

Economic & Policy Update

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Prospects for Winter Backgrounding in 2019 / 2020

Kenny Burdine and Greg Halich

A good portion of Kentucky struggled with drought from late July until early October. Dry conditions, combined with normal seasonal declines in calf values, resulted in calf prices falling by more than \$20 per cwt from their April highs. Winter backgrounding profitability has a significant impact on calf prices as those winter backgrounders are competing with feedlots to purchase calves for placement in the fall. The purpose of this article is to examine potential returns to backgrounding programs for the upcoming winter.

At the time of this writing (October 22, 2019), March 2020 CME® feeder cattle futures were trading around \$138.50 per cwt. As winter backgrounders consider purchasing calves this fall, these late winter futures prices provide market expectations for feeder cattle sale prices. With an early spring futures price of \$138.50, and an estimated -\$6 basis, an 800 lb feeder steer in Kentucky would be expected to bring around \$1,060 (800# @ \$132.50 per cwt) in March. Of course, actual basis is heavily impacted by local market conditions, lot size, cattle quality, location, and numerous other factors. The -\$6 basis discussed previously assumes that cattle are of relatively good quality and are sold in potload sized groups. Producers considering winter backgrounding should make some estimate of a late winter sale price as they start to consider what can be paid for calves this fall.

The Kentucky Livestock and Grain Market Report for the week ending on October 18th reported a state average price for 450-500 lb steers of \$139.39 per

cwt and a state average price for 500-550 lb steers of \$136.98 per cwt. This market continues to evolve and additional costs could be incurred putting together groups of calves for placement. For the purposes of this article, we estimated the purchase price for a 500 lb steer at \$140 per cwt, or something close to \$700 per head. Larger groups of high quality calves would certainly sell for more than this, so individuals are encouraged to apply this process to the type of calves they typically buy.

We also need cost estimates on wintering those calves and selling them in the spring. While we provide an estimate for a specific winter program, costs will vary based on local conditions and the specific backgrounding program. Feed is the major cost and producers should consider all potential feeding options including commodity feeds, corn, and corn silage. For this scenario, we will consider a single program where calves are fed 1.5% of their body weight per day of a 3-way blend of corn gluten, soy hulls, and shelled corn, and another 1.5% of their body weight per day of grass hay. While performance will vary, we will assume a rate of gain of 2.5 lbs per day, which would put on 300 lbs in approximately 120 days.

The 3-way blend is value at \$200 per ton and grass hay at \$80 per ton. Health costs are assumed to be \$25 per head, transportation costs are estimated to be \$8 per head, and selling/marketing expenses are set at \$17 per head. An interest charge of 6% is included and death loss is assumed to be 2%. These costs will vary by location and operation, so readers are encouraged to come up with their own estimates.

Several of these cost estimates are worth careful consideration. For example, we have assumed sell-

ing/marketing expenses of roughly \$17 per head, which assumes that producers are paying the reduced commission rates associated with large groups. However, many producers will be selling in smaller groups and likely paying higher commission rates on a per head basis. Vet and medicine costs are also important. We have assumed \$25 per head, which is likely sufficient to include mass medication of all calves. However, this is a decision that the individual producer should make and adjust their cost estimates accordingly. With these caveats in mind, the following table shows expected returns to the program described above.

As can be seen in Table 1, projected returns are \$95 per head this winter based on the assumptions discussed previously. Producers are strongly encouraged to modify these assumptions for their individual programs to better reflect calf values and expected spring basis, as well as cost estimates and feed prices for their area. It is also worth noting that labor, depreciation, and interest on owned capital are not included in the budget, so the return shown is a return to land, capital, and management. Producers should ask themselves if that return adequately compensates them for their time, capital investment, management, and risk.

The two key assumptions made in Table 1 include the cost of the calves being placed and the expected sale value in the spring. Changes in calf placement costs will greatly impact winter backgrounding returns. For every \$5 per cwt decrease in the purchase price of the calves, the return to land, capital, and management increases by \$25 per head. The second assumption, the sale price for the feeder steer won't be known with certainty until spring. Note that the assumed spring sale price in the analysis is \$132.50 per cwt and the projected return is \$95 per head. A \$12 per cwt decrease in sale price would result in actual returns falling to \$0. While feed price does not have as large an impact on profit as sale price, a \$25/ton decrease in the price of the 3-way blend would increase expected profit by \$15, and vice versa.

Table 1 reported estimated returns to placement of a 500 lb steer this fall at one specific purchase price. Table 2 shows a side-by-side comparison of expected costs for placement of a 500 lb steer and a 600 lb steer. The same feeding and gain assump-

tions are made, but feed costs are higher for the 600 lb steer due to his increased bodyweight. A few other costs also increase, such as mineral, transportation and interest.

Table 1: Winter Backgrounding Budget Estimate

	# units	unit	price / unit	total
Revenues				
Feeder	800	lbs	\$1.325	\$1060
Expenses				
Stocker Calf	500	lbs	\$1.40	\$700
Hulls / Gluten	0.585	tons	\$200	\$117
Hay	0.585	tons	\$80	\$47
Mineral	1	head	\$10.00	\$10
Vet / Med	1	head	\$25.00	\$25
Selling/Marketing	1	head	\$17.00	\$17
Hauling	1	head	\$8.00	\$8
Other (water, etc.)	1	head	\$10.00	\$10
Interest	6%	rate		\$14
Death loss	2%			\$17
Total Expenses				\$965
Return to Land, Capital and Mgt				\$95

The cost estimates from Table 2 are used to estimate target purchase prices for both 500 and 600 steers, given a target gross return, in Table 3. A range of gross returns from \$25 to \$125 per head were used to create Table 3, which are used to estimate a range of purchase prices. For 500 lb steers, target purchase prices ranged from \$1.34 to \$1.54 per lb. For 600 lb steers, target purchase prices ranged from \$1.22 to \$1.38 per lb.

Here is an example of how this works for a 500 lb steer, targeting a \$75 gross profit per head:

800 lb steer x \$1.325 (expected sale price) \$1,060
 Total Variable Costs -\$265
 Target Profit -\$75
 Target Purchase Cost \$720
 Target Purchase Price = \$720 / 500 lbs = \$1.44 per lb

Table 2: Expected Variable Costs Fall 2019

	500 lb Steer	600 lb Steer
Feed	\$117	\$140
Hay	\$47	\$56
Vet/Medical	\$25	\$25
Mineral	\$10	\$12
Commission/Sale	\$17	\$17
Trucking	\$8	\$10
Interest	\$14	\$15
Death Loss	\$17	\$17
Other (water, etc)	\$10	\$10
Total Variable Costs	\$265	\$303

Note: Interest and death loss vary slightly by purchase price.

Table 3 can also be used to adjust target purchase prices to your cost structure. If your costs are \$25 per head higher than the assumptions made in this analysis, then you would shift each targeted profit down by one row. For example, you would use the \$125 gross profit to estimate a \$100 gross profit if your costs were \$25 higher. An alternative approach would be to spread the additional costs over the purchase weight. In that way, each \$1 increase in costs, reduces target purchase price by \$0.20 per cwt for a 500 lb steer and \$0.17 per cwt for a 600 lb steer.

Table 3: Target Purchase Prices For Various Gross Profits Fall 2019

Gross Profit	500 lb Steer	600 lb Steer
\$25	\$1.54	\$1.38
\$50	\$1.49	\$1.34
\$75	\$1.44	\$1.30
\$100	\$1.39	\$1.26
\$125	\$1.34	\$1.22

Notes: Based on costs in Table 1 and sales price of \$1.325 and \$1.285 for 800 lb and 900 lb sale weight respectively for 500 lb and 600 lb purchased steers.

Given the assumptions of this analysis, expected returns to winter backgrounding are moderate given the late-October's calf market and late winter CME© Feeder Cattle Futures. However, given the importance of expected sale price on returns, winter backgrounders are encouraged to explore opportunities to manage downside price risk through contracting, futures and options, LRP insurance, and other strategies. Figure 1 depicts March CME©

Feeder Cattle Futures from DTN over the last seven months. Note that the March CME© Feeder Cattle Futures contract is up nearly \$10 per cwt from where it was in early September and has seen a trading range exceeding \$30 per cwt since April. While it does appear that the market is offering some opportunity for winter backgrounding, the last few months, as well as the last few years have provided a reminder as to how unpredictable these markets are. Therefore, some additional effort should be applied to manage downside price risk. Winter backgrounders should carefully calculate their breakeven purchase prices for calves and be opportunistic as they approach this fall.

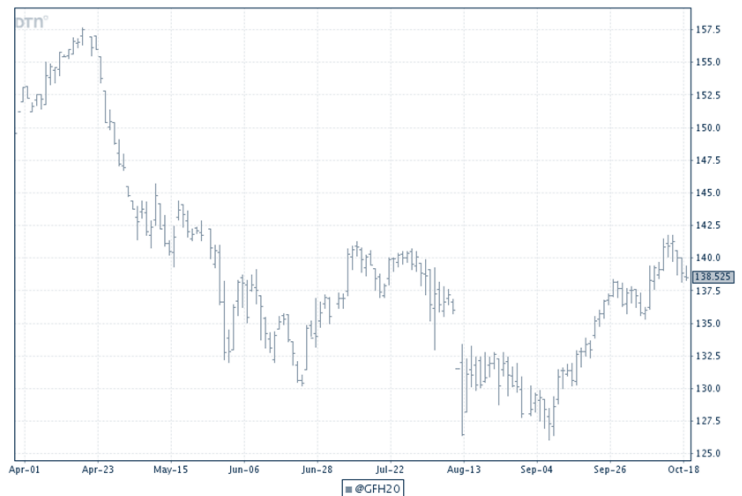


Figure 1. March 2020 CME© Feeder Cattle Futures from DTN (close 10/21/19).



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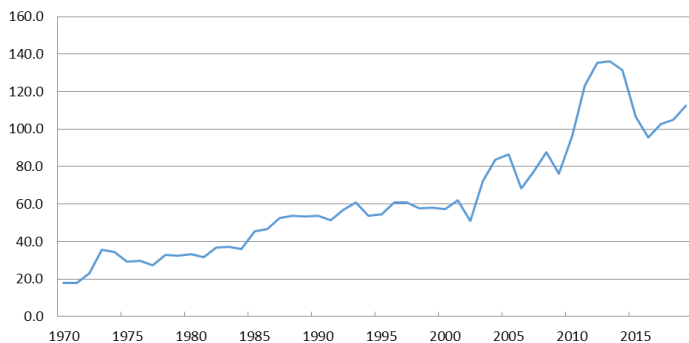
Fifty Years of Net Cash Farm Income

Steve Isaacs

Here's a couple of ways to approach net income on US farms. This information is derived from [USDA/ERS Farm Income and Wealth Statistics](#).

The first graphic is an illustration of net cash income on a nominal basis – the actual dollars reported for each year. Net cash income is determined by **deducting cash expenses** for manufactured inputs, feed, seed, labor, interest, taxes, and net rent **from cash receipts** from crops, livestock, forest products, custom work, and direct government payments. The “golden years” of earlier this decade are clearly evident along with the downturn of recent years. Otherwise, it appears that net cash income has generally increased over the past five decades.

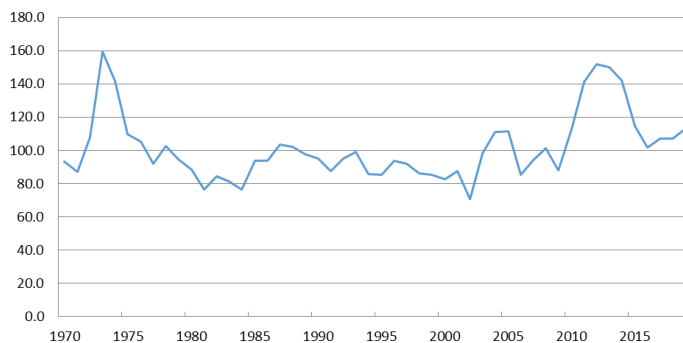
US Farm Net Cash Income
Nominal (dollars in billions)



This, however, is misleading unless we account for the fact that a dollar in 1970 had more purchasing power than a dollar in 2019. While inflation has been nowhere near as serious as it was in the 70s, it is still important when we evaluate income over a long time period. Thus, the second graphic is based on the same net cash income, but adjusted to report each year in 2019 dollars. We see a different story. Net cash income is much more cyclical, with several short-run cycles and two really good times. Even during the most recent up-cycle, 1973 retained its position as the record net cash income year at \$159.4 billion.

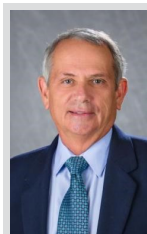
Super-cycles are the term that Dr. David Kohl, Professor Emeritus from Virginia Tech. and President of AgriVisions, LLC, uses to describe these significant

US Farm Net Cash Income
Real (2019 dollars in billions)



boom-times in agriculture and he notes a few others if we expanded the time horizon back another 75 years or so. He notes, and it's evident here, that super-cycles tend to be 30-40 years apart.

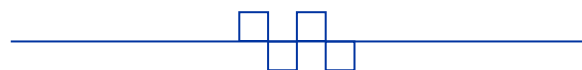
The impetus for observing long-run trends or cycles in agriculture is to remind ourselves that cycles are a persistent feature of an economy with relatively low barriers to entry and exit and market determined prices. Cycles will continue and key a role of managers is to plan for the cycles and manage wisely in the good times as well as the bad. And, if you live long enough to see another super-cycle, please pay down debt and build liquidity.



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Three Ways to Help Farmers Communicate with Bankers

Tony James

I recently joined the University of Kentucky as a farm management specialist. Most of my career has been in banking -- seated on the other side of the desk from farmers. I have been asked many times, “Why is it so hard to deal with bankers?” I use the word “banker” but it could be any ag lender. Basically, it comes down to communication. Bankers and farmers have somewhat of a language barrier when it

comes to borrowing and lending. Here are three ways to help farmers communicate with bankers.

1. Know Your Numbers

In the past, bankers primarily looked for sufficient collateral, good debt-to-income ratio, and solid payment history. These are still prerequisites for a discussion with the lender. But today, you also need to be prepared to discuss your revenues, margins, expenses, income statement, balance sheet and cash flow statement. Also, be able to discuss fair market value listing of assets and depreciation schedules.

2. Remember That Cash is King

To communicate effectively these days with a lender one must be prepared to discuss cash flow management. Why do bankers always want to know about cash flow and how loans will be serviced? After all, most farmers just need short-term help to push toward the production time of year.

Not too long ago I came across a US Bank study that reported 82% of business failures are due to poor cash management. So, it makes sense that banks are concerned with cash flow monitoring and control in this day and time. Many successful business owners have asked their accountants, "If I have all of this profit on paper, where did all of my money go?" Keep in mind that profit does not equal cash flow.

3. Limit Cash Distributions

It amazes me that financial advisor and author Dave Ramsey is so hugely successful with selling common sense information. His philosophy is simple – do not spend more than you make and know where every dollar is going. Bankers are becoming more cautious because most farm operations are tightly held organizations with no limit on personal cash distributions. A banker is looking for a disciplined individual who sticks to a budget. Farmers should be cautious about the impact personal spending has on their farming operation finances.

In summary, it is possible for farmers to have a great relationship with a banker if they are prepared to discuss numbers, show cash flow, and can offer assurance that they have control over personal cash distributions as part of their overall operation. Knowing how to communicate will help get the money they need.



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USDA Updates Corn, Soybean and Wheat Ending Stocks and Prices for 2019-20

Todd D. Davis

The October *WASDE* updated USDA's projections for the size of the 2019 corn and soybean crops, with analysts expecting the 2019-20 ending stocks for corn and soybeans to be reduced by 500 and 130 million bushels, respectively, from the September projections. In a typical year, the October *WASDE* provides an accurate measure of the size of the corn and soybean crops with USDA making minor revisions to production in the November and January reports. Because of the later than average maturing crops, analysts were hoping for greater cuts to the size of the 2019 corn and soybean crops than reported in the October report.

Table 1 provides the corn, soybean, and wheat balance sheets for the 2019-20 marketing year with the change from last year. USDA projects the 2019 corn crop to be 641 million bushels smaller than last year's crop due to an 8 bushel/acre lower yield. Surprisingly, USDA surveys show a slight increase in harvested area from 2018 even with the late-planted corn crop across the Midwest region (Table 1). USDA forecasts the total supply for corn in 2019 to be 644 million bushels lower than last year at 15.9 billion bushels.

USDA projects total corn demand to be 459 million bushels below last year due to weaker exports and feed use. Ending corn stocks are projected at 1.9 billion bushels, which is a 185 million bushel reduction from last year. The lower stock level is supporting a U.S. marketing-year average (MYA) farm price of \$3.80/bushel, an increase of \$0.19/bushel from last year (Table 1).

USDA projects the 2019 soybean crop to be 878 million bushels smaller than last year's crop (Table 1). USDA projects the 2019 yield at 46.9 bushels/acre, which is 3.7 bushels smaller than 2018's yield. The big surprise in soybeans is the 2019 harvested area is projected to be down 12 million acres from last year. The sobering aspect of

Table 1. Consolidated Corn, Soybean and Wheat Balance Sheets for the 2019-20 Marketing-Year.

	Corn	Change from 2018-19	Soybeans	Change from 2018-19	Wheat	Change from 2018-19
Planted (million acres)	89.9	+0.8	76.5	-12.7	45.2	-2.6
Harvested (million acres)	81.8	+0.1	75.6	-12.0	38.1	-1.5
Yield (bushels/acre)	168.4	-8.0	46.9	-3.7	51.6	+4.0
----- Million Bushels -----						
Beginning Stocks	2,114	-26	913	+475	1,080	-19
Production	13,779	-641	3,550	-878	1,962	+77
Imports	50	+22	20	+6	120	-15
Total Supply	15,944	-644	4,483	-397	3,161	+42
Domestic Use	12,115	-294	2,248	+28	1,168	+64
Exports	1,900	-165	1,775	+27	950	+14
Total Use	14,015	-459	4,023	+56	2,118	+79
Ending Stocks	1,929	-185	460	-453	1,043	-37
Days of Stocks	50	-3	42	-42	180	-14
U.S. Average Farm Price	\$3.80	+\$0.19	\$9.00	+\$0.52	\$4.70	-\$0.46

Source: October 2019 WASDE - USDA: WAOB.

the soybean balance sheet is that an 878 million bushel reduction in production only reduces total supply by about 400 million bushels. Beginning stocks, at 913 million bushels, dampens the impact of the lower production (Table 1).

Soybean use is projected to increase by 56 million bushels from last year. Soybean crushing demand remains strong, but increased crush cannot compensate for much smaller exports. Regardless, ending soybean stocks at 460 million bushels is cutting the stocks level in half and is supporting a U.S. MYA price of \$9.00/bushel (Table 1).

The 2019 wheat balance sheet shows little change from last year with total supply and total demand projected to increase by 42 and 79 million bushels, respectively, from the 2018 marketing year. USDA projects wheat ending stocks at 1.04 billion bushels, which is a 37 million bushel reduction from 2018. USDA projects the wheat MYA price at \$4.70/bushel, which is \$0.46/bushel less than last year's price. The 2018 crop had higher prices at harvest due to production uncertainty in the Great Plains wheat crop. The production uncertainty was not a factor this year to support a higher MYA price.

Over the last thirty years, USDA has reduced the size of the corn crop thirteen years by an average of 290 million bushels. For the other seventeen years, USDA increased the corn crop by 216 million bushels. Because of the large carry-in, adjusting the production lower by 290 million bushels or higher by 216 million bushels might increase

the U.S. MYA price by \$0.20/bushel or decrease the U.S. MYA price by \$0.15/bushel, respectively.

Similarly, USDA has trimmed the soybean crop from October to January in thirteen of the last thirty years by an average of 54 million bushels. For the other seventeen years, USDA increased the size of the soybean crop by an average of 86 million bushels. If USDA reduces the 2019 soybean crop by 54 million bushels, then the U.S. MYA price might increase by \$0.35/bushel. In contrast, an 86 million bushel increase in the size of the 2019 crop could reduce the U.S. MYA price to \$8.55/bushel.

If USDA would reduce the size of the 2019 crops, then prices would increase. However, the large carry-in is dampening the impact of smaller crops. For a greater impact on ending stocks and prices, stronger exports are needed. A resolution to trade disruptions with Mexico and Japan for corn, and China for soybeans will improve the grain markets.



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