



Analysis & Comments

Livestock Marketing Information Center
State Extension Services in Cooperation with USDA

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www.lmic.info

Sheep and Lamb Market: 2015 Review and 2016 Outlook

Review of 2015

Last year lamb producers had a rather good year, even though prices were mostly below 2014's. Commercial slaughter was down some from 2014's, but imports and frozen stocks were large.

Production and Inventory

Commercial lamb production totaled 150 million pounds in 2015, down 3.6% compared to 2014. This was on 4% less commercial slaughter and a 0.5% increase in average dressed weights year-over-year. The decrease in commercial slaughter totaled 92,000 head less than 2014. The January 2015 sheep and lamb inventory report (published by USDA-NASS) came in with a total sheep and lamb number that was 35,000 head higher than 2014's (up 0.1%). Within this report, the inventory increase was due to more breeding sheep, up 35,000 head. Market lamb inventory as of January 1 and the 2015 lamb crop were both equal to their respective year earlier levels.

The 92,000 sheep and lamb commercial slaughter decrease in 2015 might be explained by several factors; live animal exports to Mexico, death loss, delayed slaughter, and inventory hold back. Live sheep and lamb exports to Mexico in 2014 totaled 24,545 head. In 2015 the U.S. exported 7,833 sheep and lambs to Mexico. So the decrease in commercial slaughter did not come from a surge of live animal exports. The next factor to consider would be sheep and lamb death loss. USDA-APHIS publishes a report every five years titled "Sheep and Lamb Predator and Non-predator Death Loss in the United States". The most recent report was published for 2014 numbers. Total sheep and lamb death losses in 2014 decreased by 50,000 head compared to 2009 numbers, to total 585,000 head. However, death loss for sheep (as a percentage of total adult sheep) and death loss for lambs (as a percentage of total lambs) remained constant between 2009 and 2014. Assuming these death loss rates continue to stay the

same, the 92,000 head decrease in commercial slaughter cannot be attributed to an increase in death loss. The last option is animals were held back as breeding flock replacements and/or carried over year-to-year to a later slaughter date. The January 2016 sheep and lamb inventory report confirmed this was the case, at least to some extent. Breeding sheep inventory increased by 30,000 head and market lamb inventory increased by 20,000 head as of January 2016 compared to 2015. Of the market lamb inventory increase, the number of lambs over 105 pounds increased by 4,000 head and the number of lambs under 85 pounds increased by 19,000 head. While the numbers do not reconcile perfectly, at least some of 2015's decrease in slaughter was due to mature ewe and ewe lamb hold back for flock inventory and delayed slaughter into 2016.

Prices in 2015

During 2015, the three market average (CO, TX, SD) feeder lamb price, reported by USDA-AMS, was below 2014's for the majority of the year. This was coming off of some relative strength in the feeder lamb market during 2014. First, third and fourth quarter average feeder lamb prices were below those of 2014, and second quarter's price was up 0.5% year-over-year. Annual average feeder lamb prices for 2015 were \$192.38 per cwt., almost 6% below 2014's.

Annual average slaughter lamb prices, reported by USDA-AMS on a national direct hot carcass basis, were fairly even with year earlier levels. Prices were up slightly year-over-year the first three quarters of 2015, then turned down during the fourth quarter to average 6% below fourth quarter of 2014. This downturn outweighed the other three quarters, and 2015's annual average slaughter lamb price was 0.4% below 2014's at \$297.97 per cwt. (carcass basis).

On the wholesale lamb price side (reported by USDA-AMS), the 2015 average national lamb cutout value was \$361.90 per cwt., down 2% year-over-year with most of the decline in the fourth quarter. Within the wholesale cuts (on an annual basis), shoulders, legs, and loins performed equal to or above 2014 prices. Shoulders matched 2014 prices most of the year and averaged \$296.55 per cwt., which was 17% above the previous five year average (2009-2013). Leg prices were also close to year earlier levels, with the 2015 average annual price at \$342.59 per cwt., 5% below 2014's and even with the five year average. Loins performed the best out of the wholesale cuts. The first half of 2015, loin prices were above 2014's then tracked even with 2014 prices for the duration of the year. Loins averaged \$522.47 per cwt. for 2015, up 4% compared to 2014 and up 12% compared to the five year average. An interesting aspect in the wholesale loin market was the complete lack of price seasonality, where prices are usually seen increasing into the winter months from spring lows. The wholesale cut that struggled for the majority of 2015 was racks. Both medium and light rack prices trended down from the start of the year and medium racks ended the year at \$724.78 per cwt., down \$81.85 from the end of

2014. For the year, the medium rack average price was \$755.11 per cwt., down 7% from 2014 but still 19% above the five year average.

Annual per capita consumption of lamb in the U.S. increased by 4% in 2015 compared to 2016, to 1 pound per person. This is really per capita disappearance, and calculated as: (production + imports – exports – cold storage)/U.S. population. While domestic lamb production decreased slightly year-over-year, imports rose significantly, which impacted this equation and increased per capita disappearance.

Range Condition and Feed Costs

During 2015, the majority of the U.S. experienced favorable weather for good pasture and range conditions, as well as a positive hay growing season. This allowed producers to graze their animals more and longer, as well as continued to decrease feed costs. In the Western region of the U.S., the percent of pasture and rangeland rated as poor and very poor was below 2014's from May through September. After September, western drought conditions brought the percent above 2014's but it remained below the five year average level. Much of that story is consistent for the Great Plains, Southern Plains and Corn Belt regions. The Southeast and Northeast experienced more mixed conditions in terms of more weeks that were drier than the year before. Overall though, the grazing season during 2015 turned out very favorable for producers.

National average alfalfa hay prices continued to decline through 2015, based on decreased use during winter and summer months. The national average alfalfa hay price for December of 2015 was \$150 per ton, \$30 per ton below 2014's and the lowest monthly price since March of 2011 (although December's price was equal to November of 2015). Other hay type (grass hay) prices bounced around during 2015, but generally were lower year-over-year, although the December national average exceeded 2014's and the previous five year average. National alfalfa production in 2015 was down 5% year-over-year to 59 million tons and other hay production was down 4% year-over-year to 75 million tons. The decrease in hay prices largely resulted from a decrease in the quantity of hay used during winter of 2014/2015 and summer of 2015. Both seasons were relatively mild and did not require as much hay be fed to livestock. This transitioned into hay stocks building back up to pre-drought levels and although we are increasing our national sheep flock and cattle herd, the increase has not stressed hay supplies enough yet to warrant a price increase. Of course, this can all change if there is any type of drought situation.

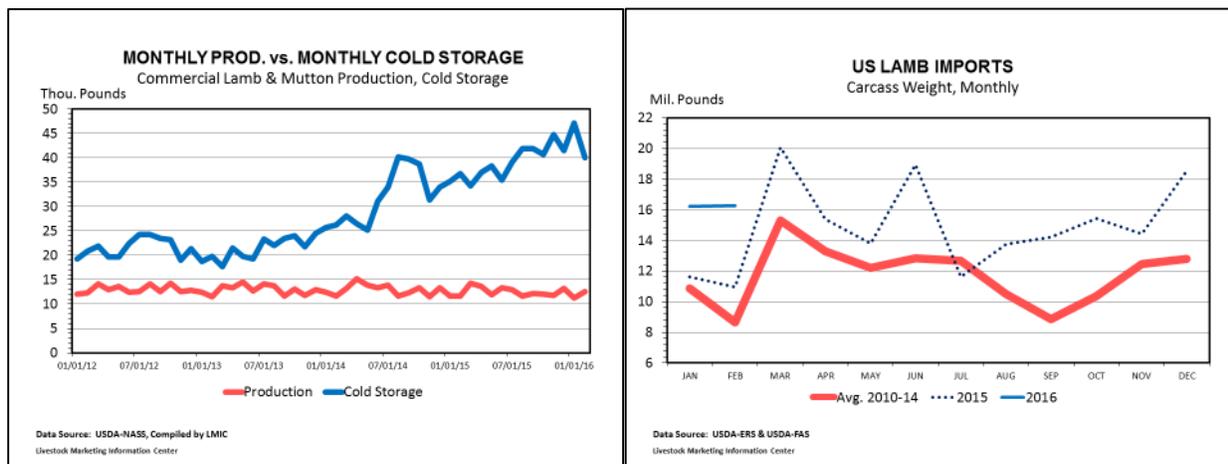
Corn prices were fairly consistent during 2015, between \$3.50 and \$3.75 per bushel on a national average basis. That was significantly lower than recent years when prices ramped up due to corn demand from the ethanol industry and short corn crops resulting from drought conditions. Corn production in 2015 was below 2014's but was still the third largest crop the U.S. has ever produced. The ethanol industry has matured, and until there is a significant change

in the Renewable Fuel Standards, corn demand for ethanol use will remain fairly stable. Unless there is another short corn crop, prices should remain relatively low.

Lamb Imports and Cold Storage Levels

Levels of lamb and mutton in cold storage were significantly elevated during 2015 compared to recent historical volumes, according to USDA-NASS. The trend of increasing lamb and mutton in cold storage started the beginning of 2014. January of 2014, lamb and mutton in cold storage totaled 25.7 million pounds. December of 2015, lamb and mutton in cold storage totaled 41.5 million pounds, almost doubling in two years. As the graph below shows, the ratio of monthly cold storage volumes to monthly commercial production also has almost doubled. The point here is lamb and mutton production has stayed fairly even (to slightly down year-to-year) but cold storage levels have increased significantly. In 2013, the annual average ratio of monthly cold storage to monthly production was 1.6. In 2015, that average ratio was 3.1. This elevated level of product in cold storage is concerning for the industry as it acts as a price overhang in the market. Product in cold storage can only be frozen for a certain amount of time before it has to be sold at a steep discount or disposed of.

Lamb and mutton in cold storage is not broken out by any category, so it is difficult to tell what cuts (if any specific ones) have accumulated in cold storage or if the frozen stocks consist mostly of domestic product, imported product, or a mix of both. Lamb imports during 2015 set a new record high on a volume basis. In 2015, the U.S. imported 179 million pounds of lamb, 9% more than the previous record in 2014. Of these total imports, 72% came from Australia and 27% came from New Zealand. In 2015, Australia increased their lamb exports to the U.S. by 6% and New Zealand increased their exports to the U.S. by 15%, compared to 2014. Mutton imports increased by 5 million pounds in 2015, up 15% year-over-year, to total 35 million pounds.



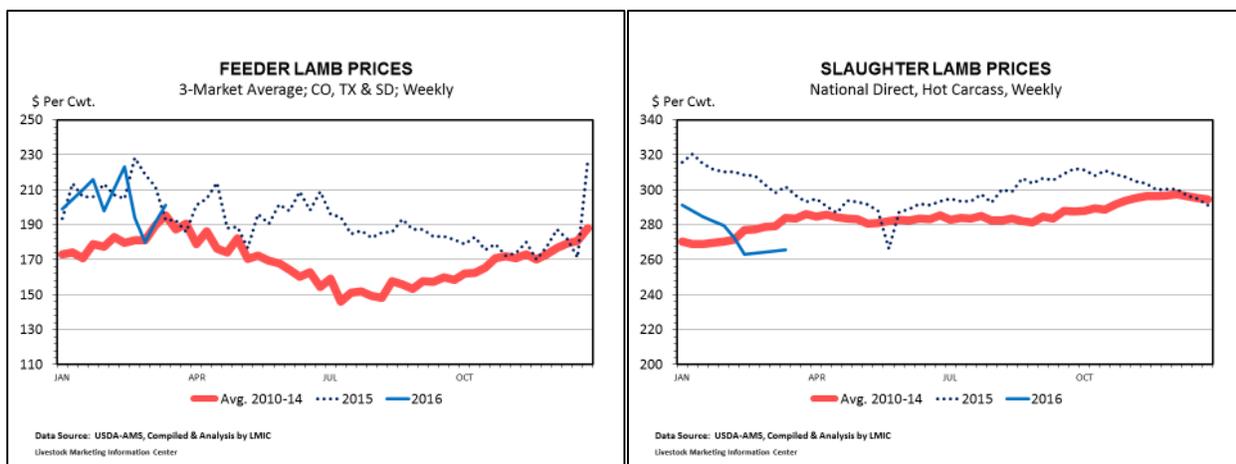
Several factors contributed to increased U.S. lamb imports during 2015. The value of the U.S. dollar increased significantly throughout the year compared to other key currencies. This effectively made imports “cheaper” for U.S. buyers and provides an opportunity to make favorable margins if the product can then be re-sold at a higher price in the U.S. Australia also continued to deal with their drought situation at least during the first part of 2015. During 2014 this forced them into a flock liquidation situation, which will have some carryover impact on their upcoming production. New Zealand lamb market prices decreased in 2015. The slowdown of global economies, specifically China, impacted both Australia and New Zealand and lowered their product exports to China.

Market Dynamics and Outlook: 2016 and 2017

The factors described above will shape the sheep and lamb market in 2016. Specific headwinds to increasing prices are rather lamb import levels, huge cold storage inventories, and competing red meat prices that are lower than those of recent years. As the market continues to work off the increased cold storage levels and lamb production increases, prices will be pressured downward. Increases in sheep and lamb inventory levels in southeast and northeast states provide opportunity to market “local” type product to metropolitan areas on the East Coast. Based on the Prospective Plantings report corn and hay prices are expected to stay relatively cheap into 2016, of course unless significant areas of the US experience any unfavorable weather conditions during the year.

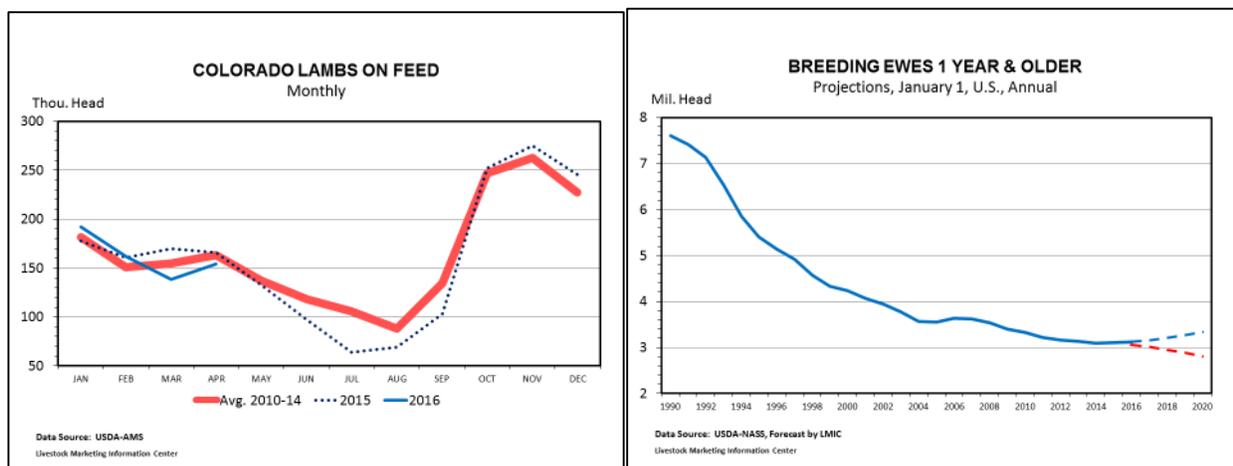
The First Quarter Review

The three market (CO, TX, SD) feeder lamb price averaged \$202.51 per cwt. through March 2016, 3% lower than the same time frame in 2015. The slaughter lamb price, on a national direct hot carcass basis, averaged \$278.30 per cwt. which is 10% below 2015's. The



slaughter lamb price has also dealt with reporting issues. Due to confidentiality issues the beginning of 2016 has seen very limited prices reported for slaughter lambs.

Through March, Federally Inspected (FI) lamb and yearling slaughter tracked 1.5% above 2015's and dressed weights averaged 72.5 pounds, 0.4 pounds above year ago. Mature ewe FI slaughter was 20% below 2015, for the same time frame. FI lamb and mutton production through March was even with year ago levels, as the decrease in mature ewe slaughter cancelled out gains in production on the lamb and yearling side. Lamb and yearling dressed weights started out the year below 2015's but for 8 out of the 10 weeks of the year so far, dressed weights have been even with or slightly above year ago levels. Part of this weight increase can be attributed to Easter falling earlier in the year than normal, which accelerated lamb production for the holiday. In the past, the lamb industry has dealt with over finished lambs. Current data available for dressed weights does not indicate this situation is developing again, yet. Additionally, USDA-AMS provides monthly data for the number lambs on feed in Colorado and the April total was 7% below 2015's count. These data indicate the industry has not started to back up fat lambs, which is a very positive aspect for the whole market.



As briefly discussed earlier the January 2016 sheep and lamb inventory report, published by USDA-NASS, confirmed flock growth. Compared to January of 2015, the breeding total was up almost 1% (up 30,000 head) with that increase split between a 15,000 head increase in breeding ewes one year and older and a 15,000 head increase in replacement lambs. This was the second year in a row for breeding flock inventory increase. Market lamb inventory was up 20,000 head (up 1.6%) year-over-year. Within the weight category breakouts, the largest inventory increase was seen in the light weight categories with market lambs under 65 pounds up 3,000 head and market lambs between 65 and 84 pounds up 16,000 head. Based on the second year in a row of breeding inventory increases, the lamb crop should increase in 2016, compared to 2015, creating more lambs available to

either enter the breeding flock or market lamb supply. Mature ewe slaughter will continue to be monitored throughout the year, along with lamb and yearling slaughter. Trends in both categories will provide insight to producers' intentions regarding sheep inventory changes.

Lamb and mutton in cold storage as of the end of February totaled 40.1 million pounds. This was down 7 million pounds compared to the end of January, but still up 5.8 million pounds from February of 2015. Lamb imports for the first two months of 2016 (data published by USDA-ERS) showed a 44% increase year-over-year and mutton imports were up 59% compared to the first two months of 2015.

Production in 2016

Looking forward throughout 2016, the Livestock Marketing Information Center (LMIC) expects a slight year-over-year increase in lamb slaughter and production, largely based on year-over-year increased sheep and lamb inventories. Commercial slaughter is forecast to be up 2-3%, dressed weights are expected to be even with to slightly below year ago levels, and commercial lamb production is expected to increase 1-2% in 2016 compared to 2015.

Lamb and mutton imports are not expected to experience significant year-over-year increases this year due to continued high levels of product in cold storage and international lamb production dynamics. However, it is expected that the value of the U.S. dollar will remain high relative to other key currencies (for this situation the Australian dollar and New Zealand dollar) and that will continue to create incentives to import relatively cheaper product into the U.S.

International Update

According to Meat and Livestock Australia (MLA), Australian lamb production is forecast to decrease 2% in 2016 compared to 2015. Lambs slaughtered is expected to be down 3-4% year-over-year, but lamb production down only 2% due to expected heavier dressed weights. MLA noted that these heavier dressed weights were the result of Australia becoming more export oriented and different market and sector preferences were influencing processor carcass weight specifications. The Australian sheep flock has been contracting since 2013, due to high slaughter levels forced by drought conditions and is forecast to total 70 million head as of June 2016. Based on the year-over-year expected decrease in lamb production, MLA forecasts total Australian lamb exports to be down 2-3% compared to 2015. Looking past 2016, MLA currently forecasts the Australian sheep inventory to grow 1-2% each year from 2017 to 2019 as the flock rebounds from drought induced reductions. Beef and Lamb New Zealand's most recent industry update indicates for 2016 that New Zealand lamb supplies will be down 7-8% year-over-year on decreased slaughter due to a smaller lamb crop and an increase in the number of breeding animals retained. Largely due to the supply contraction, total lamb exports are expected to decrease 8% year-on-year. The outlook for sheep inventory numbers as of June 2016 puts the New Zealand flock at 30 million head.

Price Forecasts

Prices in 2016

Combining these key market aspects (far from an exhaustive list), the expectation of increased lamb production in the U.S. along with burdensome levels of lamb and mutton in cold storage creates a market environment that will pressure domestic lamb prices lower to absorb the increased supply of product. Decreased international lamb production and therefore expectations for decreased exports of lamb out of New Zealand and Australia is good news for the domestic U.S. lamb industry. However, the continued strength of the U.S. dollar could still make imported product more appealing on the price side.

The LMIC forecasts slaughter lamb prices to decrease 8-10% on an annual average basis for 2016 compared to 2015. This puts the lamb national direct hot carcass price between \$269 and \$274 per cwt. for a 2016 annual average. Slaughter lamb prices normally see seasonal increases just before Easter and into the winter holiday months. During 2014 and 2015 however that seasonal norm did not hold true, and prices decreased from January through mid-summer, then increased into the winter months. Currently, 2016 prices are tracking more similar to recent trends (that of 2014 and 2015) and not the normal seasonal trend.

Feeder lamb prices are also forecast to decline year-over-year, although slightly less, down 7-9% for 2016 compared to 2015. The three market average (CO, TX, SD) feeder lamb average annual price for 2016 is forecast between \$174 and \$181 per cwt. Seasonally, feeder lamb prices are highest during spring months and again towards the end of the year. This is expected to be consistent for 2016.

Although domestic production is expected to increase slightly, per capita consumption is expected to decrease in 2016 as lamb production and import levels will not keep up with population growth. However, lamb disappearance is expected to be around 0.95 pounds on an annual per capita basis for 2016, down from 1 pound per person in 2015.

Looking Beyond 2016

Due to a forecast decrease in U.S. lamb prices in 2016, the national flock inventory is expected to stay about even to post a slight increase into 2017. In other words, the market is not expected to provide significant incentive to producers to increase their flock numbers heavily. Prices and production in 2017 are forecast to be relatively even with those in 2016 (see table). However, there are many moving pieces in the sheep and lamb industry. A factor considered in the forecasted decreasing lamb prices is the overall price decrease of competing meats, especially beef items. Another key aspect, that is notoriously difficult to measure, is demand. The unknown revolves around the ability of domestic demand to keep up with import levels and product in cold storage. If this domestic demand does not absorb the product coming into the market place, that will continue to pressure prices in the sheep and lamb industry.

**QUARTERLY COMMERCIAL SHEEP AND LAMB SLAUGHTER, PRODUCTION,
PER CAPITA LAMB DISAPPEARANCE AND LAMB PRICES ^a**

7.705

Year Quarter	Comm'l Slaughter (1,000 Head)	% Chg. from Year Ago	Average Dressed Weight (Lbs.)	% Chg. from Year Ago	Comm'l Lamb Production (Mil. Lbs.)	% Chg. from Year Ago	Per Capita Consump- tion (Retail Wt.)	% Chg. from Year Ago	Sl. Lambs Natl. Direct Carc. Weight ^b (\$/Cwt.)	% Chg. from Year Ago	Fdr. Lamb 3-Market Avg 60-90 lbs ^c (\$/Cwt.)	% Chg. from Year Ago
2015												
I	536	-0.4	70	1.5	37.6	1.1	0.25	12.0	305.98	2.2	208.09	-6.9
II	561	-7.9	69	-0.6	38.9	-8.5	0.26	5.8	287.94	1.5	195.80	0.5
III	553	-5.1	67	2.3	36.8	-2.9	0.21	3.8	296.94	0.5	186.07	-6.7
IV	567	-2.2	65	-1.2	37.0	-3.4	0.27	-2.6	301.01	-5.9	179.56	-11.1
Year	2217	-4.0	68	0.5	150.3	-3.6	1.00	4.4	297.97	-0.4	192.38	-5.8
2016												
I ^d	553	3.2	70	-0.0	38.8	3.2	0.25	-1.9	274-278	-9.8	198-202	-3.9
II ^e	574	2.3	69	-0.4	39.7	2.0	0.26	-2.4	272-278	-4.5	173-181	-9.6
III	563	1.8	66	-1.5	36.9	0.2	0.21	1.5	264-269	-10.3	164-170	-10.2
IV	572	0.9	64	-1.2	36.9	-0.3	0.23	-14.6	269-274	-9.8	168-176	-4.2
Year	2262	2.0	67	-0.8	152.2	1.3	0.95	-4.8	269-274	-9.2	174-181	-8.3
2017												
I	554	0.1	70	0.0	38.9	0.2	0.22	-9.3	264-274	-2.5	185-192	-5.8
II	580	1.2	70	0.6	40.3	1.7	0.24	-5.7	269-279	-0.4	170-181	-0.8
III	559	-0.7	66	0.6	36.8	-0.2	0.20	-4.5	262-269	-0.4	163-174	0.9
IV	586	2.4	65	0.1	37.8	2.5	0.22	-4.3	269-279	0.9	169-180	1.5
Year	2279	0.8	68	0.3	153.8	1.1	0.89	-6.0	266-276	0.0	172-182	0.0

a/ Totals may not add due to rounding.

b/ Slaughter lamb prices are formula purchases on a dressed weight basis.

c/ Feeder Lamb Prices are a three market (CO, SD, & TX) average; live weight basis.

Sources: Livestock Slaughter - USDA Publications; Lamb Prices - USDA Livestock Market News; Forecasts - LMIC Projections

d/ Estimated quarter

e/ Forecasted quarters