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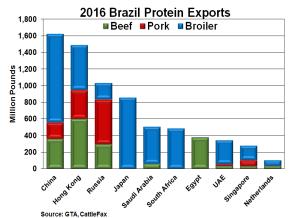




Brazil's Meat Industry Food Safety Scandal

The big news this week was that the Brazilian government raided several meat processors due to accusations of bribery to allow the sale of expired meat. While the scale and scope of the investigation is not yet fully known, the facts are that there is an investigation and several countries have enacted import bans of Brazilian product. What the outcome of the investigation will be and how long the bans will last is purely speculative at this point. Currently, Hong Kong, China, Chile, and the European Union have all enacted bans, while other countries moved to 100% product testing. South Korea banned Brazilian products when first hearing of the news, but recently lifted the bans.

Brazil is one of the largest protein exporters in the world, exporting nearly 10 billion pounds of beef, pork, and broilers in 2016. The top two markets for Brazil - China and Hong Kong



- have both enacted bans. China is Brazil's largest export destination for broilers and third largest for beef and pork. Hong Kong is the largest export destination for beef. and second largest for broilers and pork. Combined these two markets account for 31 percent of Brazil's exports. Chile and the European Union, combined, received 5.7 percent of Brazilian exports in 2016, just over 500 million pounds. Resulting in 3.5 billion pounds of Brazilian product exported to these four countries in 2016.

Russia is the third largest export market for Brazil, taking 1 billion pounds of beef, pork, and poultry in 2016. So far, there has been no word on what actions Russia will take. In 2014, Russia banned food imports from the U.S. in response to U.S. sanctions involving Russia's involvement in Eastern Ukraine and looked to Brazil to fill its import requirements.

Knowing what this could mean to U.S. cattle producers would be purely speculative at this time; yet this should not be bearish news for U.S. protein markets. With a set supply of protein in the world and one supplier being lost, countries will have to look elsewhere to satisfy demand. Again, the size and scope of the investigation, as well as how long the enacted bans will remain is undetermined.

Bottom Line: Brazilian authorities are investigating allegations of bribery and selling expired meat in the Brazilian meat industry. Two of the top three export markets for Brazil have recently enacted meat import bans. In 2016, the four regions that have enacted bans imported a combined 3.5 billion pounds of beef, pork, and broilers. If there is not a quick resolution, the U.S. could benefit from increased demand as these countries shift to new protein suppliers. Troy Bockelmann

Market Highlights

A full fed cattle trade for the week is not yet established as of press time; however, the underlying market tone is higher. There was light trade throughout the week with a full range from \$131 to \$137, mostly to regional packers. Light dressed trade also occurred at \$215 in the North. All trade that has occurred this week was higher than the week prior. Boxed beef was steady to slightly higher this week. Choice product was even and Selects were \$1.90 higher. Feeder cattle were steady to \$5 higher this week with instances of \$6 to \$8 higher earlier in the week. Calves traded this week steady to \$5 higher. Market cows were steady to \$3 higher compared to last week. Corn traded 10 cents lower this week.



RISK MANAGEMENT SEMINAR

June 21-22, 2017 Denver, CO

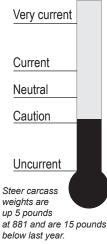
Registration Now Open!

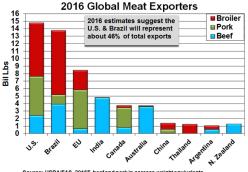
E-mail

leigh@cattlefax.com for registation form / information OR

Call 1-800-825-7525







Source: USDA/FAS, 2016F, beef and pork in carcass-weight equi

Fed-Cattle Outlook

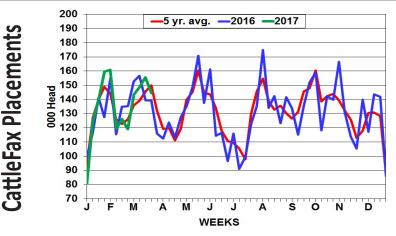
Increasing Supplies Ahead

Seasonally, fed cattle supplies will increase moving forward. The front-end supplies are manageable and carcass weights are running well below year ago levels, due to cattle being pulled forward. However, the supply increase over the next 90 days will be much larger than normal due to the 700,000 head increase in placements from November through January, and could potentially test the kill capacity. Near-term, the beef complex will have a pull back, although beef usage will be seasonally strong moving through the spring. This combination would suggest the spring highs are in place and the market will move seasonally lower through the spring and on into the summer. Historically wide basis will keep cattle feeders willing sellers, and packer profitability will encourage increasing slaughter levels. Longer-term, increasing supplies of all animal proteins will keep a lid on values, although exports of all animal proteins continues to improve, which will partially offset the increased production.

Next Week: Fed supplies, although manageable, will increase seasonally. The beef complex is expected to be lower. Basis, although historically strong, will narrow. The market is expected to trade in the upper-\$120's in the Plains, with continued premiums noted in the North.

April: Increasing supplies are noted moving forward. Continued feedyard profitability, strong basis and positive packer margins will result in cattle being

F	roje	cted	d Fed-C	Cattle M	arke	tings	(000	Не	ad) 2	4-M	ar-20	017	
MAR APR MAY JUN JUL AUG	Placed Against 714 683 740 863 885 795		Pre Mo Carryover 442 405 422 366 426 537	Begin Inv 1156 1087 1163 1229 1311 1332	M Shipr 80 7' 85 86 84 92	nents 03 19 54 64	Carry Over 34 37 30 33 39	%	Net Weeks 4.6 4.0 4.4 4.4 4.0 4.6	Shi	ij. Wkly Avg pment 124 128 138 140 149	%s Yr 10 10 10 10 10	00
CattleFax Shipments													
	Jan	Feb	Mar			May			Aug	Sep	Oct	Nov	Dec
				Month	•	,		,					
2016	539	504		2015	567	507		602		524	555	460	567
2017	584	492	2 437	2016	515	582		590	656	606	528	562	514
0040	400	400		Weekly		_	`	,	400	405	400	445	400
2016	128	120		2015	129	127		137		125	126	115	129
2017	139	123		2016	123	138	136		143	144	126	134	122
17%16	109	103		16%15	95	109	100		105	115	100	117	95
17%5Yr	103	95	5 95 	16%5Yr	96	99	92	99	99	104	100	108	88
				Cattle	Fax	Place	emer	nts					
	Jan	Feb	Mar		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				Month	ly To	tals (000 h	d)					
2016	487	582	2 645	2015	561	548	470	518	555	580	661	473	496
2017	553	525	543	2016	495	641	538	467	652	601	595	577	532
				Weekly	Aver	ages	(000 l	nd)					
2016	116	138		2015	128	137	117		132	138	150	118	113
2017	132	131		2016	118	153	122		142	143	142	137	127
17%16	114	95	5 108	16%15	92	112	104	99	108	104	95	116	112



98 101

100

102 100

108 16%5Yr

pulled forward, and increased harvest levels. Look for the strongest prices early, with a softer trend throughout the month ranging between \$122 and \$128.

May-June: With large placed against supplies, continued currentness will be critical to keeping the front-end supply and carcass weights manageable. Seasonally, beef usage increases moving through the spring. Strong basis levels will keep the cattle feeder a willing seller and could accelerate the down in the market. Look for prices near \$120 early, then a softer trend as the market transitions into the larger fed supplies.

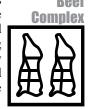
July-August: Beef production will run above yearago levels and seasonally beef usage slows moving through the heat of the summer. Large total protein supplies will be prevalent. Prices are expected to be on the defensive. **Kevin Good**

Contract and Formula Cattle 24-Mar-2017

	Scheduled in March	Shipped in March	Scheduled in April	Scheduled in May
Kansas	250,000	200,500	245,000	245,000
Texas	305,000	234,000	290,000	300,000
Colorado	85,000	69,500	85,000	85,000
Nebraska	225,000	180,000	220,000	220,000
Totals	865,000	684,000	840,000	850,000
Basis Bids Steers	May +\$5 to +\$2	Ju +\$3 to	even +	July \$2 to even
Heifers	+\$5 to +\$2	+\$3 to	even +	\$2 to even

Inventories Begin to Build

The Choice boxed beef cutout was quoted \$.08 softer this week, while Selects over the same period advanced by \$1.90. A few sellers are beginning to note larger unsold supplies, but they have come into this time in a very good sold position so cooler inventories are not yet a problem.



Much of the price advance in the cutout over the past few weeks has been due to loins and trimmings. As available fed cattle supplies start to increase, the 50's lean trimming prices may be at risk of going lower. Loin items could also back off modestly as buyers shy away from the sharply higher prices. The result could be a cutout the drifts lower over the next two to three weeks.

Next Week: Demand may slow a bit with larger supplies, yet should remain seasonally strong. Asking prices will be steady at best. A lower cutout is probable. Choice boxes are expected to trade between \$215 and \$220, Selects from \$210 to \$215. *Duane Leng*

Fed Cattle Prices 24-Mar-2017

	Live Steers	Hot-Wgt Prices	Live Heifers	Hot-Wgt Prices	Trade Volume	Contract Formula
PANH	N.T	N.T	N.T	N.T	70,200	99%
KS	N.T	N.T	N.T	N.T	62,000	92%
NE	133-135	215	133-135	215	80,000	95%
CO*	N.T	N.T	N.T	N.T	19,250	100%
CB	133-135	213-218	133-135	213-218	0	0%
PNW*	N.T	N.T	N.T	N.T	0	0%
SW	N.T	N.T	N.T	N.T	0	0%

Price ranges reflect the last best test for average choice to high quality cattle *Includes all reported Canadian Imports

17%5Yr 104

Titanium® Research Brief 5

Evaluating the Effects of Vaccine-Induced Stress on Productivity

Elanco Study No. TR-13



Study overview

Although vaccine-related stress can be difficult to measure in cattle, appetite is one of the more useful indicators researchers can monitor to determine whether an animal is stressed. It has been shown that vaccination can have a significant negative effect on feed intake.^{1,2}

This field trial was conducted to compare post-vaccination feed intake for cattle administered Titanium® 5 with that of cattle receiving a sterile saline solution.

Background Information

- Upon arrival, 46 Angus steers of similar size were fed for 39 days to acclimate them to the pens and feeders
 - Seven days before the study began, they were switched from a receiving ration to a finishing ration
- Cattle ate from a single feeder activated by a computer chip unique to each animal, enabling measurement of individual-animal feed consumption
- · Fresh water was available ad libitum
- Cattle were assigned randomly to two treatment groups and treated on Day 0:
 - 1) Titanium 5 administered intramuscularly³ (IM) according to label directions
 - 2) Sterile saline solution administered IM
- Researchers measured individual daily feed intake:
 - Day -10 through Day -1 to establish baseline feed intake
 - Day 1 through Day 29 to compare results between treatment groups
- Daily feed consumption was calculated by subtracting the amount of ration removed from the total ration delivered during the day
- Titanium 5 is a modified-live virus vaccine that protects against bovine viral diarrhea (BVD) virus, types 1 and 2, infectious bovine rhinotracheitis (IBR), parainfluenza₃ (Pl₃) and bovine respiratory syncytial virus (BRSV)

Study results

Table 1. Mean dry matter intake (lbs)

Days post-vaccination	Titanium 5	Control (saline solution)
Days 1-4	26.8ª	26.1ª
Days 1-5	26.9ª	26.3ª
Days 1-10	26.6ª	26.4ª
Days 1-29	27.0ª	26.9 ^a

^{ab}Different superscripts within each row indicate statistical significance (P < 0.05)

Key findings

Vaccination with Titanium 5 did not have a negative effect on feed intake.

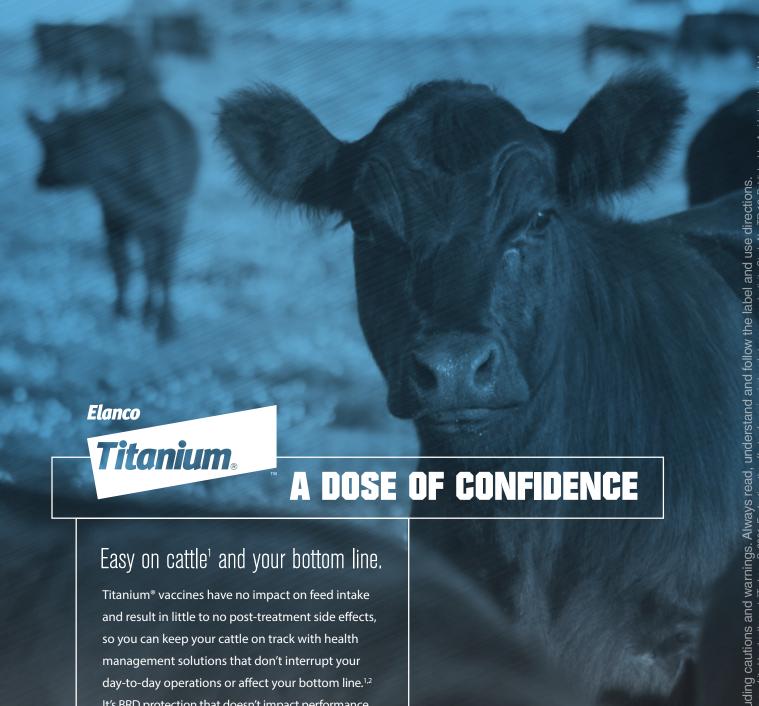
¹Chirase, N. K., L. W. Greene, G. D. Graham, and J. M. Avampato. 2001. Influence of clostridial vaccines and injection sites on performance, feeding behavior and lesion size scores of beef steers. J. Anim. Sci. 79(6):1409-1415.

²Stokka, G. L., A. J. Edwards, M. F. Spire, R. T. Brandt., Jr., and J. E. Smith. 1994. Inflammatory response to clostridial vaccines in feedlot cattle. J. Am. Vet. Med. Assoc. 204(3):415-419. ³At the time this research was conducted, label directions for Titanium 5 allowed IM administration. Current label directions say to inject the vaccine subcutaneously.

The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

Do not vaccinate within 21 days of slaughter.





It's BRD protection that doesn't impact performance, so you can be confident in every dose.

ELANCO.US/TITANIUM







Feeder Cattle Auction Supply Summary

With the recent rally in the feeder cattle futures, the market has reached the targeted range of \$134-\$136/cwt for the spring high. The May feeder to October live cattle spread has rebounded to a new recent high, as feeder cattle futures have outpaced live cattle futures. In all key regions feeder cattle auction receipts are running above year ago levels. In the Southeast, auction receipts are up 16 percent or 83.5 thousand head, and in the Southern Plains receipts are up 25 percent or nearly 110 thousand head. The trend continues in the Northern Plains with auction receipts running 12 percent or 103 thousand head above a year ago.

			alves: Representat	ive Direct	Sales
Area	# Hd.	Wt.	Breed Type	Price	Del.
WEST	•		STEERS		
WA	400	634	CH ENG X	142.35	NOV
ID	200	807	CH ENG X - DEL	125.83	IMM
WEST			HEIFERS		
WA	200	620	CH ENG X	135.00	NOV
CENT	RAL		STEERS		
TX	500	760	CH ENG X	140.50	MAY
TX	400	725	CH ENG X	141.00	JUN
TX	400	765	CH ENG X	133.00	MAY
TX	500	800	CH ENG X	134.00	MAY
OK	450	975	CH ENG X	119.50	APR
KS	200	825	CH ENG X	133.50	MAY
NM	800	800	CH ENG X	133.80	AUG
NM	600	825	CH ENG X	127.75	SEP
NE	200	810	CH ENG X	134.00	IMM
NE	200	850	CH ENG X	130.50	IMM
CENT			HEIFERS		
TX	450	750	CH ENG X	126.00	MAY
KS	500	850	CH ENG X	128.25	AUG
NM	1200	750	CH ENG X	121.60	MAY
NM	300	750	CH ENG X	128.50	JUN
NE	2000	733	CH ENG X	130.97	IMM
SOUT			STEERS		
GA	100	675	CH ENG X	136.40	IMM
GA	350	725	CH ENG X	130.80	IMM
GA	350	925	CH ENG X	124.25	IMM
SOUT			HEIFERS		
GA	150	725	CH ENG X	121.00	IMM

always potential for more upside in markets, it is well worth considering managing risk and protecting equity. Summer month feeder cattle futures have rallied nearly 25 percent from the fall 2016 low, and there are larger supplies of feeder cattle available compared to 2016. Fundamentally, there is a concern overcattleproducer leverage regarding what will packers need for incentive to move through

cattle supply

during the peak in

late summer and early fall. Couple the facts of larger

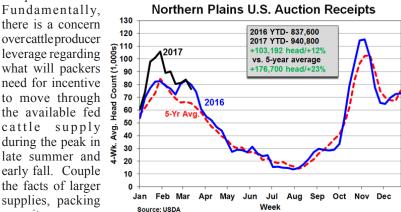
supplies, packing

While there is

Feeder Cattle Outlook



Southeast & Southern Plains



capacity concerns and increased production of competing proteins into the thought process of developing a risk management strategy to protect equity. Whether hedging with futures, using options to open upside potential, or forward contracting, producers should look to develop an equity protection plan.

Troy Bockelmann

Feeder Cattle Prices 24-Mar-2017

	101 Ou									_	4 1						_		4	
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						WA/OR														
	co	MT/WY	CA	NV/UT	AZ/NM	/ID		TX	KS/MO	ND/SD	NE	oĸ	IA		AL	AR	FL	GA	LA/MS	KY/TN
Wts	STEER						Wts	STEER						Wts	STEER					
9-10	123-128	123-130	116-122	115-124	115-124	116-125	9-10	117-123	116-127	125-130	125-130	119-125	124-129	9-10	117-123	117-123	115-121	117-123	117-123	118-124
8-9	131-136	125-138	124-130	122-129	123-131	120-129	8-9	125-133	121-134	129-134	129-134	124-132	128-133	8-9	117-125	121-129	115-123	117-125	117-125	120-128
7-8	134-140	137-144	130-137	129-138	129-139	129-139	7-8	133-141	128-144	139-145	141-147	133-141	139-145	7-8	121-129	126-134	119-127	121-129	122-130	121-129
6-7	146-155	146-163	140-151	139-152	138-150	139-153	6-7	145-155	142-154	147-156	150-159	142-152	150-159	6-7	130-140	140-150	128-138	130-140	130-140	128-138
5-6	165-176	166-180	155-167	154-169	153-169	155-170	5-6	155-167	155-169	167-178	165-176	155-167	162-173	5-6	144-156	155-167	138-150	140-152	140-152	144-156
4-5	180-192	177-195	167-180	166-181	165-186	166-182	4-5	170-184	176-190	178-190	176-188	167-181	175-187	4-5	153-167	167-181	151-165	151-165	150-164	158-172
	HEIFER	!					. •	HEIFER							HEIFER					
8-9	116-121	116-122	113-120	112-119	112-119	110-120	8-9	113-121	110-125	121-126	120-125	112-120	119-124	8-9	109-115	111-117	107-113	109-115	109-115	109-115
7-8	122-128	119-129	116-124	115-125	115-129	115-126	7-8	121-129	118-130	125-131	125-131	120-128	123-129	7-8	114-122	115-123	111-119	113-121	114-122	112-120
6-7	131-140	131-145	121-132	120-135	119-140	122-136	6-7	124-134	121-136	133-142	131-140	125-135	130-139	6-7	115-125	120-130	114-124	116-126	115-125	122-132
	145-156	143-158	135-147	132-146	133-152	130-145	5-6	134-146	134-150	144-155	137-148	133-145	139-150	5-6	123-135	132-144	118-130	120-132	123-135	129-141
5-6	156-168	153-172	147-161	145-160	145-166	143-160	3-6 4-5	144-158	135-162	153-165	158-170	138-152	159-171	4-5	131-145	142-156	128-142	128-142	128-142	142-156
4-5	cows						4-5	COWS						4-5	cows					
	66-76	62-72	69-76	61-76	58-74	64-76		65-68	64-74	66-76	65-75	66-71	64-74		60-70	60-69	62-71	63-72	62-72	58-65
Util	62-72	54-69	60-67	57-64	53-63	55-65	Util	65-67	57-73	58-68	56-66	65-69	55-65	Util	58-63	57-66	58-64	59-65	58-66	57-63
Cn/Cı	82-92	82-95	79-89	74-85	78-95	72-86	Cn/Cut	86-94	88-96	89-99	85-95	89-95	82-92	Cn/Cut	85-92	84-94	90-97	93-99	85-95	81-85
Bulls							Bulls							Bulls						
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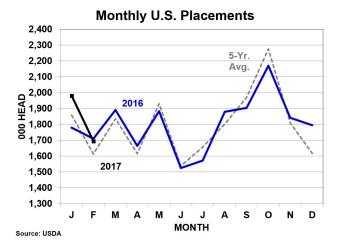
Short Month Squeeze

Cattle-on-feed on March 1st were found to be even with 2016. February marketings came in up 4 percent from last year, with cattle placed on feed lower by 1 percent. There were 4.0 marketing weeks this February, one day fewer than last year. Federally inspected steer and heifer slaughter was 3 percent higher than February of last year.

U.S. Cattle-on-Feed March 1, 2017 1,000+ capacities

	Average 2012-2016	2016	2017	% year ago
COF Feb. 1	10996	10709	10782	100.7
Placed	1614	1710	1694	99
Marketed	1603	1591	1648	104
Other Dis.	68	58	56	97
COF Mar. 1	10939	10770	10772	100.0

From November to January, year-over-year placement growth was roughly 14.5%, so February placements paled in comparison. The availability of placement weight feeders was likely somewhat squeezed by the large placements in the prior 3 months; fewer marketing days were also a contributing factor. *Marcus Brix*



Live Cattle Imports, Year-to-Date Totals

Canada	11-Mar-17	17-YTD	16-YTD
Feeders	3,419	21,229	29,591
Slaughter	10,757	94,897	116,701
	18-Mar-17	17-YTD	16-YTD
Mexico	35,502	287,818	240,087
Page 4			

Summary of Activity	This Week 24-Mar-17	Last Week 17-Mar-17	Year Ago 25-Mar-16
CattleFax Data Placements	144,409	155,656	139,453
Shipments	127,524		121,796
Avg In-Weights USDA Sltr Wgts	746 1,360		757 1,366
USDA Str Carc Wgt*	881	876	896
Days on Feed	N/A		165
Carryover Pct Weekly Supply	34 387.100		41 429.300
Percent Grade Choice & H	igher 78.93		76.25
Prime Grade Pct	6.18		5.68
Choice Grade Pct Select Grade Pct	72.75 15.87	72.77 16.90	70.57 17.97
Live Prices (\$/cwt)	15.67	10.90	17.37
Slaughter Steers	N/A	128.79	136.00
Steer Calf (450#)	176.70	174.48	211.19
Steer Calf (550#) Yearling Steer (650#)	162.40 147.07	158.26 142.84	194.70 175.66
Yearling Steer (050#)	135.45	131.84	160.62
Yearling Steer (850#)	127.77	123.83	149.29
Utility and Commercial Cov Canner and Cutter Cows	ws 68.15 63.00		76.04 71.59
Lean Hogs	68.46		63.07
Omaha Čorn (\$/bu)	3.18	3.24	3.50
12-City Broiler	98.57	96.63	87.19
Dollar Index Meat Prices (\$/cwt)	99.72	100.38	96.14
Certified Angus Beef Cutou	ut (UB) 223.76	222.46	238.32
Choice Cutout	222.28	222.36	224.84
Select Cutout Choice/Select Price Spread	215.77 d 6.51	213.87 8.49	217.31 7.53
Cow Cutout	169.61	168.30	173.24
Hide and Offal	11.96	11.85	11.30
Pork Cutout	77.49	81.34	75.55
Slaughter (000 hd) and A Cattle	Neat Productio 613.0	on (Mil Ibs) 588.0	538.0
Hogs	613.0 2,313.0 997.0	2,335.0	2,166.0
Total Red Meat Production	997.0	981.2	914.9
Beef Production Pork Production	501.5 491.2		447.4 463.0
Poultry Production	491.2 N/A		781.9
,	CME AVG	6 STATE FED	KS-TX-OK
TI 00/00	FDR PRICE		FED STR**
Thu 03/23 Wed 03/22	N/A 131 58	130.86 129.59	129.15 128.04
Tue 03/21	131.58 130.02	128.61	127.63
Mon 03/20	129.95	128.61	127.63
Fri 03/17	129.70	128.60	127.61
* USDA steer carcass weights ** 5-Day weighted average fed			KS,TX,OK)

F.I. Slaughter Mix (000 head)

		Week	Ending		Year To Date				
	11-Mai	-2017	12-Ma	r-2016	2017	2016	Pct Chg		
Total Sltr	5	95	543		5811	5502	UP 5.6		
	Pct	No	Pct	No					
Steers	51.8	308	51.9	282	2999	2854	UP 5.1		
Heifers	27.4	163	27.1	147	1593	1477	UP 7.9		
Cows	19.2	114	19.3	105	1129	1092	UP 3.4		
Bulls	1.7	10	1.7	9	90	79	UP 13.9		