

Iowa Farm Outlook

Department of Economics
Ames, Iowa

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Cull Cow Marketing is Important to Your Business

At cow culling time, producers often face some tough decisions. Optimal culling seems to require a sharp crystal ball that can see into the future. At times, the market offers guidance for culling and marketing decisions.

At the margin, for cows that could go or stay

Profits and prospects matter. As of November 2nd, the \$18 rally in November feeder cattle futures since August 21st aligns with a better 2017 for many cow-calf producers than previously expected. Additional value could also come from holding onto calves as backgrounding opportunities look promising. Deferred 2018 feeder cattle futures contracts have gained \$19 on average since late August. Producers are not getting strong market signals to expand their herds but prices are not indicative of contraction either.

Costs matter. For 2017, the average rental rate for Iowa pastures was \$54 per acre. This is a new record, up \$2 from last year, but has likely reached a plateau. The average sales value of Iowa pastureland was \$3,100 per acre, down \$300 from last year. Iowa's estimated 2017 all hay production at 3.4 million tons is up 6% from last year. Iowa hay (excluding alfalfa) prices have average \$79 per ton in 2017, about \$2 lower than last year. For the week ending October 29th, the last pasture and range conditions report for the year, 70% of Iowa pastures were still rated in fair, good, or excellent condition. Low feed costs helped underpin cow-calf profitability in 2017. Many expect feed prices to remain relatively low for the next couple of years, pending a major weather impact.

Slaughter cow prices matter. And, they matter a lot. A common misconception is that one can make a profit from a beef cow by just selling her lifetime production of calves. It's not true. A cow's salvage value is often needed to show a lifetime profit. When buying (retaining) bred females, cull values 5, 6, 7, etc. years down the road matter. Possibly more than an additional calf, after considering the cost to produce relative to the price received for one more calf.

Calf prices can fluctuate and culling percentages can vary to affect the share of revenue, but overall cull revenue is important. Research has shown that cull cow income makes up 10% to 20% of the total revenue for a cow-calf operation and values can be increased by 25% to 40% by management strategies alone. Cull cow values can be increased by adding weight, improving quality, and marketing cows during seasonal price increases.

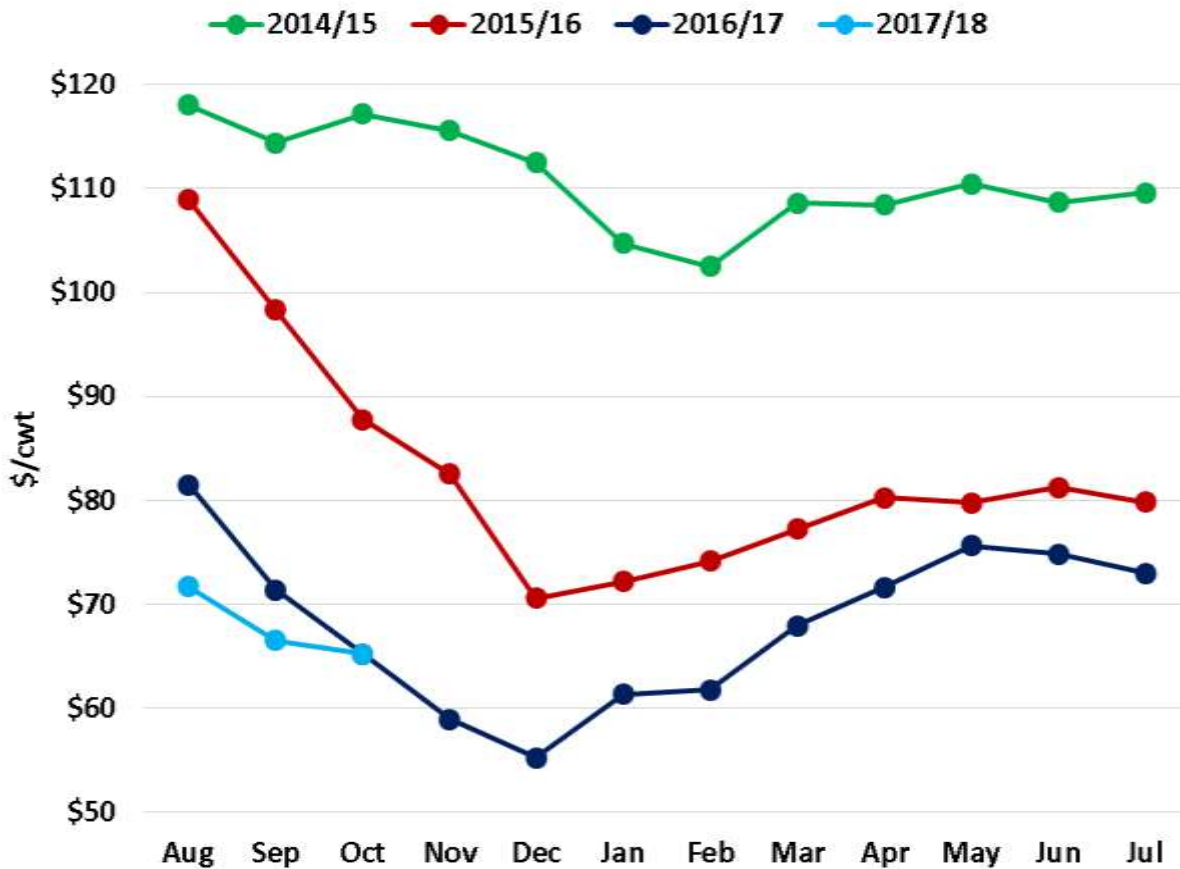
Before decisions regarding retaining or culling a cow are made, producers should consider the economic value of cows exiting or remaining in the herd. Take into consideration what was paid (or incurred for developing) the replacement female and past and future calf prices, cash cow costs, and cull cow values. The Net Present Value of Beef Replacement Females decision tool—available on the Ag Decision Maker website at <https://www.extension.iastate.edu/agdm/livestock/html/b1-74.html>—can be used to evaluate if now may be an opportune time to cull a cow from your herd.

Once (or before for preparation) the culling decision has been made

The slaughter cow market was very strong through the spring and early summer months this year (Figure 1). The longevity of the strong market provided a longer period to optimally market cows than has been typical in

previous years. However, late summer proved to be less supportive of the slaughter cow market, and the fall months will likely result in even larger price declines.

Figure 1. Weekly Slaughter Cow Prices, Sioux Falls, SD, Breaking (1200-1600 lbs.)



Data source: USDA Agricultural Marketing Service.

The slaughter cow market price tends to wane during the fall and this is largely due to the increased supply of cows for slaughter as many cow-calf producers market cows at time of calf weaning. Then prices rise into the new calendar year, often rather dramatically. But in some years, the new calendar year does not bring much, if any, price increase.

Note, South Dakota prices are used here as South Dakota’s cow herd is almost twice the size of Iowa’s so USDA’s Agricultural Marketing Service finds more data on cow prices there than in Iowa. Similar patterns likely hold in Iowa.

Holding cull cows did not pay from the fourth quarter of both 2014 and 2015 into the next year. Last year, between December 2016 and the first several months of 2017, the normal seasonal price increase returned. In 2016/17, per cwt price increases were \$6 between December and January/February; \$15 December to March/April; and \$20 December to May.

Slaughter cow prices into early 2018 are forecast to increase. Fed cattle prices are typically highest in the winter and early spring months which supports slaughter cow prices. The December to February live cattle futures spread is currently \$4.

Typically, the price of slaughter cows is measured or considered as a percentage of live cattle prices or a basis, cash cow price minus live cattle futures price (Figure 2). During the past five plus years, the monthly slaughter cow price has averaged 64% of live cattle futures or a -\$46/cwt basis. More detail or scrutiny is warranted for pricing or cross-hedging as the ratio has varied from 49% to 77% or a basis of -\$32/cwt to -\$61/cwt.

Figure 2. Sioux Falls, SD Slaughter Cow Basis, Cash Cow Price minus Live Cattle Futures, \$/cwt

	2012	2013	2014	2015	2016	2017
January	-\$50.17	-\$53.08	-\$54.17	-\$52.57	-\$60.47	-\$56.75
February	-44.68	-48.18	-51.34	-54.81	-60.96	-57.13
March	-42.74	-49.65	-47.29	-48.36	-59.96	-50.78
April	-36.15	-49.64	-44.88	-51.72	-49.10	-54.38
May	-31.84	-44.32	-39.27	-41.16	-40.80	-49.06
June	-37.68	-43.07	-39.99	-43.36	-37.58	-49.61
July	-44.74	-43.09	-39.54	-37.21	-31.87	-42.21
August	-40.72	-40.26	-35.05	-38.19	-33.12	-37.34
September	-44.65	-44.17	-42.69	-39.00	-33.33	-41.29
October	-48.76	-51.64	-49.03	-46.13	-34.95	-46.60
November	-51.94	-52.92	-53.06	-49.74	-47.72	
December	-52.63	-52.96	-50.82	-54.61	-56.89	

Data source: USDA Agricultural Marketing Service & CME Group.

Using 2017 monthly percentage or basis levels suggest a price per cwt for slaughter cows of \$68 to \$75 in January and February 2018; \$74 to \$79 in March; \$74 to \$75 in April; and \$72 to \$73 in May.

Cow-calf producers that are set-up to economically add weight to cull cows and then sell in the first few months of 2018 instead of this fall at the seasonal price low, might want to put a pencil to that soon. Correct decisions depend on the resources available and the degree of staying power or upside in deferred markets.

Lee Schulz

Searching for the Bottom

Looking back over the last ten years, crop agriculture has swung between two regimes. The years 2007 to 2012 were characterized by strong crop prices, driven in the beginning by record building demand and at the end by a drought. The years 2013 to 2017 are characterized by strong crop production, a consistent string of large harvests that have been more than enough to meet and exceed demand. The outlook for 2018, based on the information we have today, suggests that pattern will continue for at least another year.

For corn, while the 2017 crop is smaller than its' predecessor, it is still projected to be the 2nd largest crop ever. This continues the string of large corn crops, with the last five U.S. corn crops being the five largest ever. Corn usage over the past five years has been robust as well, but usage is running just short of supplies. Corn stocks have built and corn prices have retreated.

Feed usage continues to grow with the general expansion in the livestock sector. Biofuel usage has entered an era of slower, but steadier, growth. Combined, these two sources of demand provide a solid 11 billion bushel usage base for the corn market. Food, seed, and industrial usage has been slowly building as well. The wildcard is the export picture. In general, international corn demand has been growing over the past five years. But with greater competition of other corn producers worldwide (Brazil, Argentina, Ukraine, etc.), export projections have slipped a bit for the current marketing year.

For soybeans, 2017 is basically a continuation of 2016, with record acreage, production, and usage. But as with corn, supplies are slightly exceeding usage. Stocks are building and prices have retreated. Soybean's demand structure has been relatively more supportive than corn's, so in relative terms soybean prices have held up better. Domestic soybean crush usage has slowly grown, while international usage continues to build at a record pace.

Pricing patterns over the past few years have returned to a typical historical pattern, with crop prices generally building through the spring and early summer, only to retreat later as we approach the harvest season. Figures 1-3 show that pattern for 2017 under a few different assumptions. Figure 1 shows estimated crop margins for 2017/18, based on futures prices throughout the year, ISU Extension projected production costs, trend yields, and historical average basis levels. Under those assumptions, estimated Iowa crop margins started out in positive territory, swooned a bit from March to June, hit their peaks in early July, and retreated significantly in August and early September. Recently, corn margins (and prices) have been slowly falling, while soybean margins (and prices) have rebounded. But with the harvest, more information has come in to help us firm up these estimates. We know yield estimates are running above trend, but basis levels are below historical average.

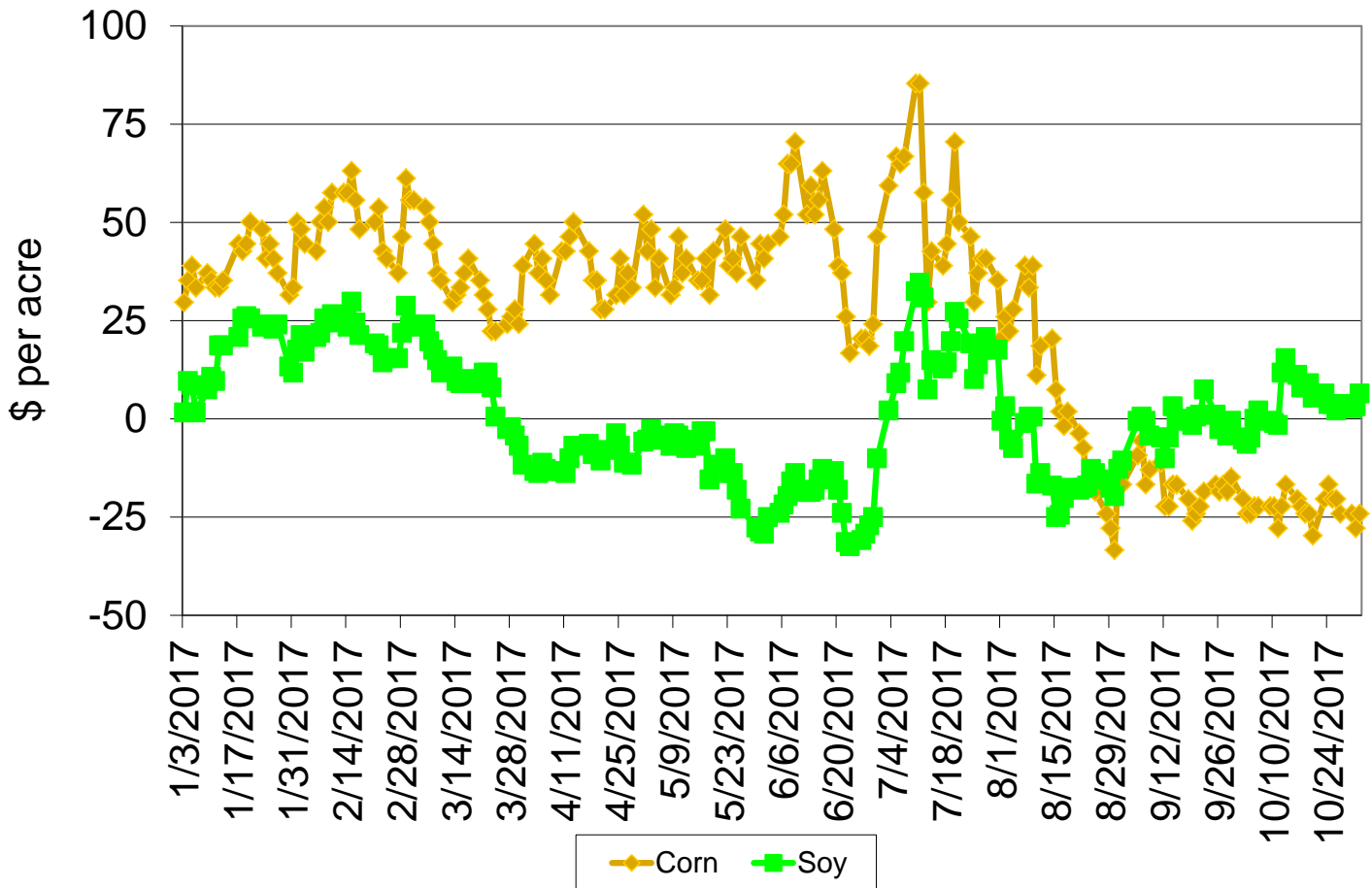


Figure 1. Estimated 2017/18 crop margins, at trend yield and historical average basis.

Figure 2 contains the estimated crop margins at updating for the 2017 yields. The yield shift alone adds roughly \$20-30 per acre to projected margins. This bump comes from the extra bushels to sell, but also the reduction in costs (on a per bushel basis). This year, the yield bump on margins is similar across the crops. And if that were the end of the story, soybean returns would be decent, while corn returns would be hovering around breakeven. But alas, that is not the end of the story.

The building of crop stocks has limited improvement in basis levels. Throughout most of this year, basis levels have run below historical averages and that continues today. Figure 3 factors in the impact of those weaker basis levels. The margin impacts of the weaker basis are more than enough to offset the extra bushels. And corn margins take a bigger hit than soybean margins. In total, soybean margins are hovering around breakeven, while corn margins have sunk to nearly the lowest levels for the year. That said, these graphs also remind us why we look at pre-harvest marketing and post-harvest storage for margin improvement. Both crops had positive pricing opportunities earlier in the year and seasonal pricing patterns would suggest more opportunities next spring and summer as well.

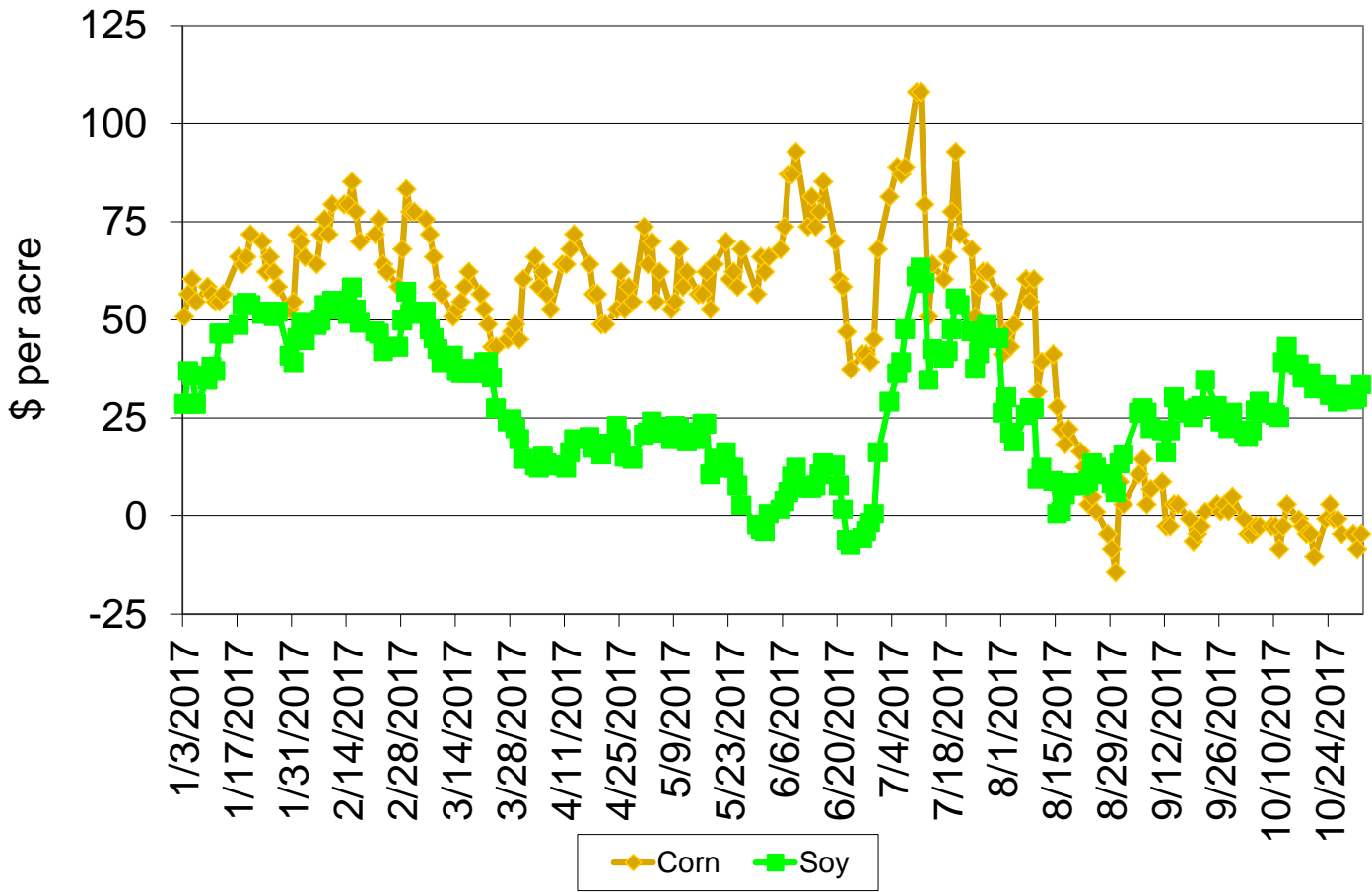


Figure 2. Estimated 2017/18 crop margins, at 2017 estimated yield and historical average basis.

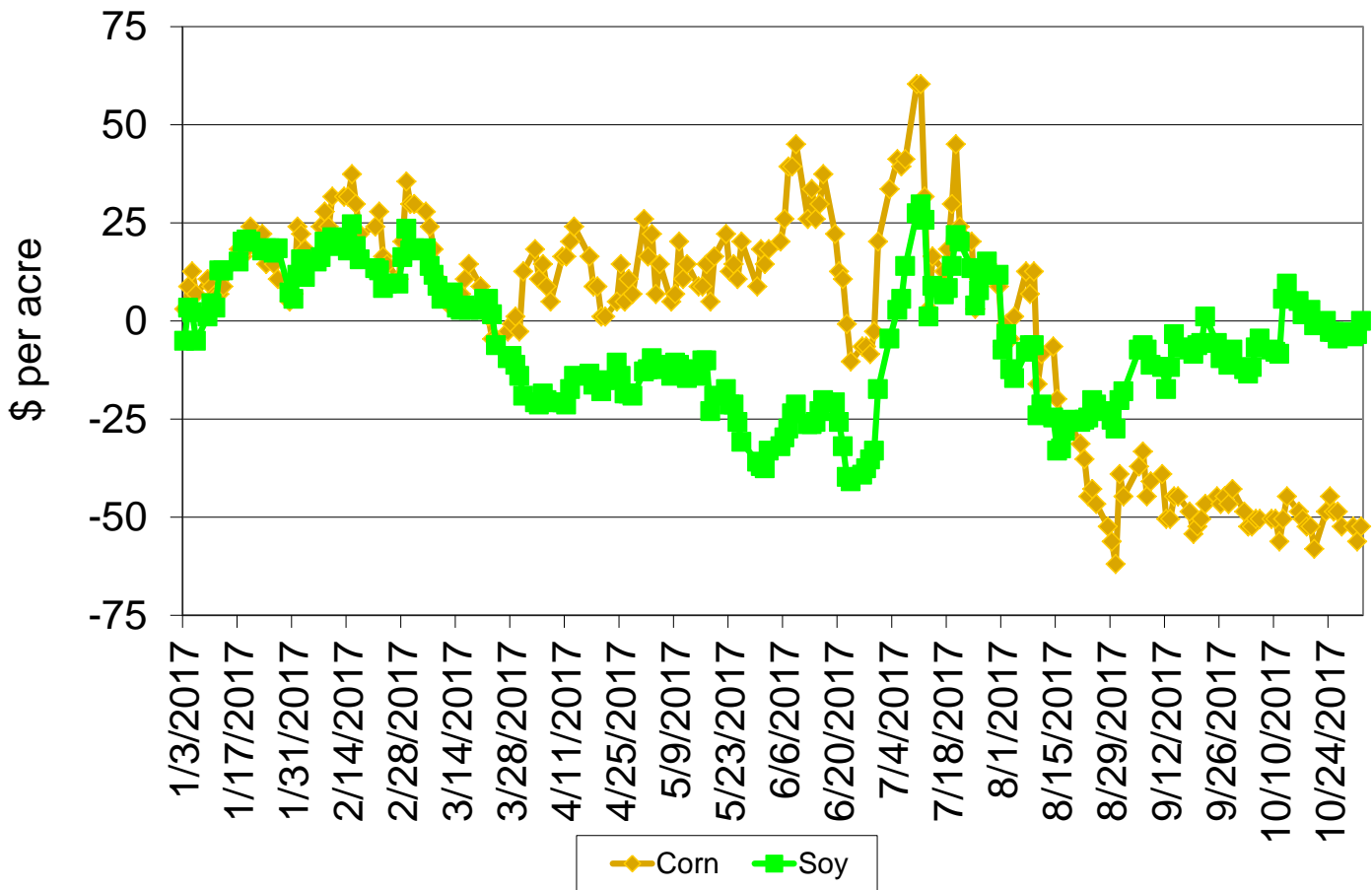


Figure 3. Estimated 2017/18 crop margins, at 2017 estimated yield and current basis.

Looking forward to the 2018 crop year, crop futures are providing some support for improving returns in the coming year. Computing margins based on 2018 trend yields, historical average basis, and holding costs steady at 2017 levels, both 2018/19 corn and soybean projected margins are holding above breakeven. However, given the stocks, I would discount these projections by \$30-50 per acre (the basis effect). That would basically put both crops around breakeven. And while that's not an optimistic outlook, it's better than we've had over the past few years. Last year at this time, this graph was showing \$50 losses.

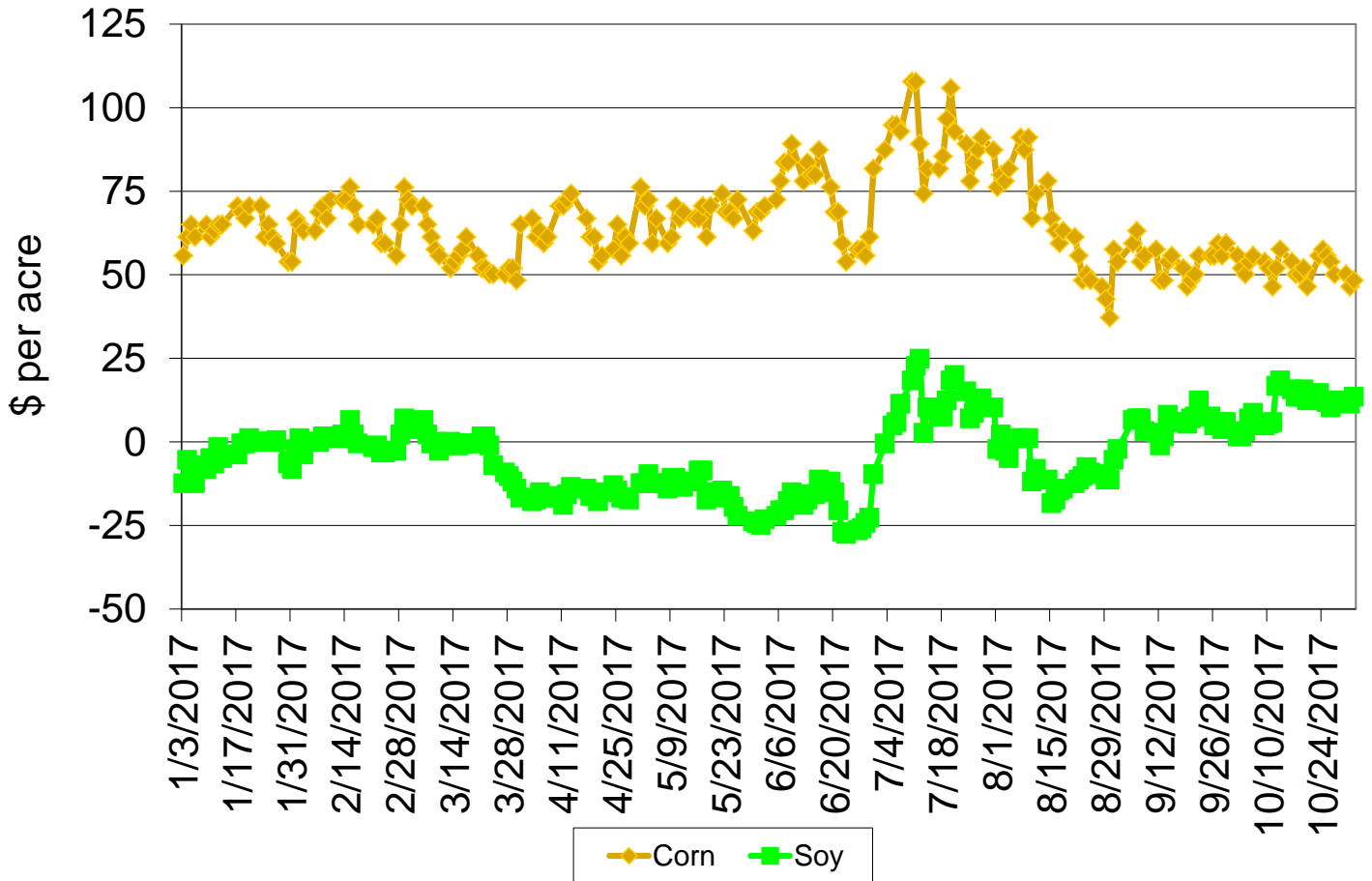


Figure 4. Estimated 2018/19 crop margins, at trend yield, historical average basis, and 2017 costs.

The dynamics for better margins are still holding in the markets. Usage continues to grow and traders have shown a willingness to ride price higher, as evidenced by the spring rallies over the past couple of years. As has been indicated before, the markets are hoping supplies slow down just enough to allow usage to catch up. Given the wider basis levels today, futures and options based marketing strategies offer better opportunities than cash positions currently. And while the basic storyline in the crop markets remains similar to previous years, the outlook is getting a little brighter.

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