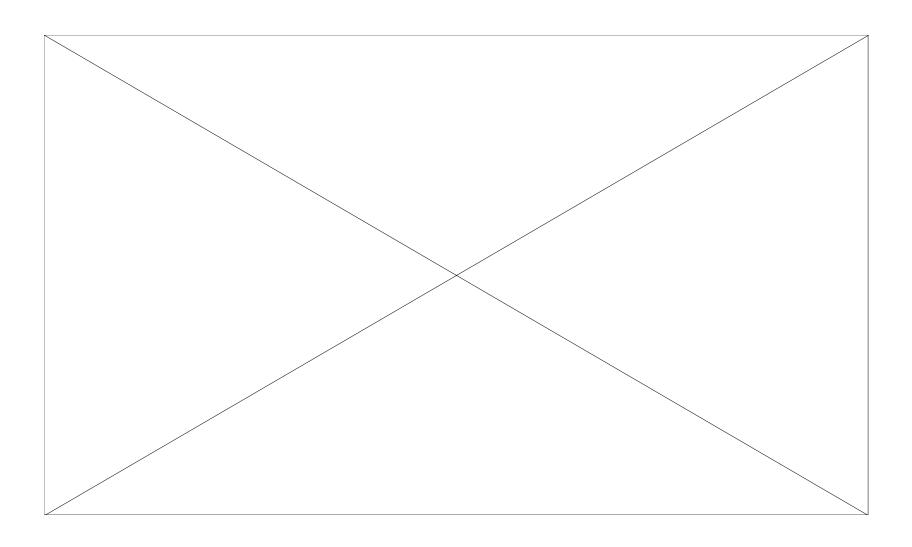
Annual Meat Conference – February 2017

Market Outlook for Meat & Poultry – General Economy and Pork

Steve R. Meyer, Ph.D. Vice-President, Pork Analysis EMI Analytics



In case you missed it, I have a new title ...



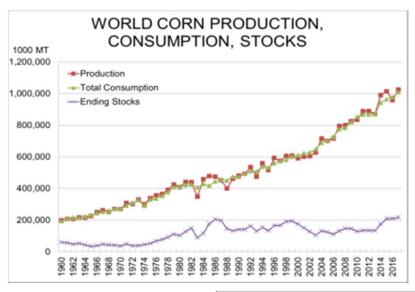
Annual Meat Conference – February 2017

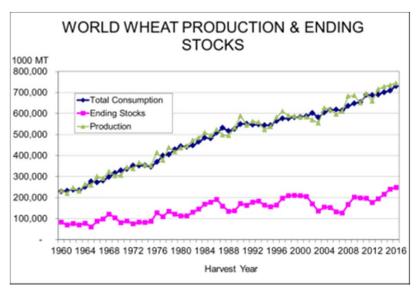
Market Outlook for Meat & Poultry – General Economy and Pork

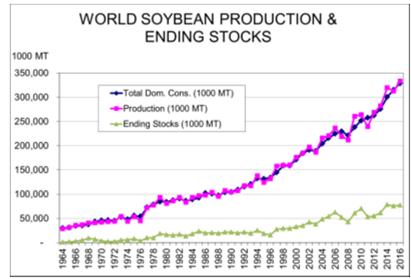
Steve R. Meyer, Ph.D., **GOD AMONG MEN** Vice-President, Pork Analysis EMI Analytics



A word about feed ingredients and costs...

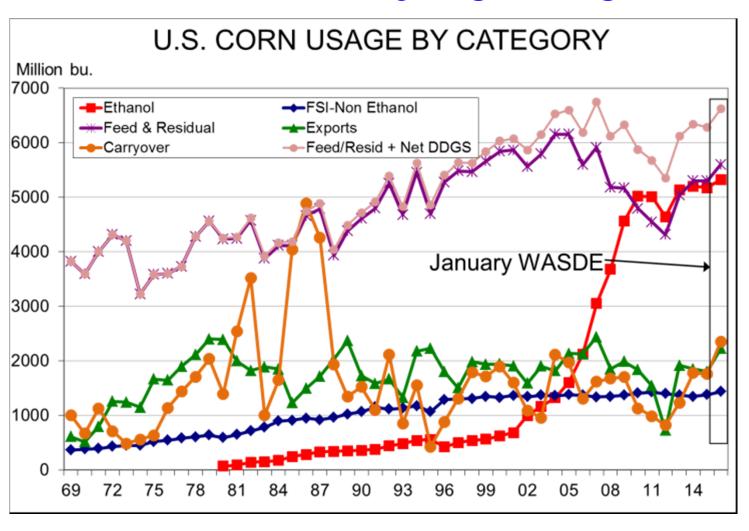






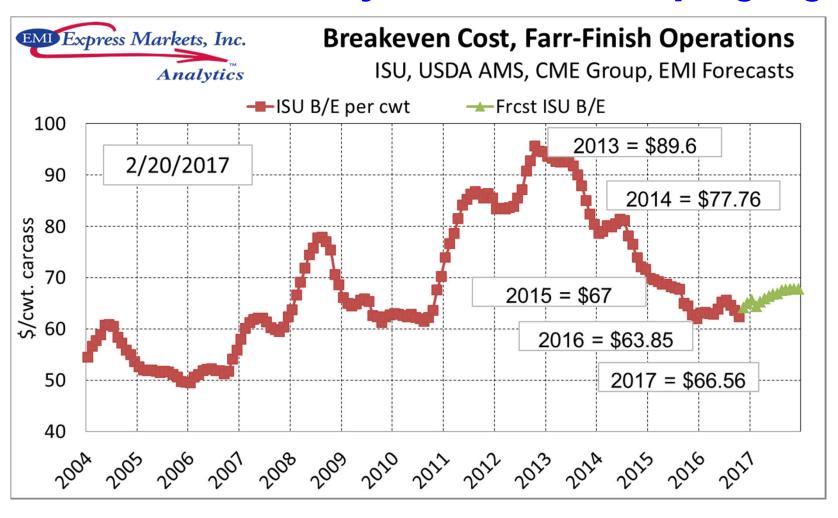
Ethanol usage is now flat...

... And feed availability is growing with output!

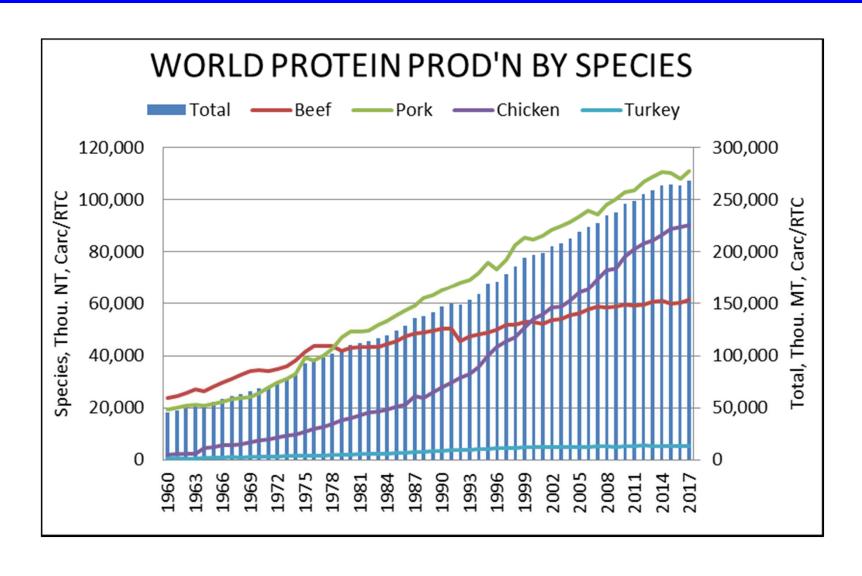


'16 & '17: Silver lining was and is production costs

... but they have been creeping higher

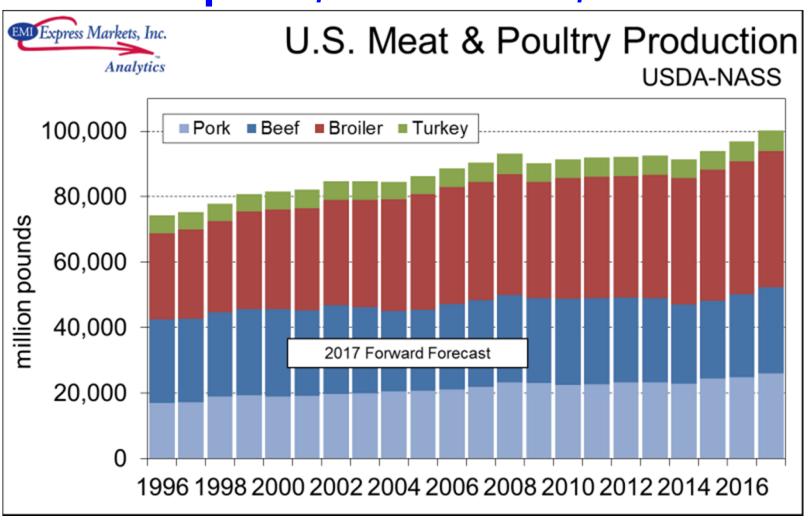


The same is true of meat and poultry supplies ...



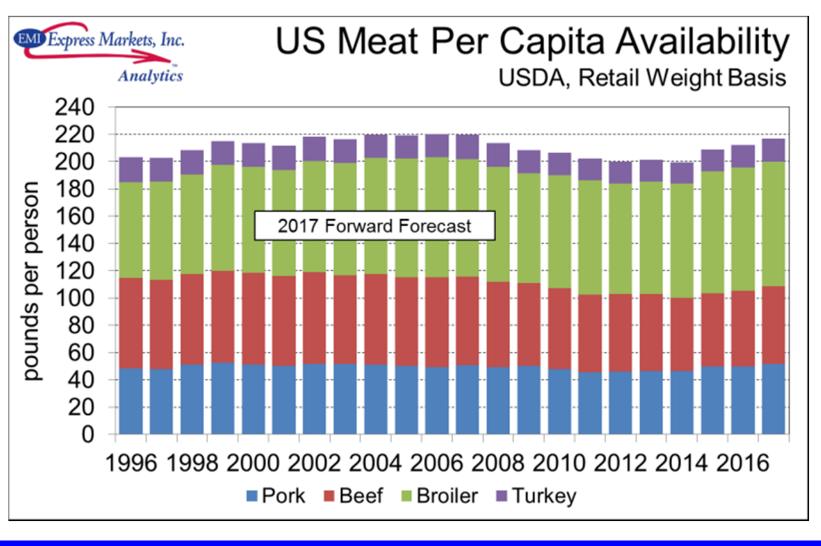
U.S. production will set records as well ...

.. '15 was up 2.7%, '16 was +3.1%, '17 will be +3%

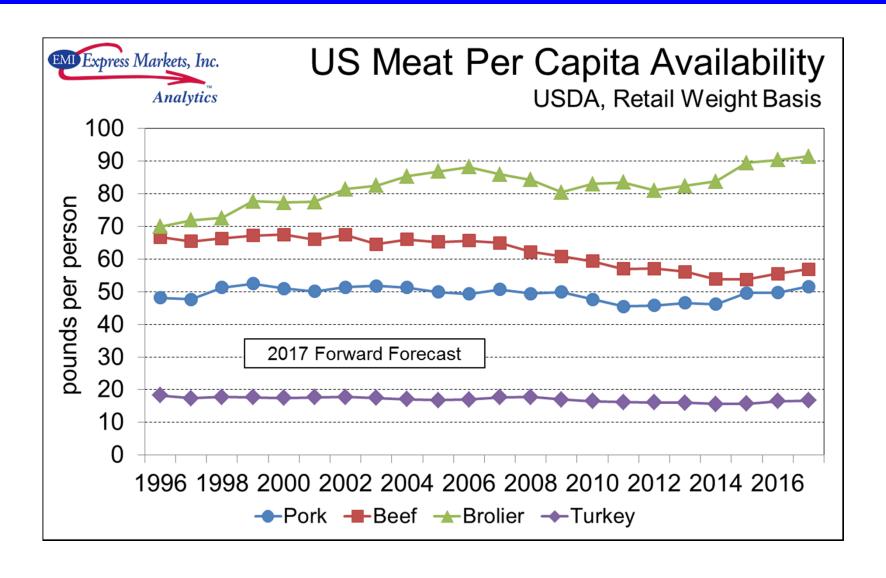


Per capita protein consumption is rising again...

... big jump was 4.6% in '15; '16 was 1.5%, '17 = 1.9%

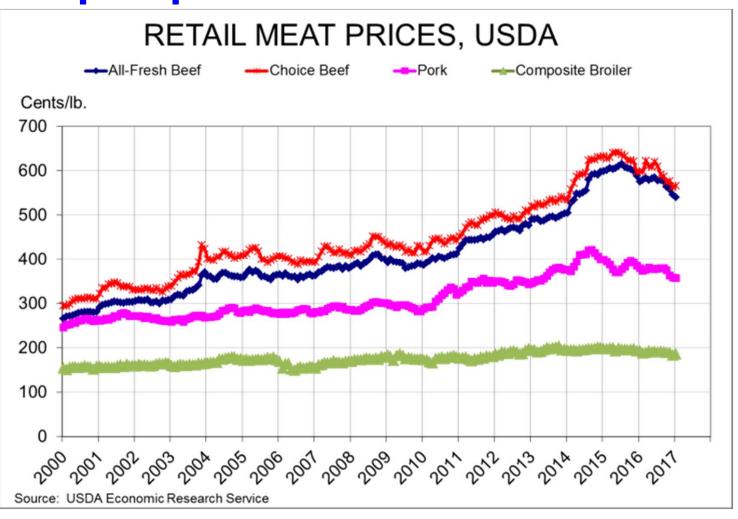


Pork has returned to its "normal" 50 lbs/person...



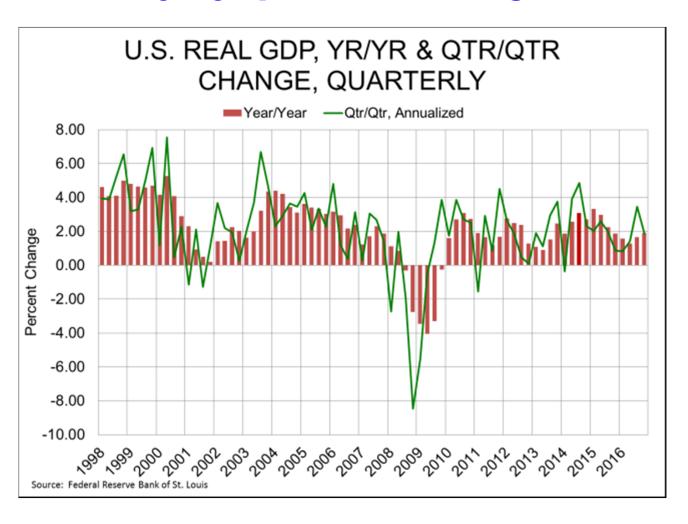
The other part of demand is retail price ...

... & pork prices have fallen – lowest since '13

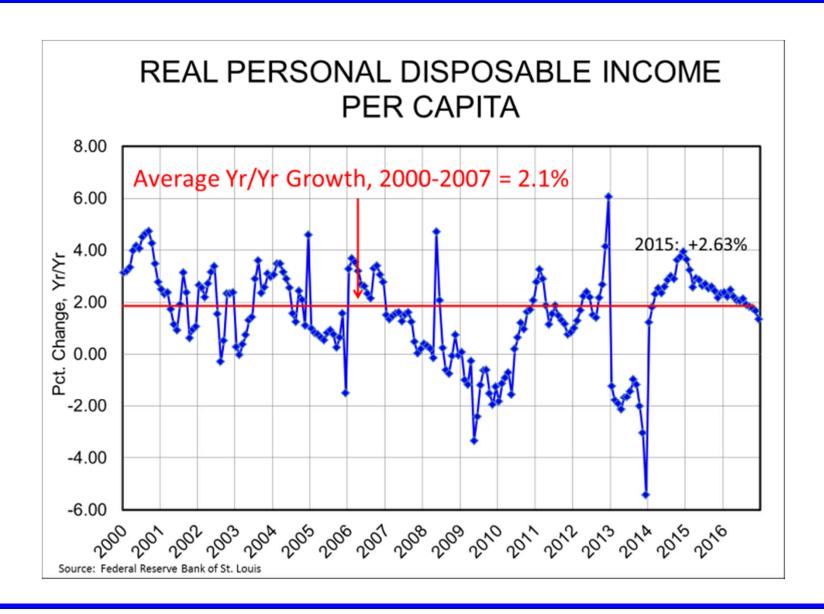


Q4 GDP grew, qtr/qtr at a 1.9% annual rate ...

... And yr/yr percent change was also 1.9%

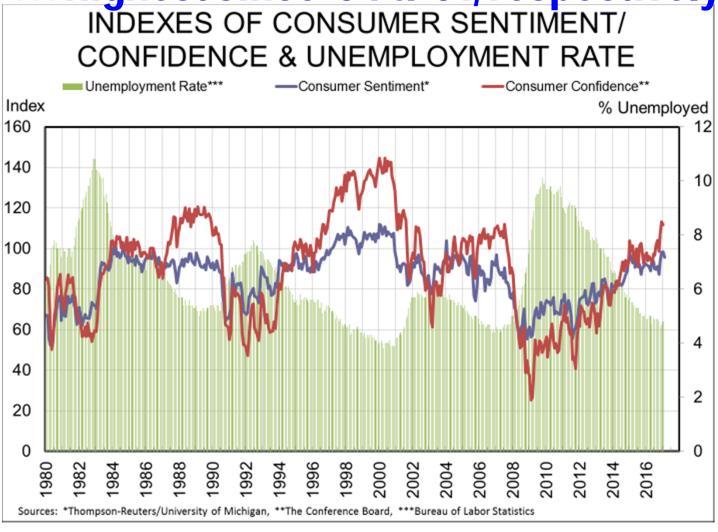


RPDI growth has slowed steadily: '16 = 2.01%...



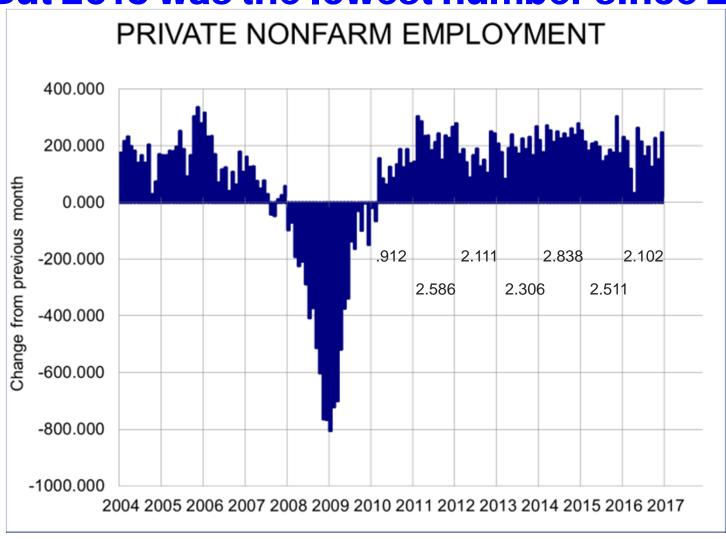
Consumer Sentiment & Confidence Indexes...

... Highest since '04 & '01, respectively, in Dec



The economy has consistently added jobs ...

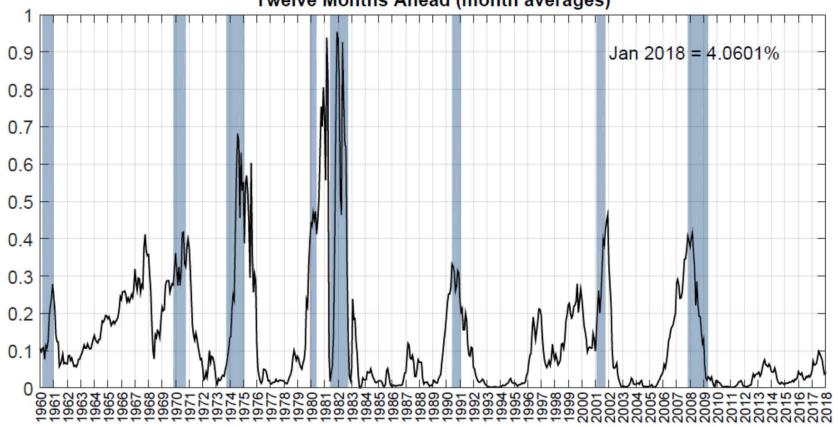
But 2016 was the lowest number since 2010...



By at least one measure/predictor...

... A recession is very unlikely over next 12 mos.

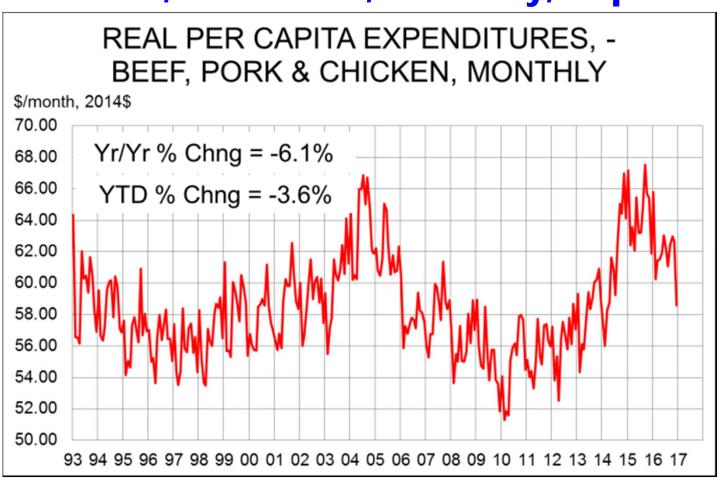
Probability of US Recession Predicted by Treasury Spread*
Twelve Months Ahead (month averages)



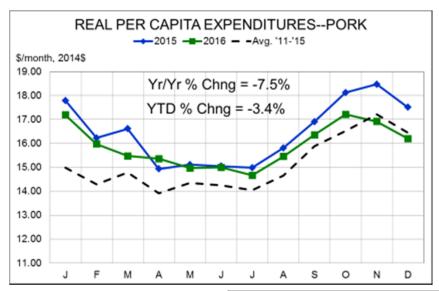
Source: Federal Reserve Bank of New York

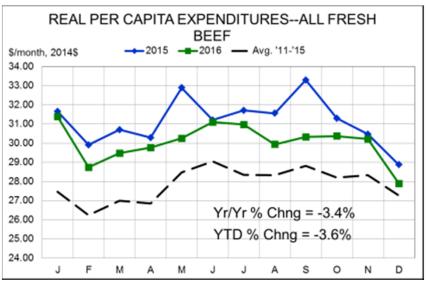
Meat/poultry demand has improved ...

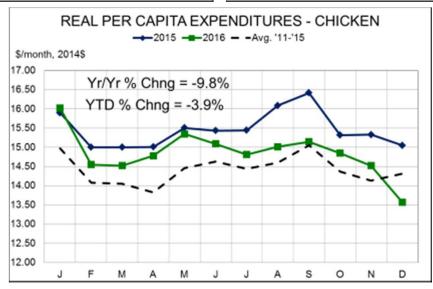
... Atkins, recession, recovery, hi-pro/lo-carb



'16 pork RPCE is down less than beef, chicken

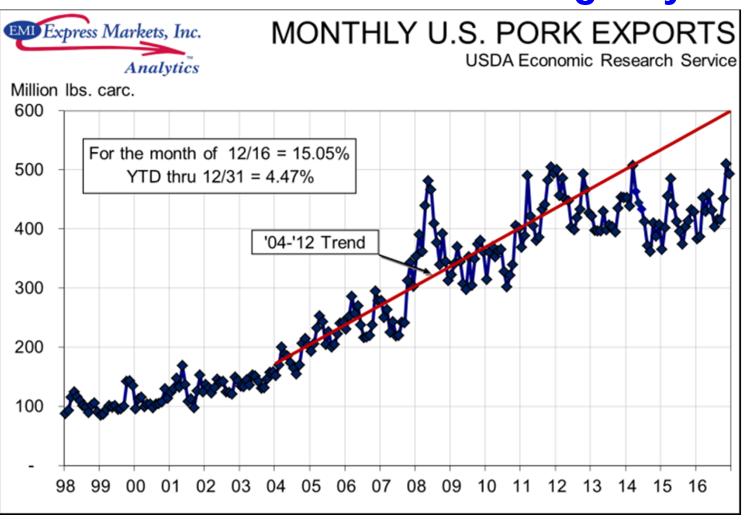






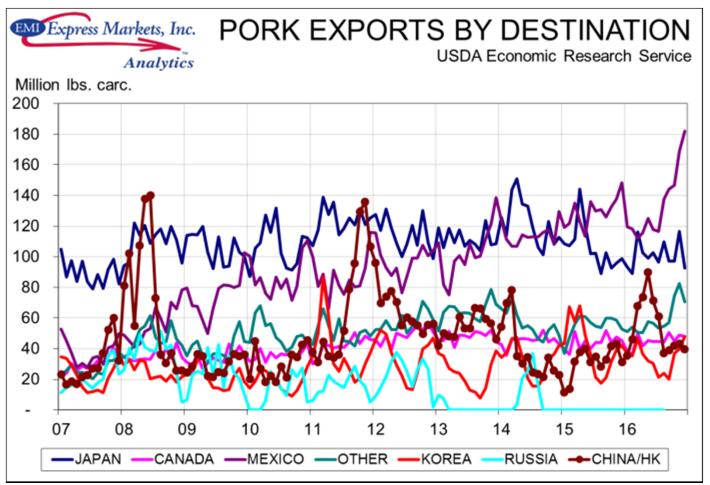
Export growth has slowed since '11...

... But 2016 was the second largest year ever



China has generally been slow since '11...

... While Mexico, Other markets continue to grow



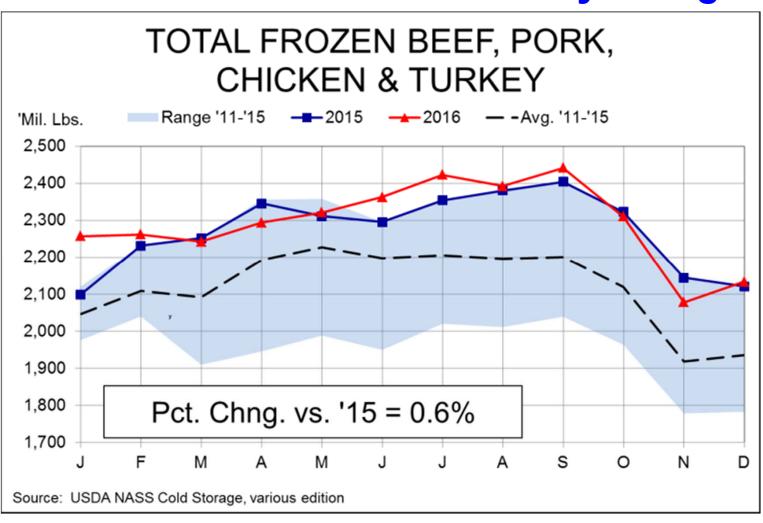
The strong \$US has been a challenge

... Will it drop back into its range?

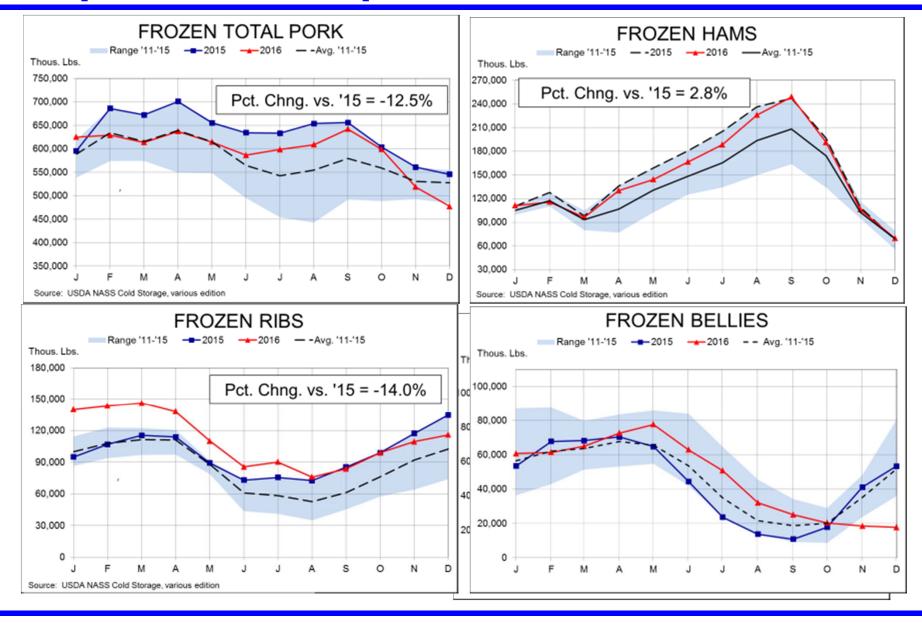


Total frozen meat/poultry grew in December ...

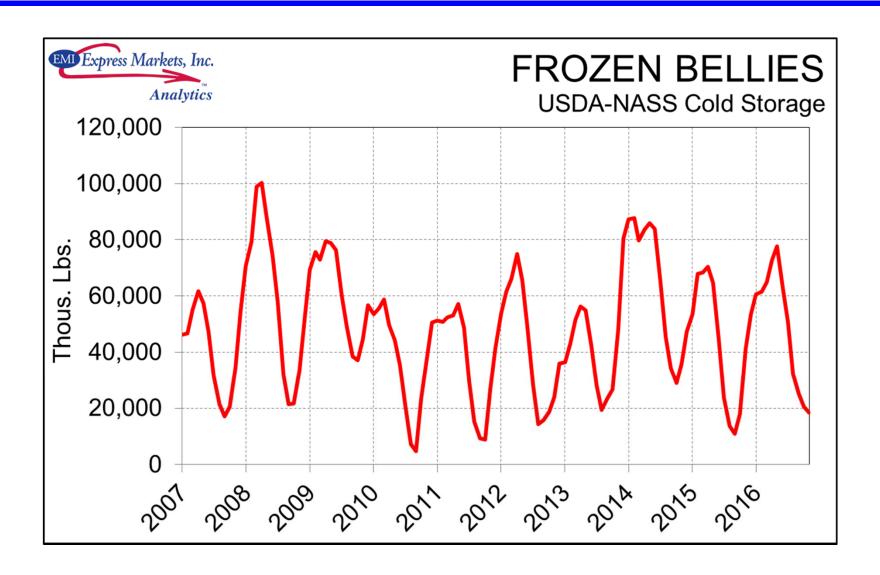
... And was back above year-ago level



But pork is NOT the problem...

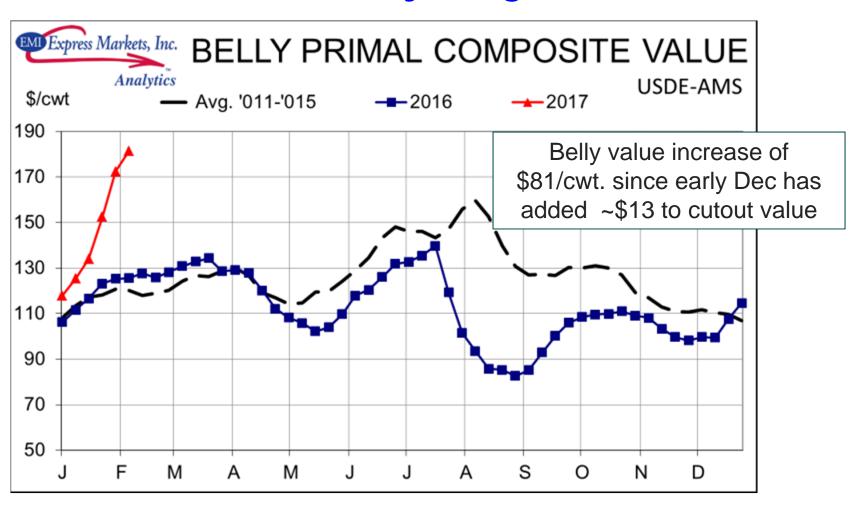


And about the GREAT BACON SHORTAGE II



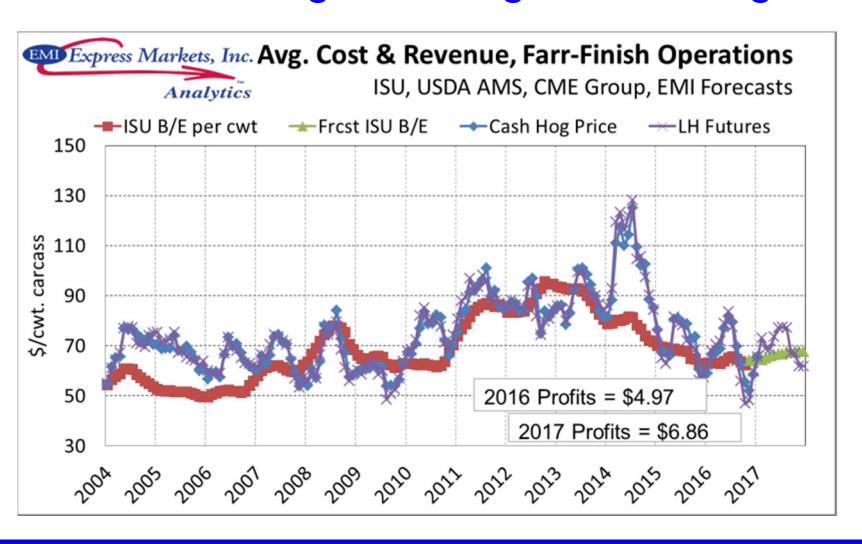
Price is the rationing mechanism ...

... That will slow belly usage, increase stocks



Profit outlook has improved greatly from Nov. ...

... Better than '16, good enough to sustain growth!



December Hogs and Pigs report -- BEARISH...

... But Feb futures have rallied \$4+ thru Friday

USDA QUARTERLY HOGS & PIGS REPORT

December 23, 2016

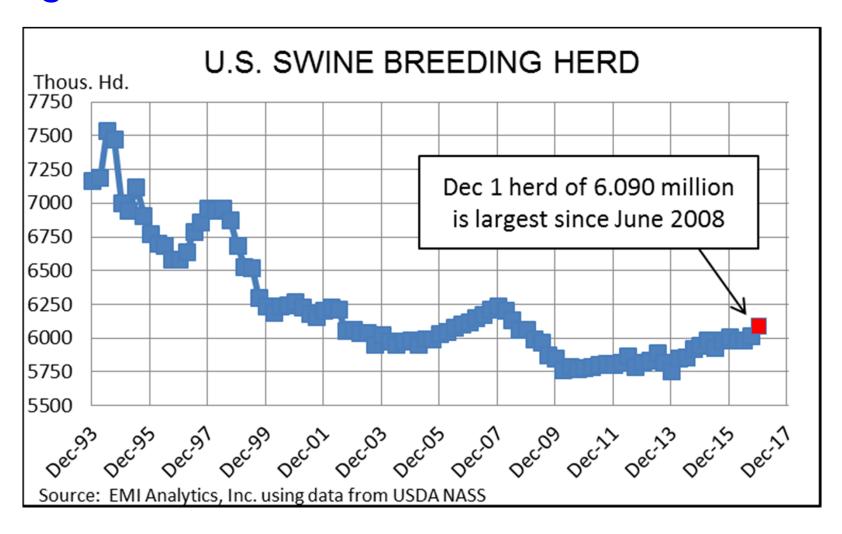
			'15 as	Pre-	Actual
Category	2015	2016	Pct of	Report	minus
			'14	Est's ¹	Est.
Inventories on Dec 1					
All hogs and pigs	68,919	71,500	103.7	101.7	2.0
Kept for breeding	6,002	6,090	101.5	100.2	1.3
Kept for marketing	62,917	65,410	104.0	102.0	2.0
Under 50 lbs.	20,008	20,882	104.4	101.4	3.0
50-119 lbs.	17,262	18,037	104.5	101.8	2.7
120-179 lbs.	13,370	13,911	104.0	102.0	2.0
180 lbs. and over	12,276	12,580	102.5	102.8	-0.3
Farrowings					
Sep-Nov sows farrowed	2,929	3,043	103.9	100.4	3.5
Dec-Feb Intentions	2,927	2,968	101.4	99.6	1.8
Mar-May Intentions	2,968	2,997	101.0	100.5	0.5
Sep-Nov Pig Crop	30,848	32,333	104.8	101.5	3.3
Sep-Nov pigs saved per litter	10.53	10.63	100.9	101.1	-0.2
*Tb			10	. I less see Di	

^{*}Thousand head ** Thousand Litters

¹Source: Urner Barry

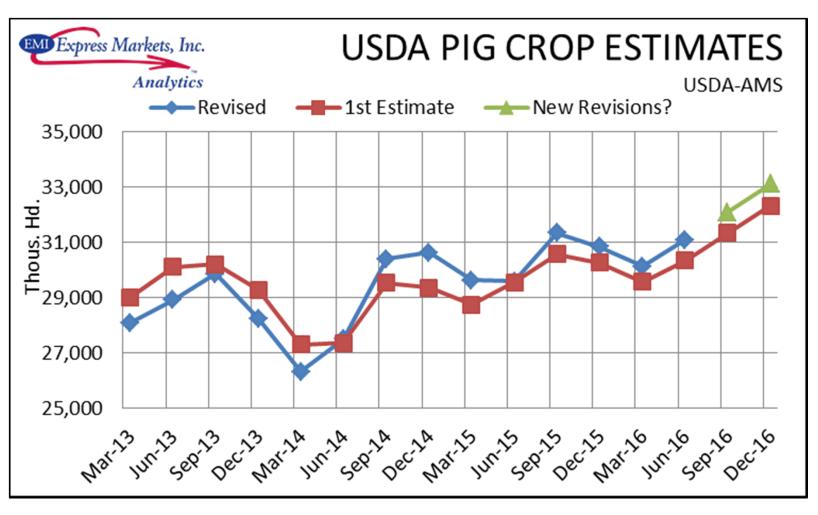
Dec 1 BH of 6.090 mil. hd. is, we think, reasonable ...

.. largest since June 2008, look for +1 to +1.5% in '17

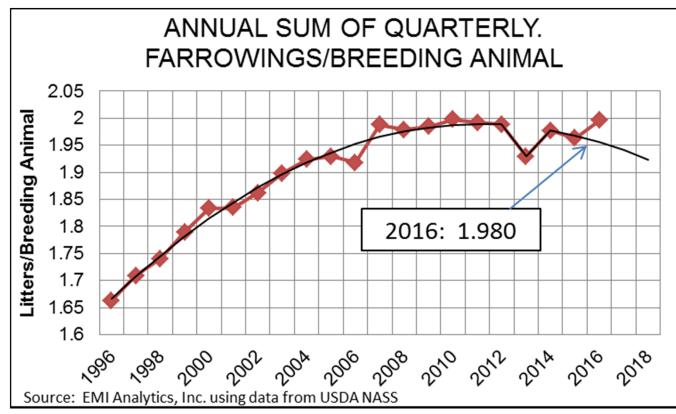


Mar-May pig crop revised up 2.4% -- long pattern!

... Average revision since Jun-Aug '14 is +2.4%



Dec report & revisions drove litter/BA up sharply

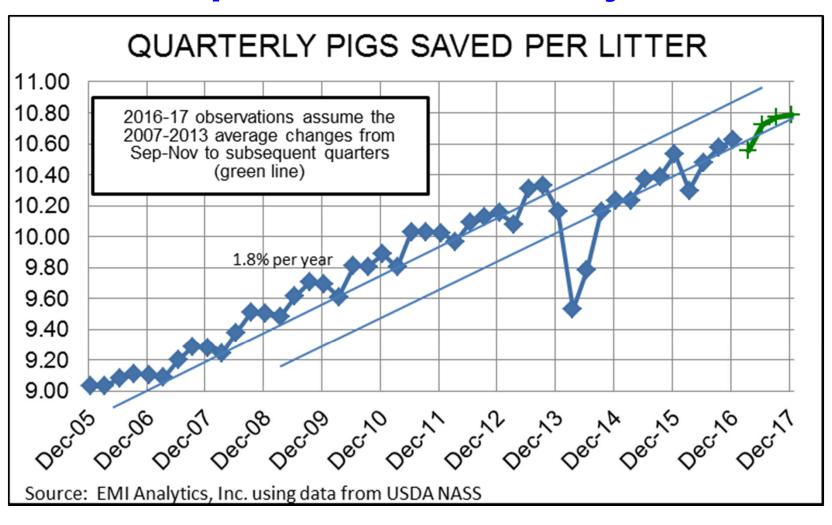


... 11.963 mil. litters in '16

	Brdg Herd	Avg. Brdg	Litter	Annual	
	Growth	Herd	Rate/Brdg	Farrowings	
2016*	0.6%	5994	1.996	11,963	
2017	1.5%	6039	1.980	11,958	
2018	-1.0%	6009	1.980	11,898	
*Actual farr	owings per US				

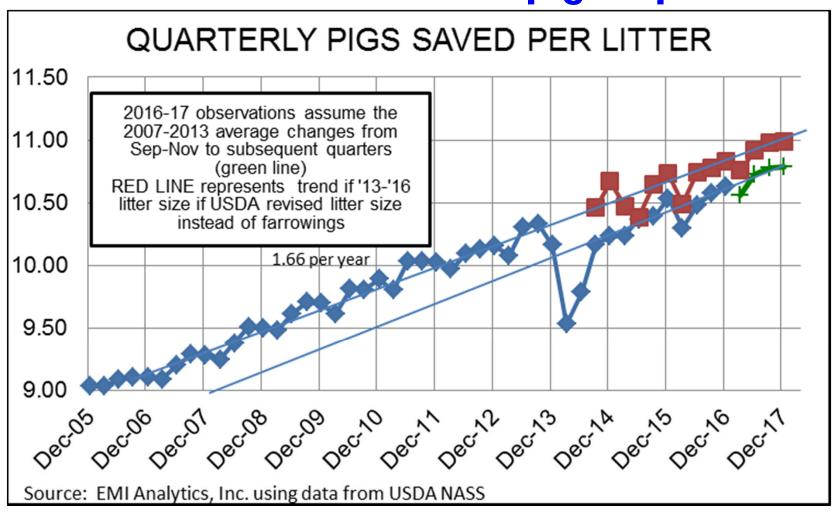
Key issue is still litter size -- likely understated ...

... We expect near 2% -- in 4-5 yrs will be 3%+



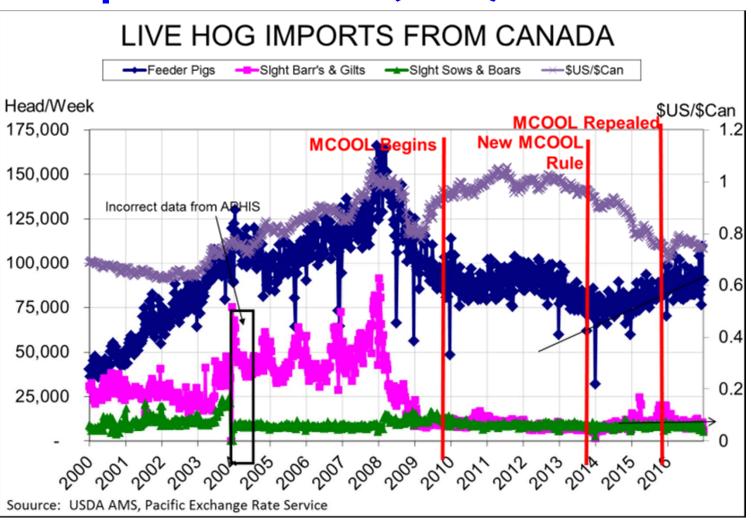
What if USDA had revised litter sizes, not farr's

... to account for pig crop shortfalls?



'16 FP imports from Canada: +332k hd (7.7%) ...

... MH imports are -174k, (-25%), S&B are -8k, (2%)

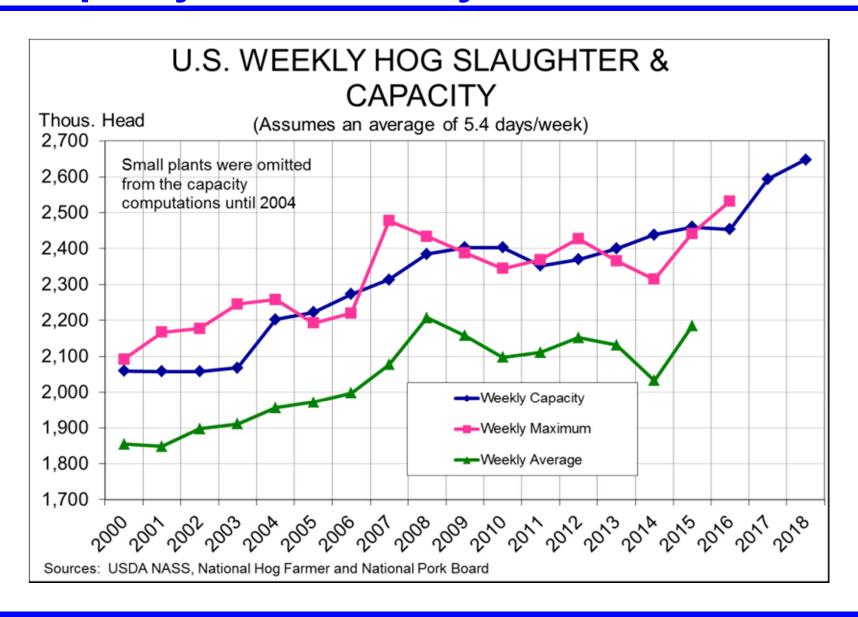


Pending packing capacity increases ...

U.S PACKING CAPACITY UNDER CONSTRUCTION										
	Fall 2016		Fall 2017		Fall 2018		Fall 2018	- TSF Doubled		
	Daily Hd	Ann Hd	Daily Hd	Ann Hd	Daily Hd	Ann Hd	Daily Hd	Ann Hd		
Pleasant Hope, MO	2,500	625,000	2,500	625,000	2,500	625,000	2,500	625,000		
Windom, MN	-4,000	1,000,000	4,000	1,000,000	4,000	1,000,000	4,000	1,000,000		
Sioux City,IA			12,000	3,000,000	12,000	3,000,000	20,000	5,000,000		
Coldwater, MI			10,000	2,500,000	10,000	2,500,000	10,000	2,500,000		
Wright County, IA					10,000	2,500,000	10,000	2,500,000		
Total	2,500	625,000	28,500	7,125,000	38,500	9,625,000	46,500	11,625,000		
Head per week		12,019		137,019		185,096		223,558		
Pct of '15 avg = 2.195 mil. 0.5%			6.2%		8.4%		10.2%			
Pct of '15 max = 2.507 mil.		0.5%		5.5%		7.4%		8.9%		
								9/26/2016		

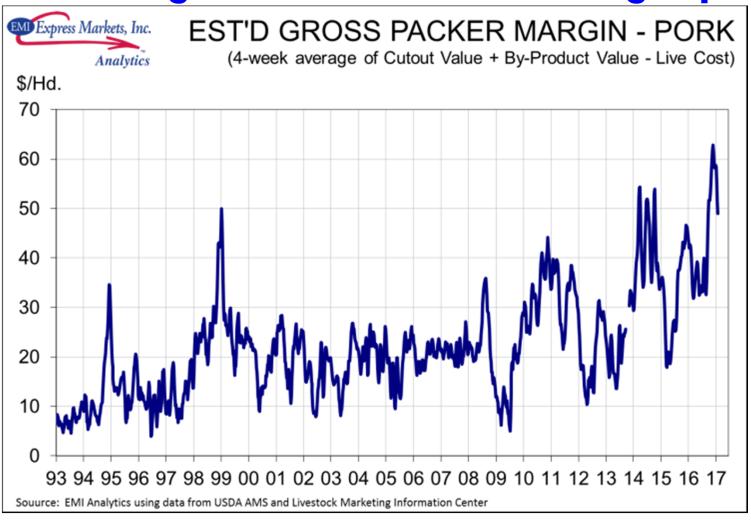
- Triumph/Seaboard & Clemmons are on track to open this summer – July?
- MoonRidge (MO) is at 800-1000/day
- Prime Pork (MN) has been delayed to March or April '17

'16 capacity is 454,320/day, 2.453 million/week



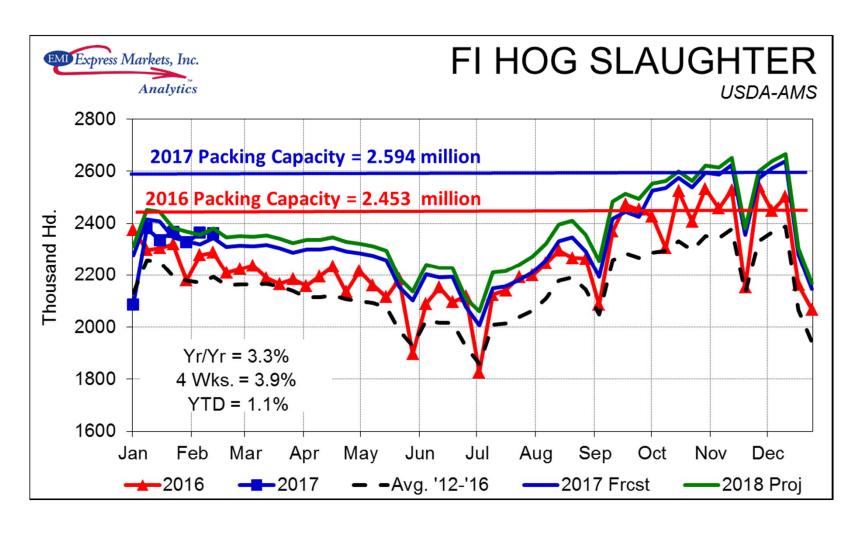
Packer margins: Record wide in November ...

... But growth since '07 is driving expansion



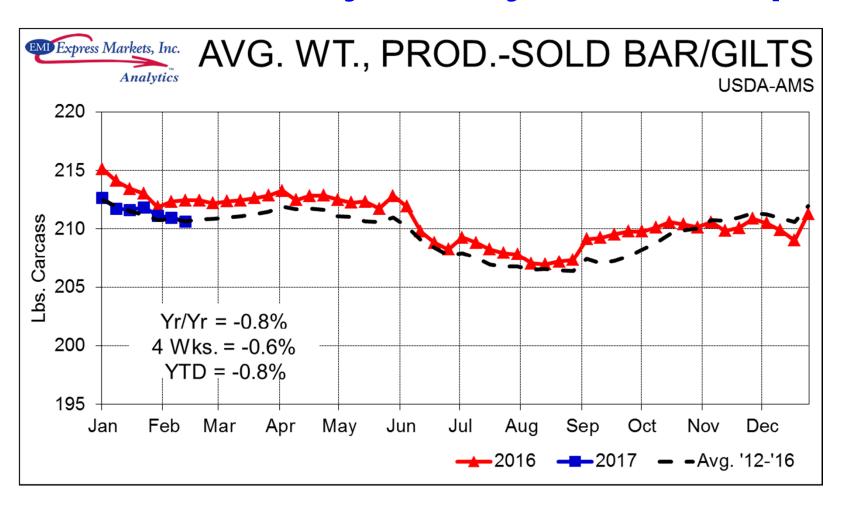
Last week 2.38 mil. – 37k above our forecast

... 1.1% YTD increase is due to different New Year's



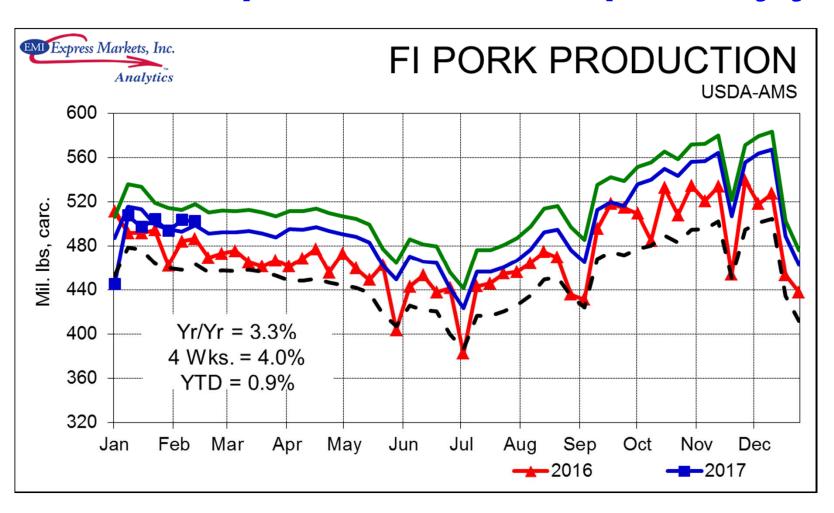
Weights are creeping back up on year-ago ...

... We think they will stay below until spring



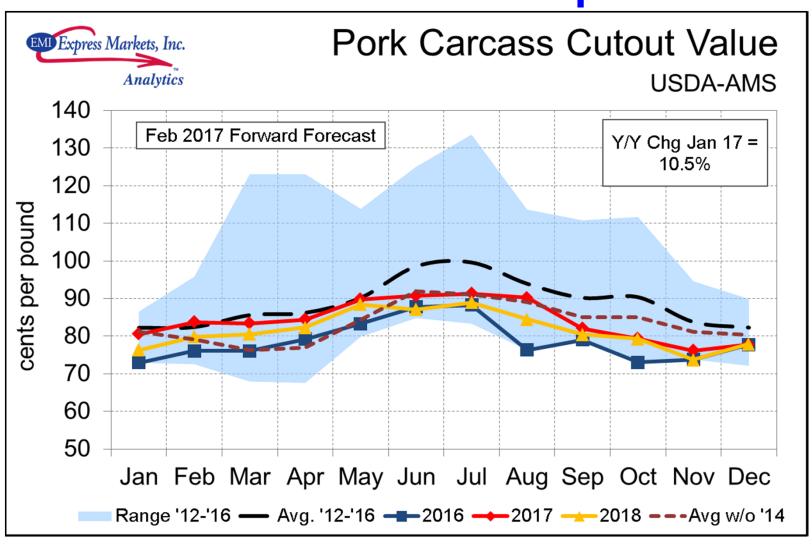
Pork production up 1.8% in '16 and 3.9% in '17...

... but Q4s up 3.1% and 5.3%, respectively, yr/yr



Cutout held up remarkably well last fall ...

... And we see more improvement in '17



Slaughter forecasts: More BIG growth in '17

December 2016 Hogs & Pigs -- Commercial Slaughter Forecasts

		IS	SU	LN	IIC	EN	ИI	ACT	UAL
		Mil. Hd	% Chnge						
2014								106.876	-4.7%
2015								115.426	8.0%
2016	Q1**	29.240	1.8%	29.597	3.0%	28.860	0.5%	29.259	1.9%
	Q2	27.971	0.4%	28.100	0.9%	27.604	-0.9%	28.111	0.9%
	Q3	29.038	2.0%	28.875	1.4%	28.662	0.7%	29.316	3.5%
	Q4	31.365	3.3%	30.773	1.3%	31.540	3.4%	31.516	3.8%
	Year*	118.051	2.3%	117.459	1.8%	118.226	2.4%	118.202	2.4%
2017	Q1	30.069	2.8%	30.241	3.4%	30.412	3.9%		
	Q2	29.410	4.6%	29.136	3.6%	28.935	4.8%		
	Q3***	30.034	2.5%	29.555	0.8%	29.598	1.0%		
	Q4	32.436	2.9%	32.153	2.0%	32.764	4.0%		
		121.950	3.2%	121.085	2.4%	121.709	3.0%		

^{*}Annual total uses actuals to-date plus forecasts for the rest of the year.

^{** 1} more day in qtr vs. yr. ago

We revised '17 upward – demand strength

... But futures are higher yet! - look to price hogs!

December 2016 Hogs & Pigs Hog Price Forecasts								
	ISU		LMIC	EMI	CME			
		Ia-Mn Producer-Sold Neg'd Base	National Wtd Avg. Base Price	National Net Neg'd Price, Wtd. Avg.	CME Lean Hog Futures/ Index			
2014		102.50	100.31	102.95	104.99			
2015		67.08	69.69	68.49	70.09			
2016	Q1	59.67	62.15	60.14	63.13			
	Q2	73.46	73.38	73.15	75.36			
	Q3	62.30	68.31	66.25	69.31			
	Q4	46.79	53.08	47.61	52.43			
	Year	60.56	64.23	61.79	65.06			
2017	Q1	59 - 63	55 - 58	54 - 58	71.55			
	Q2	67 - 71	65 - 69	66 - 70	75.25			
	Q3	68 - 72	65 - 70	66 - 70	77.58			
	Q4	56 - 60	53 - 59	56 - 60	66.36			
	Year	62 - 66	60 - 64	60 - 64	72.69			
Blue figu	ires are es	timated using USDA data		2/20/17				

Risks to the forecasts – an important practice!

- Major export disruption
 - FMD, ASF, CSF small probability, HUGE impact
 - PT is high probability, unknown impact
- Diseases -- PEDv is good (Illinois?), some recent PRRS activity but still better than '16
- Feed costs '16-'17 is okay; price '17-'18???
- Demand: Growth in '17?
 - Domestic: Prefs? Wages/incomes?
 - Exports: CHINA/HK? Mexico? \$US?
- Impact of competition for hogs in H2, 2017?
- Pork prices if plants are full in '18?