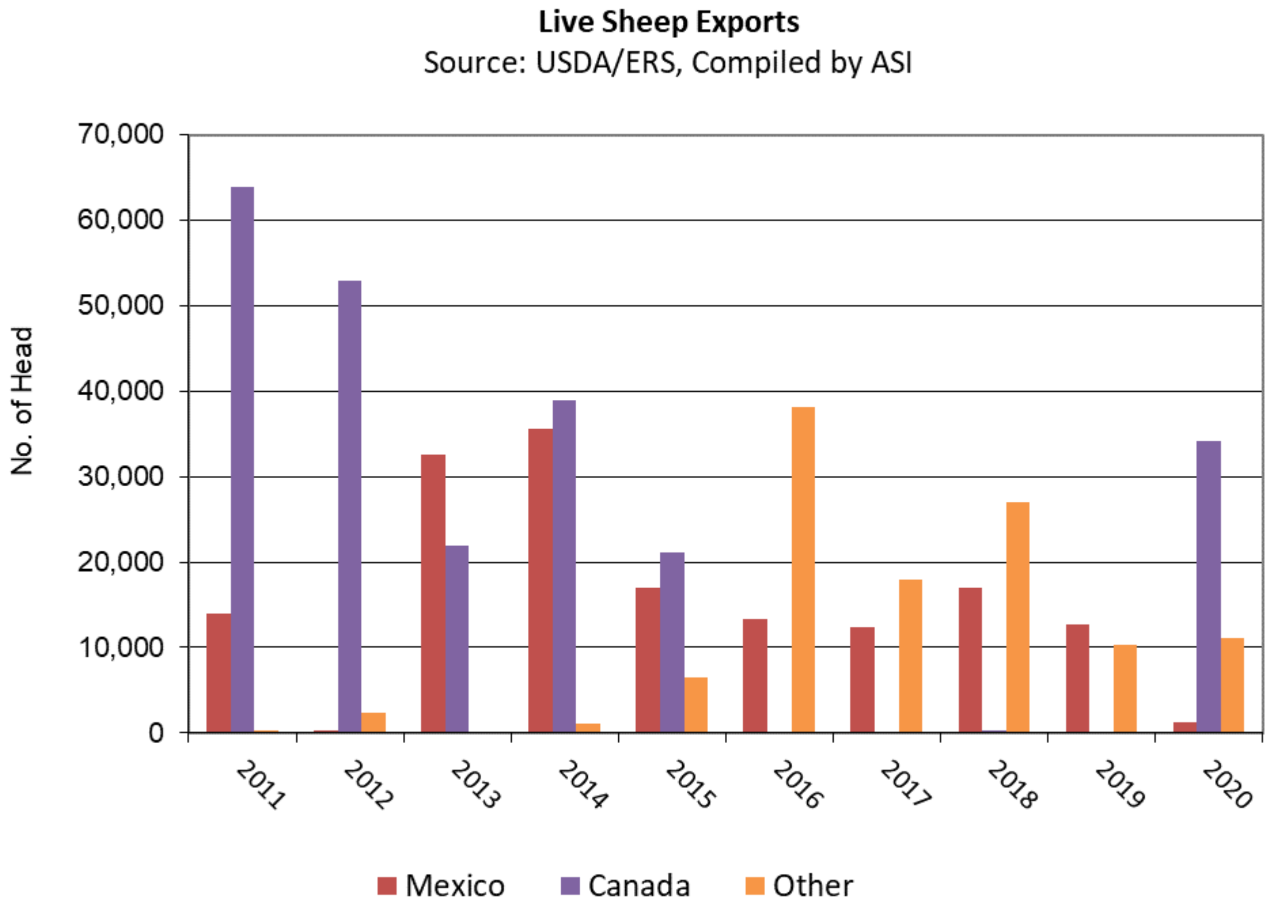
(1,000 lbs. carcass weight basis)

	Lamb	Year-to-year % change	Mutton	Year-to-year % change	Total Lamb & Mutton	Year-to-year % change
2011	757	-57.4%	18,058	26.3%	18,814	17.0%
2012	344	-54.6%	10,294	-43.0%	10,637	-43.5%
2013	751	118.6%	6,488	-37.0%	7,240	-31.9%
2014	1,344	79.0%	5,389	-16.9%	6,734	-7.0%
2015	428	-68.2%	4,046	-24.9%	4,473	-33.6%
2016	828	93.4%	4,593	13.5%	5,421	21.2%
2017	922	11.4%	4,982	8.5%	5,905	8.9%
2018	785	-14.9%	5,032	1.0%	5,817	-1.5%
2019	737	-6.1%	4,958	-1.5%	5,695	-2.1%
2020	**594**	**-19.3%**	**18,482**	**272.7%**	**19,076**	**234.9%**

. Source: USDA/ERS

Live Exports

- Live lamb & sheep exports doubled in 2020.
- Exports to Canada up from 109 head in 2019 to 34,112 head in 2020.
- Over time live exports down to Mexico, but up to Bahamas, Venezuela, St. Martin, Nigeria & Bahrain.



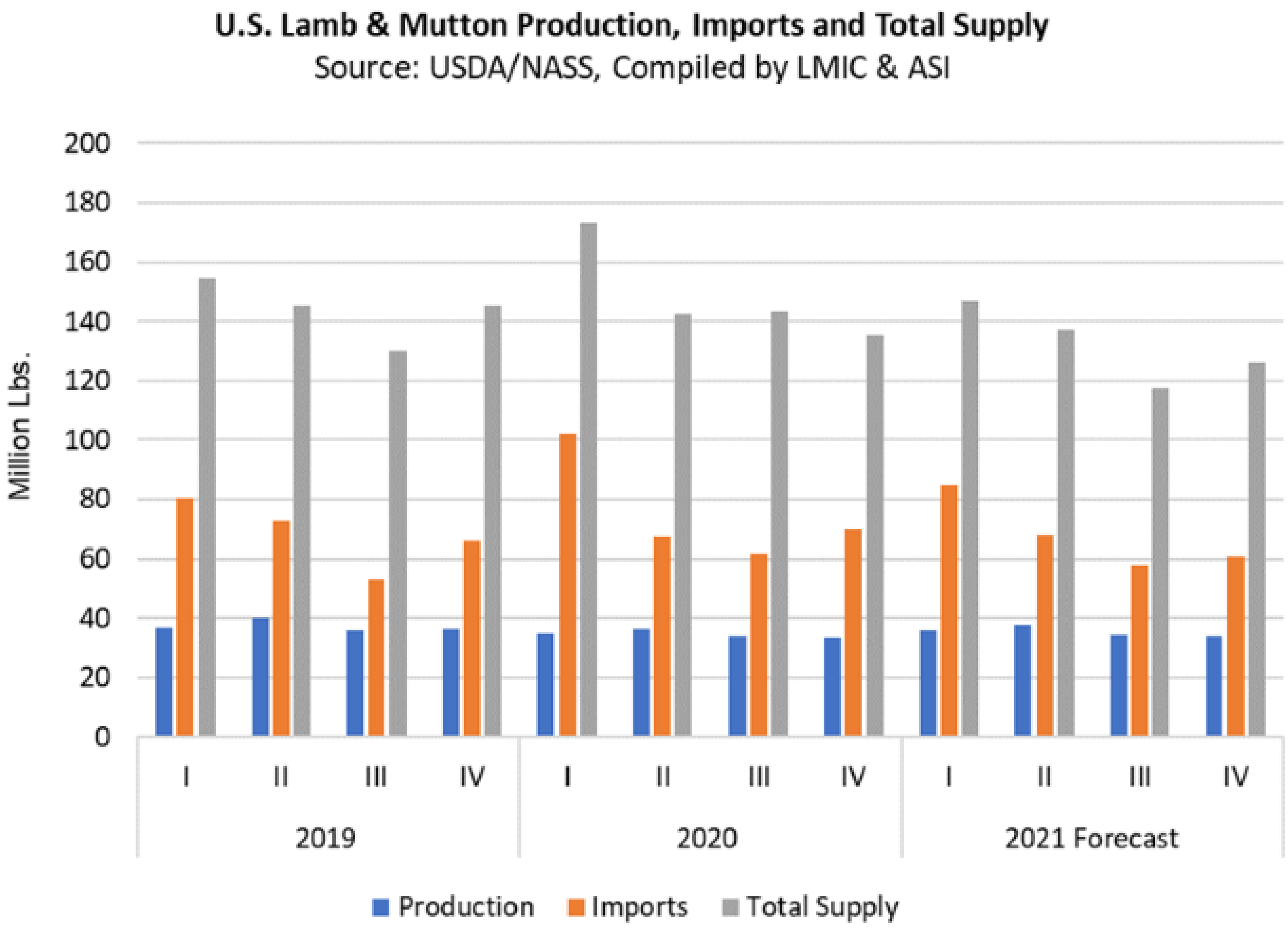
X. Market Outlook

Livestock Marketing Information Center: 2021 Forecasts

- Commercial slaughter to increase by 2% to 2.3 million head.
- Commercial production at 142 million lbs., up 3% year-on-year.
- Imports expected to fall 10% to 272 million lbs.
- Total lamb availability expected to contract by 7% to 444 million lbs.
- National slaughter lamb prices (carcass basis) to average $268-$278 per cwt., up 10%
- Feeder lamb prices (60-90 lbs.) to average $200-$210 per cwt., up 7%.

LMIC - 2021 Market Forecasts

- Steady production
- Lower imports
- Total supply forecast to be down about 10% from 2020.
- Lowest available supplies reported since 2017.
- Lower supplies expected to support feeder & slaughter lamb prices in 2021.



Thank You!