Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky

Ag Economic Situation & Outlook
U.S. AND KENTUCKY

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2023-2024

Table of Contents

Dr. Will Snell

2023 SITUATION

Following an amazing run in 2021 and 2022, the agricultural economy is expected to retreat in 2023. Prices for most major farm commodities were lower in 2023 as the global producers responded to price incentives induced by tight global stocks and trade opportunities. In addition to increased global competition, the U.S. ag economy was adversely affected by slumping exports, interest rate hikes, labor challenges, unfavorable weather patterns impacting crop yields and pasture conditions, along with the volatility caused by ongoing global geopolitical issues.

Net farm incomes will retreat in 2023 and 2024 from record high levels in the past two years, but remain relatively high

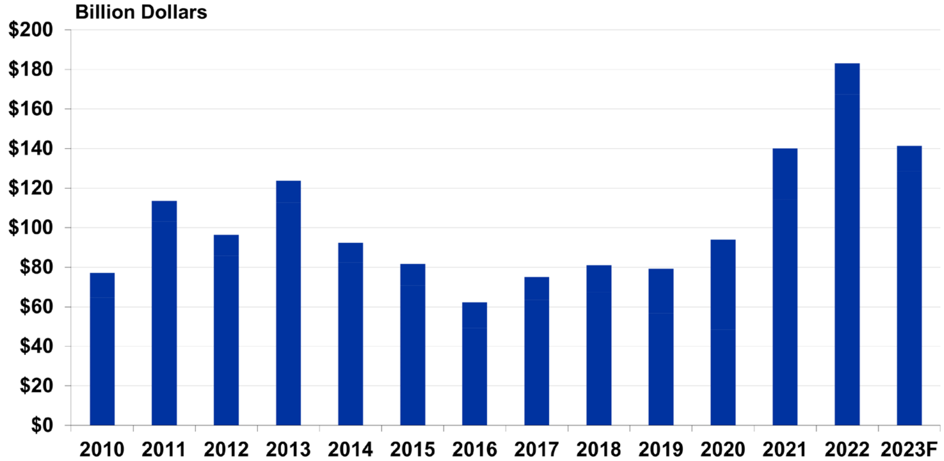
Ag Exports will be challenged by increased export competition and a slowing global economy

Despite economic challenges, the farm balance sheet remains relatively strong heading into 2024

The lone bright spot in the ag economy in 2023 was cattle markets where farm-level prices soared in response to tight cattle supplies and a resilient beef consumer base even amidst relatively high retail beef prices.

While inflation moderated in the second half of the year, the ag sector continues to be adversely impacted by inflationary pressures on the economy. Despite lower fertilizer and feed expenses, overall farm production expenses were higher in 2023, primarily due to higher interest expenses (with farm loan rates exceeding 8%) and labor costs. In addition, government farm payments receded to pre-trade war/pandemic levels. In aggregate, USDA is forecasting that U.S. net farm income will decline by 17% in 2023, following record-high levels in 2021 and 2022. Despite a significant decline, the projected 2023 U.S. net farm income level adjusted for inflation will still be the fourth-highest real net farm income realized in the past 75 years.

EXHIBIT 1: U.S. NET FARM INCOME



Source: USDA-ERS, December 2023 Estimates

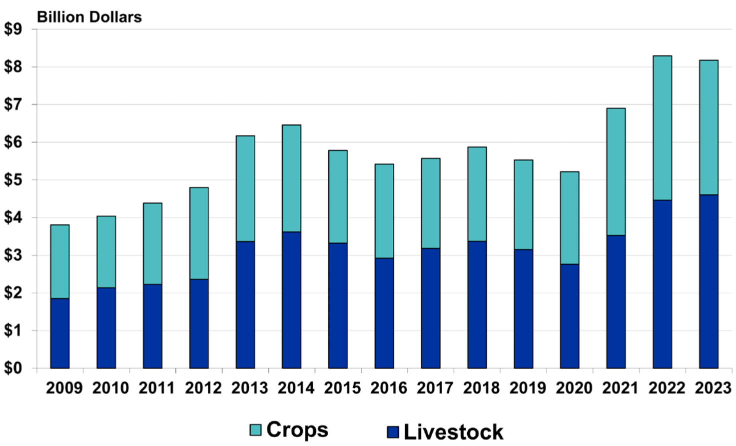
A significant portion of the growth in farm income in recent years has been a strong international market for U.S. farm commodities and ag products. However, U.S. ag exports, which generally account for over 20% of U.S. ag production, declined in 2023 in response to a stronger U.S. dollar, a weakening global economy, and rebounding world stocks. The biggest decline occurred in our largest ag export market – China which faces a lot of economic challenges as its economy continues to try to recover from COVID and other financial stressors. The decline in U.S. ag exports, coupled with continued growth in ag imports will likely cause the U.S. ag industry to experience its third trade deficit in the past five years – very uncharacteristic given that the U.S. ag sector historically has recorded relatively large trade surpluses.

The Kentucky agricultural economy has not escaped many of these national macroeconomic issues and trends, but our diverse farm economy, better-than-expected grain yields amidst weather challenges, and carryover grain sales from the 2022 crop helped cushion some of the downfall. As a result, University of Kentucky agricultural economists are projecting that 2023 Kentucky ag cash receipts will decline modestly from its record high level of $8.3 billion in 2023 to $8.1 billion as the significant increase in cattle (+22%) and wheat receipts (+30%) are just slightly offset by lower receipts for corn (-18%), soybeans (-6%), dairy (-15%) and tobacco (-10%). Poultry will likely remain Kentucky's number one commodity in terms of cash receipts, but strong cattle prices vaulted cattle receipts over corn, soybeans, and equine receipts in 2023. Similar to national trends, production expenses will be higher for most Kentucky farmers this past year while government payments will fall leading to net farm income for Kentucky agriculture declining in 2023 from record highs of $3.1 billion in 2021 and $3.9 billion in 2022. While the outcomes will vary across enterprises and farmers, overall net farm income adjusted for inflation for Kentucky this past year is expected to remain above the $2.5 billion average recorded over the past ten years.

2024 OUTLOOK

Looking ahead to 2024, commodity prices, except for cattle, will continue to face headwinds amidst global competition, higher stock levels, and a slowing global economy. Despite challenges, Kentucky ag cash receipts may still remain above

EXHIBIT 2: KENTUCKY FARM CASH RECEIPTS

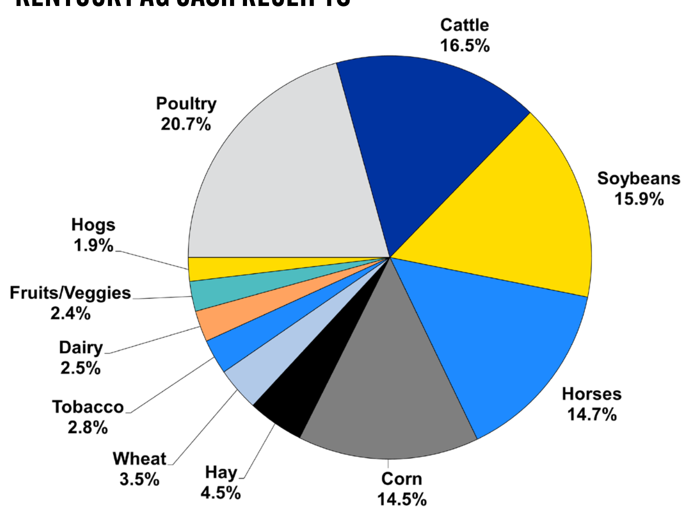


Source: KY Ag Stats/USDA-NASS, UK Ag Economics Estimates for 2023

$8 billion on the heels of expanding livestock receipts and anticipated stable crop receipts. While inflation has eased in recent months, the current macroeconomic environment does not indicate that interest rates will likely fall dramatically in the coming year. Labor costs will continue to rise as the H2A wage rate is bumped up 6% to $15.14 per hour. Feed and fertilizer costs have moderated from recent highs, but remain above historical levels. Despite political drama in DC, we will have some sort of farm bill in place, but one that will likely deliver very little changes in price/income protection leading to lower government payments with conservation funding being the wild card. After trending up the past few years, the value of the dollar could soften some in 2024 if the Federal Reserve begins to ease its recent restrictive monetary policy. However, a slowing global economy along with export market competition will continue to challenge U.S. ag export growth.

Collectively, lower/stable crop prices, intense export competition, higher interest and labor expenses, and limited government payments will challenge potentially higher livestock receipts in the coming year. Even accounting for narrowing profit margins, the ag balance sheet remains relatively strong heading into 2024. Ag loan portfolios have benefited in recent years from the ability of farmers to utilize excess cash to pay for operating expenses, land, and equipment holding down increasing debt levels. However, higher interest rates and the depletion of cash/working capital in a lower net farm income environment may cause lenders to be more cautious in the coming year in evaluating loans. Despite these economic challenges, the farm economy outlook remains relatively positive heading into 2024. However, as usual, extreme/unpredictable weather events and uncertain geopolitical actions could quickly disrupt markets and forecasts emphasizing the need to incorporate various risk management tools to counter potential market volatility.

EXHIBIT 3: DISTRIBUTION OF PROJECTED 2023 KENTUCKY AG CASH RECEIPTS



Source: UK Agricultural Economics, December 2023 Estimates

Dr. Kenny Burdine

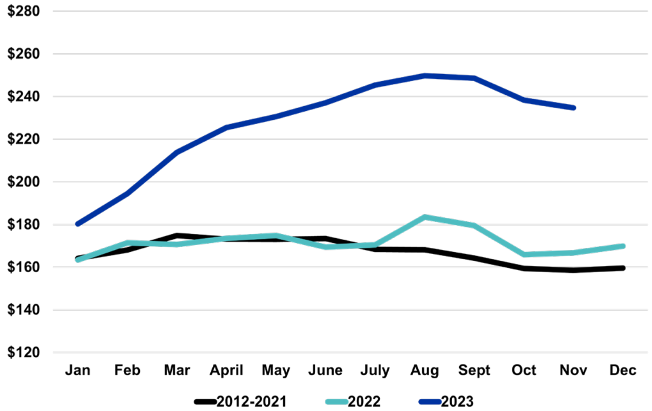
2023 SITUATION

We came into 2023 with the smallest beef cow herd on record in over sixty years. At the same time, US beef production saw its first year-over-year decline since 2015 and will be down nearly 5% for the year. Tight supplies were the story for the vast majority of the year and were reflected in feeder cattle and calf prices. Beginning in mid-September, futures market prices saw major declines that persisted into December. The drops were driven by a combination of markets moving too high, too quickly over the summer and larger than expected fall feedlot placements. While cash feeder cattle prices were impacted, they did not drop as drastically as the futures market did. Despite the fall market frustration, both calf and heavy feeder prices averaged $40-$60 per cwt higher than 2022, as can be seen in the charts below.

2023 Kentucky feeder cattle and calf prices were up $40-$60 from 2022

U.S. cow herd likely more than 2% smaller to start the new year

EXHIBIT 1: KENTUCKY AUCTION PRICES FOR 550 LB M/L #1-2 STEERS ($ PER CWT)



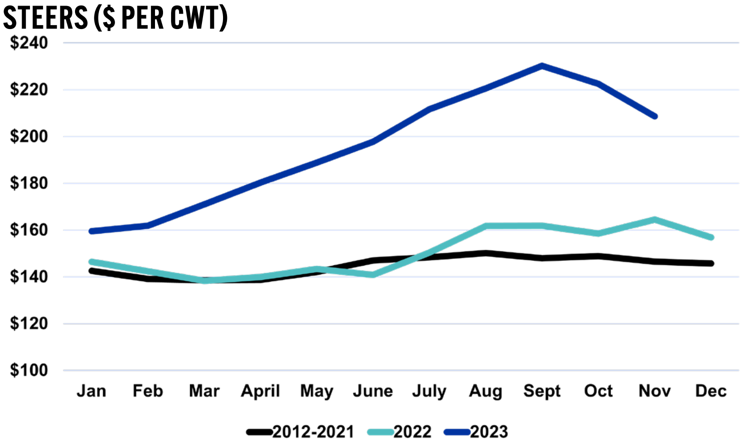
Source: USDA-AMS, author calculations

2024 OUTLOOK

Dry weather in much of Kentucky during 2023 impacted hay supplies and prices going into 2024. Despite relatively high calf prices, there is no indication that cattle producers have started to expand. Cow slaughter and heifers on feed point to another year of contraction. The 2024 cow herd will likely be more than 2% smaller than 2023, which means feeder cattle supplies will only get tighter. While inflation, interest rates, and macroeconomic questions have the potential to impact the market, supply fundamentals should support cattle prices such that calf prices increase again year-over-year. While cow-calf operators are typically the primary beneficiaries of tight cattle supplies, the outlook for margin operators is also encouraging. Feed prices have moderated somewhat from last year, but the value of gain should remain relatively high, creating opportunity for stocker and backgrounding operations. One lesson of fall 2023 was how quickly markets can swing, so price risk management should be a component of marketing plans.

Supply fundamentals continue to support feeder cattle and calf prices in 2024

EXHIBIT 2: KENTUCKY AUCTION PRICES FOR 850 LB M/L #1-2 STEERS ($ PER CWT)



Source: USDA-AMS, author calculations

Dr. Kenny Burdine

Dr. Jordan Shockley

2023 SITUATION

Kentucky poultry production will be higher in 2023 as post-tornado impacts were at play in early 2022. However, out times remain an issue for growers, as do operating costs. The two largest poultry narratives centered around plant closures and Avian Influenza (AI) this year. The announced closure of the Tyson plant in Corydon, Indiana impacts more than 20 growers in Kentucky and the future of those operations is certainly in flux. At the same time, a significant increase in cases of AI was seen in the fall across the U.S. As of early December, a case had not been confirmed in Kentucky, but the situation should be monitored. At the national level, broiler production is expected to be up by less than one percent in 2023 and broiler prices are down by roughly 13% from last year.

Closure of Tyson plant in Corydon, Indiana impacts more than 20 Kentucky growers

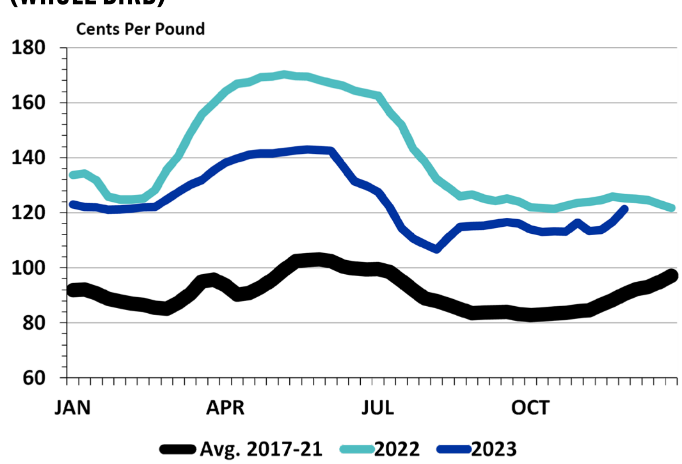
Wholesale broiler prices down by 13% from 2022

Construction costs with higher interest rates hinder expansion

2024 OUTLOOK

While feed costs have trended lower, labor challenges continue to impact integrators. It is very possible that this was a major factor behind the closure of the Corydon, IN Tyson plant and certainly bears watching going forward as additional plant closures would significantly impact the industry. Construction and material costs, combined with much higher interest rates, are creating entry challenges for growers into the poultry sector and those upgrading existing operations. While the sector remains stable, significant growth seems unlikely. The recent increase in cases of AI serves as a crucial reminder that growers need to manage that risk to the extent possible and the December 2021 tornado drives home the linkage between infrastructure, markets, and grower profits.

EXHIBIT 1: NATIONAL COMPOSITE BROILER PRICES (WHOLE BIRD)



Source: USDA-AMS, Livestock Marketing Information Center

Dr. Kenny Burdine

2023 SITUATION

After two solid years in the hog sector, things shifted drastically in 2023 as farrow-to-finish margins turned negative. The lone bright spot in the hog markets has been exports, which have been higher in 2023, despite the fact that China has continued to import less pork from the U.S. The increased export levels seen in the pork market are counter to what has generally been seen in other protein markets and Mexico has been a major driver of this export strength. Closer to home, Kentucky came into 2023 with a steady breeding hog inventory and larger market hog numbers. Eastern corn belt hog prices fell by 15% when compared to 2022, which was only partially offset by cheaper feed.

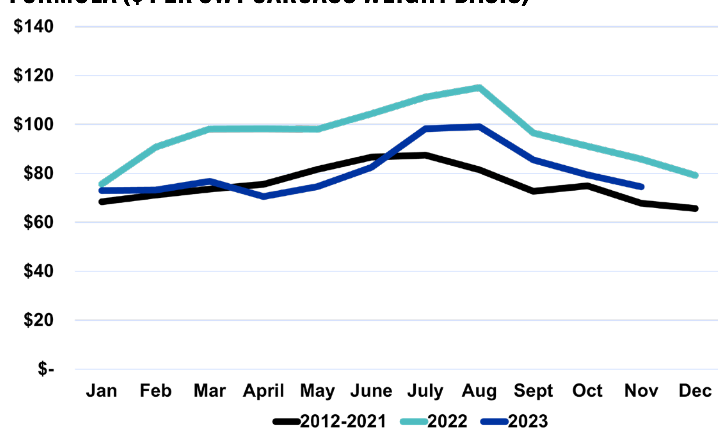
Eastern Corn Belt Hog prices were down 15% from 2022 levels, with only a portion of that being offset by lower feed prices

Exports have been a bright spot and are being driven by high export levels to Mexico

2024 OUTLOOK

Productivity gains continue to be a double-edged sword for the industry. Gains in pigs per litter are a major reason why USDA-ERS is predicting nearly a 2% increase in pork production next year. Hopefully, continued export strength can keep increases in per capita availability at a minimum. Kentucky's hog sector is a healthy mix of independent and contract-integrated operations and both segments of the market are impacted by different things. For independents, margins should improve in 2024, but that is most likely to be driven by lower feed prices. Indications are that growth is continuing among integrated operations, but construction costs and interest rates are having an impact there as well.

EXHIBIT 1: DIRECT EASTERN CORN BELT HOG PRICES - MARKET FORMULA ($ PER CWT CARCASS WEIGHT BASIS)



Source: USDA-AMS, USDA-NASS, author calculations

Equine

Dr. Kenny Burdine

Dr. Jill Stowe

2023 SITUATION

Following two years of post-Covid improvement, equine markets seemed to cool somewhat in 2023. After sizable year-over-year increases in 2021 (+38%) and 2022 (+13%), Keeneland sales revenues were down by 6% in 2023, in part due to a 3.6% decline in the number sold. While the pullback is significant, perspective is likely valuable as the sales levels of 2023 are still the second highest annual sales level since 2007 (second only to 2022). While the number of mares bred in North America continued to decline, Kentucky actually bucked the national trend and saw an increase in the number of mares bred in 2023 (The Jockey Club). Stud fees paid on these mares are another significant contributor to equine receipts in the Commonwealth.

Keeneland annual sales decrease by 6% from 2022 but are second highest level since 2007

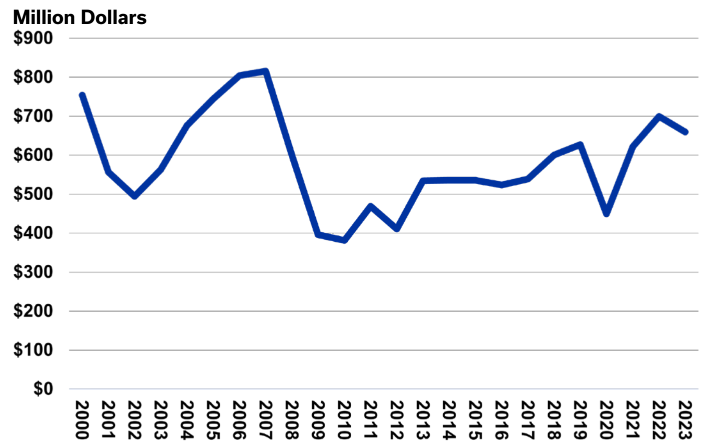
Historical horse race (HHR) gaming revenues continue to impact purses

2024 OUTLOOK

Despite the decrease in sales for 2023, the equine sector remains relatively strong. Gaming revenues from historical horse racing continue to impact purses, which has the potential to impact sales and stud fees. It is unclear how broader sports betting in Kentucky may impact this going forward but it certainly bears watching. It will also be interesting to watch how inflationary pressure impacts equine markets, especially the non-racing markets. Despite the 1.6% increase in number of mares bred in Kentucky during 2023, it is difficult to forecast another increase for 2024. And one would have to expect stud feeds to flatten, at best, for the upcoming year. An expectation of steady equine receipt levels in Kentucky would seem most likely for 2024.

The most recent [Kentucky Equine Survey] was released in the summer of 2023 and provides a comprehensive look at Kentucky's equine sector and its impact on the state.

EXHIBIT 1: ANNUAL KEENELAND SALES, 2000-2023



Source: Keeneland

Dairy

Dr. Kenny Burdine

2023 SITUATION

Coming off a reasonably good year for the dairy sector in 2022, Kentucky came into 2023 with slightly more dairy cows than last year. This was the first statewide increase since the 1980's. Unfortunately, the values of cheese, non-dry milk, and whey pulled farm-level milk prices lower. U.S. all milk price decreased by $4-5 per cwt in 2023 and Dairy Margin Coverage (DMC) margins reached levels this summer not seen since 2012. By fall, farm-level milk prices showed some improvement and were accompanied by decreases in feed costs. Still, dairy cow numbers have been decreasing at the national level since the spring of 2023.

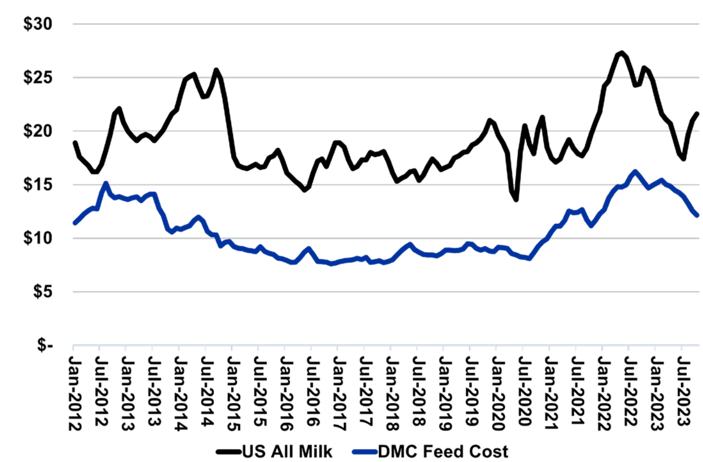
In summer of 2023, dairy margins reached lows not seen since 2012

Some improvement in farm level milk price, combined with lower feed costs should result in a better year for dairy producers in 2024

2024 OUTLOOK

While the dairy herd should enter 2024 a bit smaller than last year, this will likely be largely offset by productivity increases. The second half of 2023 provided some optimism that dairy product prices will improve going forward and USDA-ERS is projecting an increase in dairy exports. This should be somewhat supportive of prices and producers will further benefit from lower feed costs. Profitability challenges will continue to be felt by smaller-scale dairies, which make up a significant portion of Kentucky's dairy sector. Dairy producers should continue to utilize the DMC program and other risk management tools available to them.

EXHIBIT 1: U.S. ALL MILK PRICE VS. DMC FEED COST ($ PER CWT)



Source: USDA-AMS, USDA-NASS, author calculations


Dr. Grant Gardner

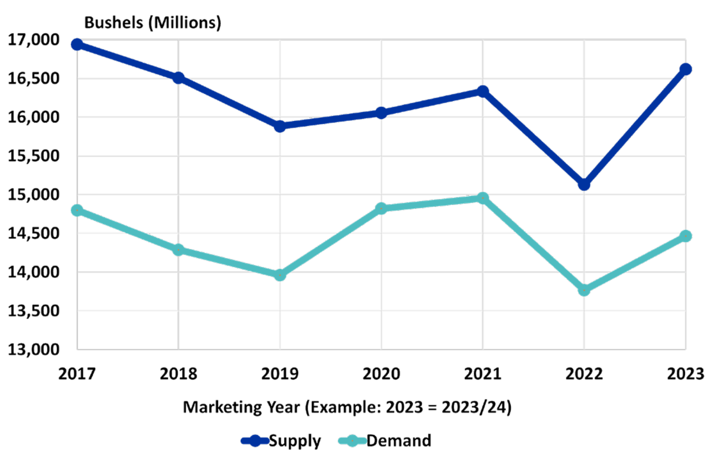
2023 SITUATION

A record year of U.S. corn production widened the gap in supply and demand, pushing corn prices down close to $1.40 per bushel in 2023. For example, the 2023 December corn futures were around $6.00/bu on December 1, 2022, and $4.60/bu on December 1, 2023. Thankfully, volatility throughout the marketing year offered ample opportunities for producers to lock in higher prices. Harvest time futures were above $6.20 in June due to weather conditions, which caused a supply scare in major production states like Indiana, Illinois, and Iowa. 2023 was an atypical year, as corn prices mostly trended downward, correcting for a tight stock and high price situation that has lingered since COVID. The marketing year typically runs September-September, and we generally expect prices to increase until June or July when end-users and elevators start accounting for the next season's crop. Kentucky producers likely faired the drop in prices better than other states, as 2023 yields were much higher than the lower drought-induced yields of 2022.

2023 saw a $1.40 drop in corn prices from December 2022 to December 2023, but price volatility offered producers the opportunity to lock in higher prices

I look for corn prices to return to typical cyclicality as we exit post-COVID lows

EXHIBIT 1: CORN SUPPLY AND DEMAND BY MARKETING YEAR



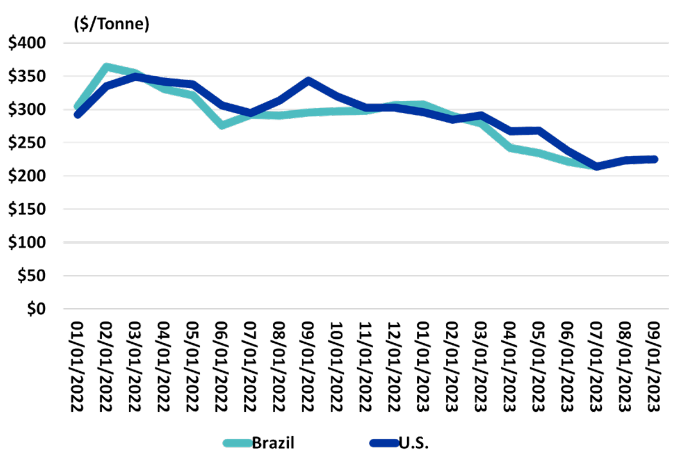
Source: USDA Feed Grains Yearbook

2024 OUTLOOK

As we move into 2024, I expect corn prices to return to typical cyclicality, meaning prices should increase as the marketing year progresses. Questions remain on the demand side of the equation, especially concerning export markets. Brazil surpassed the United States as the world's largest corn exporter in 2023, and the United States will need to make up for the lost demand in 2024 to induce a meaningful increase in corn prices. Of late, China has avoided U.S. corn exports, but as prices have dropped, the United States' export price is on par with Brazil's. Next year's corn supply will also have a large impact on prices. If soybeans follow corn on all the U.S. acres planted in corn in 2023, we could easily be in another tight stock situation in 2024; however, I do not expect this to occur as fertilizer prices have lowered dramatically, incentivizing corn. Current harvest time futures are above $5.00, a lower but profitable corn price.

Questions remain on the demand side of the equation, as the U.S. must pick up the market share lost to Brazilian exports

EXHIBIT 2: MONTHLY EXPORT PRICE BY COUNTRY



Source: FAO FPMA Tool

Soybeans

Dr. Grant Gardner

2023 SITUATION

Near-record corn planting led to the lowest soybean supply since 2019. 2024 January corn futures began the year close to $14.00 and followed the downward trajectory of corn to nearly $11.40 before the June/July weather scares. Unlike corn, which quickly declined in price after the scare, soybeans stayed relatively high due to the small U.S. projected production and relatively strong exports. Since June, soybean futures have mostly been above $13.00, indicating multiple opportunities for producers to lock in $13.80/bu beans in 2023.

Due to tight supplies, soybean prices were highly volatile in 2023. Adding to this pressure, Argentina, a major contributor of soybeans, has been reported to be out of beans after a poor production year. Tight stocks have led to continually elevated prices since June instead of prices falling in June/July as expected.

2024 OUTLOOK

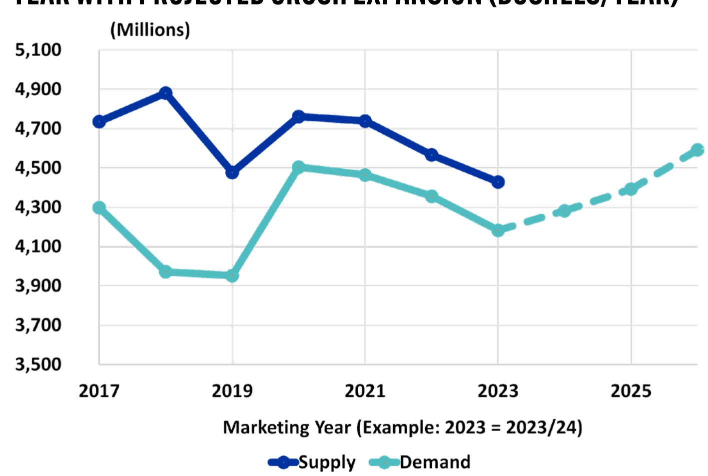
Soybean prices still look strong in 2024 due to projected U.S. crush expansion and smaller stocks. Unlike corn, we have not seen a widening gap in supply and demand post-COVID. I expect soybean prices to stay elevated but highly volatile for years. Between 2023 and 2026, soybean crush capacity is expected to increase by over 500 million bushels. Questions remain on whether supply and demand will meet capacity, but the U.S. will likely need soybean expansion as we look to the future. I do not see a surplus of beans on the horizon unless most of the 2023 corn acres are planted to soybeans in 2024. Harvest time futures prices are close to $12.75, a lower but profitable soybean price.

Tight stocks are causing price volatility, which we will continue to experience for years

Prices are strong currently and should stay elevated. Consider some higher-priced bookings now to spread risk

Crush demand is expected to increase by 500 million bushels between 2023 and 2026

EXHIBIT 1: SOYBEAN SUPPLY AND DEMAND BY MARKETING YEAR WITH PROJECTED CRUSH EXPANSION (BUSHELS/YEAR)



Dr. Grant Gardner

2023 SITUATION

Russia's invasion of Ukraine pushed the wheat price to a record level and pressed U.S. wheat supplies to new levels in 2023. Supply outpaced demand by nearly 60 million bushels, driving the 2023 December SRW wheat futures contract from close to $8.20 on December 1, 2022, to $5.60 on December 1, 2023, a decline in price of nearly $2.60. Thankfully, futures shot above $7.60 in June and July due to a weather scare combined with geopolitical tensions, specifically the cancellation of the "Black Seas Grain Deal." These price movements likely allowed some marketers to lock-in higher-than-average wheat prices.

2023 wheat markets experienced price movements that were similar but more volatile than those of corn markets. Short price spikes due to geopolitical tensions gave ample marketing opportunities to lock in prices before the winter wheat harvest. Since the winter wheat harvest, prices have remained low.

Low world stocks and geopolitical tensions between Russia/Ukraine have caused price volatility in 2023, which will continue in 2024

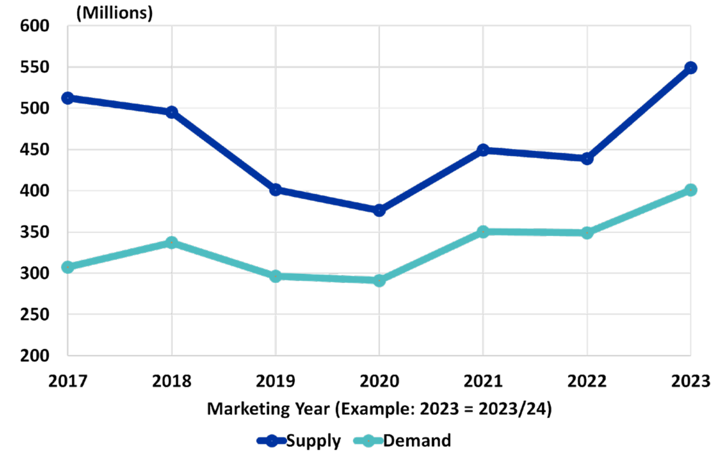
Wheat marketing will require close attention to markets and quick decision-making to book higher prices

A large number of corn acres primes double-crop producers for wheat expansion

2024 OUTLOOK

U.S. wheat prices are dictated more by world supplies than U.S. corn or soybean prices, and thus, the declining stocks held by major exporters add price volatility to wheat markets. Geopolitical tensions between Russia, the largest wheat exporter, and Ukraine, the seventh largest export since 2019, exacerbate these effects. As prices return to normal levels, capturing volatile price spikes will become increasingly important for the U.S. producer. Harvest time futures are still profitable at close to $6.00, but producers should pay attention to short-term increases to maximize profitability. From a supply perspective, the large number of corn acres in 2023 primes producers for double-crop wheat/soybeans. Production could increase in Kentucky, a key double-crop state, but I look for similar numbers nationally due to current pricing mechanisms.

EXHIBIT 1: WHEAT SUPPLY AND DEMAND BY MARKETING YEAR (BUSHELS/YEAR)



Source: USDA Wheat Data

Tobacco

Dr. Will Snell

2023 SITUATION

Kentucky's tobacco sector continues to contract amidst declining consumer demand for tobacco products, international competition, and labor/yield challenges adversely impacting profit margins. The situation and outlook have reversed among tobacco types.

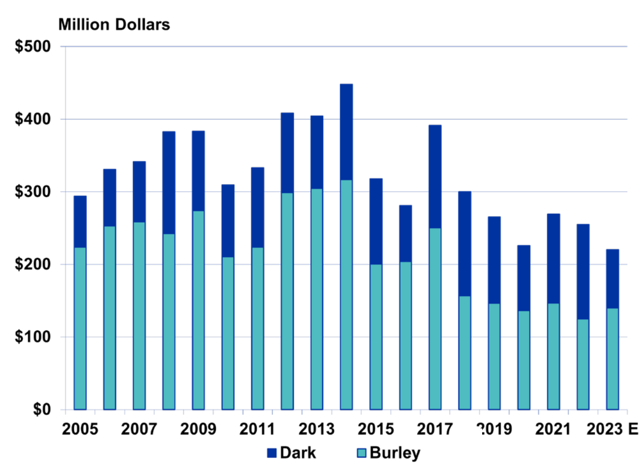
Burley demand continues to slide, but production opportunities continue amidst tight global supplies

The value of Kentucky's tobacco crop may total around $250 million in 2022

While U.S. burley use continues to fall amidst an accelerating decline in domestic cigarette sales, and import leaf substitution, burley growers were encouraged to grow more pounds in 2023 with increased contract volume offers coupled with higher contract price incentives. However, increased burley acres planted did not materialize (off 3%). Overall U.S. burley demand may have been around 70 million pounds, but it is likely that the 2023 crop will not total much more than 50-55 million pounds. Accounting for all the additional price adjustments, U.S. burley prices for the 2023 crop may average around $2.40 - $2.50/lb, compared to $2.21/lb in 2022.

Given the demand challenges facing burley, Kentucky's dark tobacco sector has been the bright spot over the past decade as snuff sales increased and growers faced virtually no international competition. The situation has reversed as competition in the form of product competition has unfolded for the dark tobacco sector with nicotine pouches (which do not use dark tobacco) cutting into the snuff market (the primary use of dark tobacco). Consequently, dark tobacco contract volume was reduced significantly in 2023 with acreage harvested down by more than 20%. In addition, the 2023 dark tobacco crop was hurt dramatically by excessive rain leading to very poor yields and quality. As a result, the value of the Kentucky tobacco crop (burley + dark) may just barely exceed $200 million in 2023 compared to averaging around $250 million in recent years.

EXHIBIT 1: VALUE OF KENTUCKY TOBACCO PRODUCTION



Source: USDA, UK Projections for 2023

2024 OUTLOOK

U.S./Kentucky burley growers will once again have an opportunity to grow more pounds in 2024 given extremely tight global burley supplies. However, acreage responses will hinge critically on contract prices offered for the 2024 crop. U.S./Kentucky dark tobacco growers are expected to experience additional cuts in contract volume as the nicotine market adjusts to a changing consumer base. Wage rates for the labor-intensive crop are expected to surpass $15.00/hour which will continue to challenge profit margins at existing yields. Profit opportunities for cattle and grains may also impact the number of tobacco growers remaining in the industry. Consequently, the value of the 2024 Kentucky crop may be challenged to surpass much above $200 million unless price incentives are significantly higher, and growers experience a much better growing/curing season compared to this past year.

Kentucky's value of tobacco production my be challenged to exceed $200 million in 2023 and 2024

Fruits, Vegetables, and Greenhouse

Dr. Tim Woods

2023 SITUATION

Input costs remained up sharply during 2023 for most specialty crops, especially labor, pesticides, and capital items. Strong local retail markets helped strengthen demand and prices for both produce and nursery/greenhouse crops. Some significant business failures associated with controlled environment production were experienced, however, the scale of production remains significant and, despite the difficulties of transition, sales continue to expand significantly. Farm gate cash receipts for fruit are estimated at $24 million, vegetables at $55 million, and nursery and greenhouse crops at $120 million – all at or near record levels of sales for Kentucky. Controlled environment greenhouse production will contribute another $30-$50 million above that level.

Sales experiencing continued growth despite continued high costs of inputs

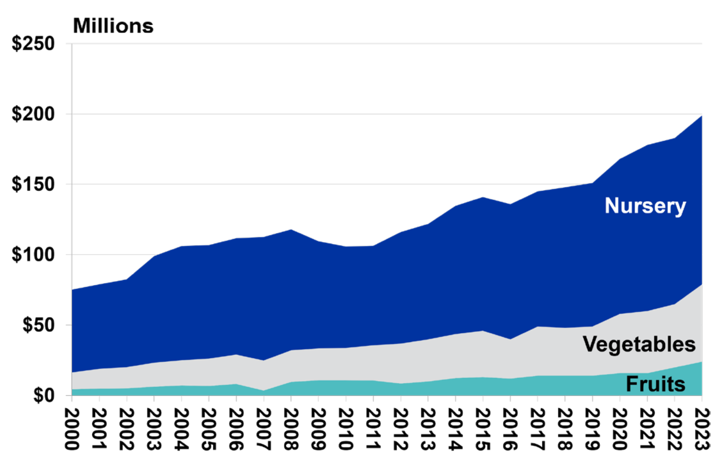
High labor costs expected for 2024 with impacts on profit margin

2024 OUTLOOK

Strong competitive pressures will continue from outside of the U.S. in the produce market, challenging many of the wholesale market outlets for Kentucky farms. While Kentucky growers benefit from strong local demand, and strong local prices may remain in direct markets, import supply will continue to rise. Labor costs are a big constraint in this sector, accounting generally for 30-40% of production costs for most produce. Labor cost projections for 2024 are sharply higher and will put pressure on grower margins. New capital-intensive greenhouses and vertical farming systems continue to expand in Kentucky, primarily with a view toward regional wholesale markets.

The outlook for 2024 in Kentucky will continue to hinge on strong local demand for specialty crops as markets for many specialty crops trend downward nationally. Recovering restaurants and other wholesale channels, including the produce auctions, will help support continued strong markets in direct-to-consumer platforms. Garden center demand in Kentucky will be expected to keep pace with the strong growth nationally, helping the retail-oriented farms.

EXHIBIT 1: KENTUCKY PRODUCE & NURSERY CASH RECEIPTS



Dr. Jeff Stringer

2023 SITUATION

While the overall economic contribution for the forest sector remained steady, approximately $13 billion, for 2023 there were significant discrepancies in market strength among sub-sectors. Lumber prices, to a large extent, drive average timber and log pricing. The last two quarters of 2022 encountered significant downturns in lumber prices across all species, with white and red oak dropping 91% and 106%respectively. Only a portion of these losses were recovered in 2023, for example, white and red oak recovered only 37% and 44%, respectively. Other species responded with modest gains in 2023, but only partially recovering from losses in 2022 with the exception of hard and soft maples that lost over 40% of their value in 2023. The sluggish oak lumber market was also felt in the railway tie log market especially for oak, with oak prices retreating to values paid for non-oak tie logs. Pulpwood demand in eastern Kentucky has suffered with the loss of markets thus further depressing timber markets and limiting forest management opportunities in that region. While western Kentucky pulpwood markets have rebounded since the re-opening of the Wickliffe pulp mill, overall prices are static. In total, the lackluster lumber, tie, and pulpwood markets have led to anemic timber values for woodland owners that have average-quality timber. The one bright spot continues to be white oak stave log prices. While flattening somewhat in 2023 prices have remained relatively high and there continues to be a strong demand to support a seller's market throughout 2023.

Lumber price changes varied significantly across species in 2023

Labor shortage, mill closings, and low inventories signaling apprehension

Along with demand issues, overall the forest sector is plagued by a worker shortage, three smaller mills closed in 2023 and many mills are keeping log inventories low, which is unusual going into the winter. The latter shows a short-term fear of continuing soft markets and results in a lack of demand and reduced prices for average logs for many species. Part of this positioning is based on housing starts which are down.

2024 OUTLOOK

However, there is some optimism in the sector that there will be a balance in supply and demand in 2024. This balance will be needed before we see a rebound in overall timber pricing for a large number of our species. The exception being white oak stave logs where demand will remain high enough to maintain prices throughout 2024.

Mr. Jerry Pierce

IMPACT OF NET FARM INCOMES ON KENTUCKY COMMERCIAL CROP FARMS

Farm profitability affects farms and farm families in tax liability, the net farm income that enables the business to meet its financial obligations, and in farm family income. Data from the Kentucky Farm Business Management (KFBM) program illustrates how farm profitability has affected participating commercial crop farms.

Decrease in profitability is expected

Plan for competing needs among loan payments, farm expenses, family living, and balance sheet

Most farmers pay income tax on a cash basis: income received minus expenses paid and depreciation taken. Average 2022 Farm Profit or Loss for this group was $161,591. Crop farmers can expect high income tax liability again this year.

Net farm income (NFI) is a more accurate measure of profitability. It is gross income produced in the year minus cost of production regardless of when expenses are paid or income is received. The highest NFI yet seen in KFBM was $871,325 in 2021. Last year it dropped back to the 2020 level. Two reasons for the drop: 1) Total Cost Per Acre rose 21%, cutting the net by $184/ac. 2) Government Payments, a huge factor in farm recovery starting in 2017, fell to nearly nothing in 2022. Farmers can expect the same for 2023 and 2024.

USDA projects substantially lower 2023 NFI for all farms nationwide. For Kentucky crop farms, corn and soybean yields may offset lower prices, and the increase in cost of production has slowed, which could result in a less severe drop in NFI.

Net farm income directly affects farm financial condition by providing the means to meet obligations in long-term and short-term.

Solvency is the ability of the farm to meet its obligations in the long-term. A debt/asset ratio of less than 30% is healthy for a crop farm. Debt/asset ratio for these farms has been below 30% and falling for the past 6 years, due to increased NFI, good management decisions, and stable land prices.

Liquidity is the ability of the farm to meet its obligations in the short-term. Working capital is used to measure liquidity. It is current assets minus principal due in the next 12 months. The remainder

is available to pay operating expenses, take advantage of opportunities, and meet challenges. Comparing working capital to principal due in the next 12 months gives the working capital ratio. A 2:1 or more ratio is healthy for a crop farm. These farms have had a healthy working capital ratio for the past three years due to management planning to keep current assets in the farm.

These farms are all owned and operated by families. They depend on NFI to contribute to Family Living. Total spending in 2022 was $95,988, a $24,000 increase over 2020 and earlier, led by increases in medical & general expenses.

Some farms may be challenged to adequately cover their obligations in the short-run

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