Kentucky Farm Business Management Program

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Inside:

University of Kentucky College of Agriculture, Food and Environment
Cooperative Extension Service

Cooperative Extension Service
University of Kentucky
Department of Agricultural Economics
400 Charles E. Barnhart Building
Lexington, KY 40546-0276
(859) 257-5762
Fax: (859) 323-1913
extension.ca.uky.edu
agecon.ca.uky.edu
www.uky.edu/ag/kfbm

Solar Farming Considerations

By: Alison Davis

An effort to rely on renewable resources instead of nonrenewable has the potential to meet the increased global demand for electricity. Both solar and wind energy have the potential to offset a significant fraction of non-renewable electricity demands, yet it occupies extensive land when deployed at levels large enough to meet global demand. With continuing cost declines, led by federal and state incentives, solar power is playing an increasingly important role in how states meet their energy needs. The following summarize some of the considerations for individual farmers, communities, and local leaders before any final decisions are made and/or contracts signed:

1. The most suitable land suitable for utility-scale solar farms is flat, clear of trees, structures or other obstacles, free of ponds, streams, and creeks, and bordered by a road that will provide easy access to construction crews. These conditions are typically found on prime agricultural farm land. This can create tensions between land uses and bid up the price of these higher valued lands. Ideally, solar panels should be used on more marginal lands.
2. It is essential that anyone considering the lease of their land has their contract reviewed by a lawyer familiar with the possible terms. In particular, the contract should clearly specify disposal of panels and the negotiated terms of returning land for production. In some states, solar companies are required to post a bond to protect the property owner from developer bankruptcy, disposal, and clean up.
3. It is easy to be swayed by the short-term benefits of leasing your land for solar panels. Currently, solar farms are leasing land at prices ranging from $400 to $1,200 an acre. These lease rents are higher than the current cash rents Kentucky farmers are receiving for cropland and tobacco. In the short-run there are financial benefits, particularly for older farmers who are battling a downturn in the agricultural economy. It is important to make decisions with the long term in mind. How does the present value of the lease payment offered by the developer compare to the expected long-term return if the land was in production?
4. Through the popularity of utility-scale solar farming, it has become clear how important farm succession plans are. If the term of the lease is expected to outlive one's life expectancy, then creating a succession plan now is critical.
5. Land maintenance might be lower but it is not negligible. Because solar panels capture 20% of the light for about 5

hours of the day, the rest of that solar energy will pass through to the ground. As a result, grasses, broadleaf weeds, and eventually woody shrubs will grow. There are three ways that solar farms can address this potentially unwanted vegetation: herbicides, mowing, ground cover, or a combination of all three. It's likely that a non-trivial amount of herbicide will need to be used to minimize weeds. In addition, landowners will still need to maintain equipment to remove unwanted vegetation or soil, grade roads or paths, mowing etc. Some places have used sheep for some maintenance but this probably won't be sufficient.

Kentucky is not yet a significant player in utility-scale solar farming. Currently, Kentucky is ranked 40th as measured by the number of annual new installations. California and the other Southwestern states, and even the state of New York have been dealing with solar farming for several more years and only recently has been a surge in interest in Kentucky. The topic is one of significant national, state, and local interest particularly since so many of the affected counties didn't have any plans in place to address this new competition for land. In an effort to allow time for careful planning, dozens of communities across the country have imposed 6 - and 12-month moratoriums on new large-scale solar projects. For example: Porter, NY, Riverhead NY, La Sueur County, MN, San Bernardino County, CA, Marshall County, IN, Duanesburg, NY and Northampton County, NC have all recently voted to impose short -term moratoriums.

The local community should proactively adopt policies within its planning and zoning ordinances. The policies should complement the community's existing comprehensive plan. It is important to not make fragmented decisions and instead identify areas of the community, if any, best suited for utility-scale development. The community should also clearly articulate its values and priorities to ensure all contracts meet the minimum standards. Stakeholder engagement is a key component of large-scale solar development. The majority of the proposed projects will require a zoning change which means the community will have an opportunity to voice their concerns in a public setting. The more community leadership and developers understands local values and policies, the easier it will be to develop a project that is acceptable to the community.

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Understanding Commodity Wages

By: Kayla Brashears

When it comes to paying employees, agriculture producers have a unique flexibility in compensation options that is not available to all employers. Commodity wages are a way to compensate employees without the obligation of many payroll taxes. This can be extremely useful in a situation in which a family member is working for the farming operation; an employee is transitioning into an owner/manager role, or other creative possibilities. Commodity wages compensate by transferring the ownership of a commodity, such as corn, soybeans, wheat, livestock, etc. to an employee. The employee then has the opportunity to market the commodity and generate a wage.

This route of compensation is appealing to some farm producers for several reasons:

- When paid properly, commodity wages are exempt from Social Security and Medicare tax for both the employer and employee portion.
- Commodity wages are exempt from federal unemployment taxes.
- The producer is not required to withhold any federal income tax. **Although the employer is not required to withhold federal income tax, the employee is required to PAY federal income tax on the full amount.**
- The exemptions above *can* lessen the administrative burden on employers in regards to payroll reporting throughout the year.
- The employee has the opportunity to create more income by marketing their ownership of the commodity effectively.
- Some farms may consider this method of compensation a good way for an employee to "buy-in" to the success of the crop.

Similar to most things in life, this route of compensation has some disadvantages as well:

- Producers should expect extra scrutiny by the IRS in the event of an audit if they pay commodity wages. To ensure proper use of commodity compensation, there are a few record-keeping details important to address (discussed in the next section).
- Although an employee can create income by marketing their commodity, conditions beyond their control, like weather and market changes, can cause them to have a downswing and collect a smaller wage.
- There are instances in which family members and employees should receive traditional wages for Social Security credits.

If a producer has decided commodity wages are a good fit for their operation, there are a few important record-keeping steps:

- The producer should record the sale of the commodity in their books. An offsetting transaction is a wage expense, resulting in a net-zero transaction to the producer.
- The farm and employee should take extra care that the transaction does not appear as cash equivalent by immediately paying out the sold commodity. For a true commodity wage, the recipient must absorb market risk. A delay of at least two weeks between delivery and commodity sale/payment to the employee is a safe hedge.
- The producer should report the amount of the commodity wage on the W2. A tax preparer, payroll expert, or a KFBM specialist can help with this, especially because FICA exempt wages report differently than regular wages.

Understanding how to utilize commodity wages can be a great way for a producer to compensate their employees. It is important to understand how to document commodity wages correctly. A tax professional, payroll expert, or a KFBM specialist can help you understand how commodity wages can benefit your operation.

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Contractor or Employee?

By: Jennifer Rogers

Extra help is often needed around the farm. It can be easy to get someone to come help out when needed and pay them at the end of the day for the job completed. What gets difficult is knowing the difference between contract labor and an employee. A lot of the time, this distinction between contractor or employee may not come up until the end of the year, when it is time to issue W-2's and 1099's. However, the correct treatment should be determined before a payment has ever been made.

What is a contractor?

According to the IRS Publication 1779, there are three main categories that are used to determine if you are an independent contractor. Those categories are behavioral control, financial control, and relationship to the parties. It is important to note, that when determining if you are an independent contractor, you must review all of the facts. Typically, just one piece of information will not be enough to make the determination.

When considering behavior control, the question you are trying to answer is who is in control. Does the person paying you control your behavior, or how and when you complete the job? If someone else trains you and specifically instructs you on how to complete the job, you may be an employee, not a contractor.

Financial control considers who has an investment in the project and who is bearing the financial risk of the job. An independent contractor typically has an investment in the business (tools, equipment, education), pays for expenses to complete the job, and has the opportunity to make or lose money based on the successful, satisfactory completion of the job.

The relationship of the parties refers to if the worker is compensated with employee benefits, such as insurance and retirement. If the employer pays these benefits, you are most likely an employee, not a contractor. A formal contract may also be used to determine the status of an independent contractor. A contract to complete a given job at a specified price could help distinguish the relationship as an independent contractor.

What is an Employee?

An employee is typically hired by an employer to perform jobs as requested by the employer. Typically, employees are not paid by the job, but at an hourly or piece rate. The employer trains employees and the employer provides the instructions, tools, and equipment to perform the assigned task. Employees do not bear any financial risk associated with the job or project. Employees may receive certain benefits such as insurance, retirement, and time off that are paid by the employer.

Why does the Distinction Matter?

If you are an employee, an employer is responsible for withholding and paying Social Security and Medicare benefits on your salary, as well as withholding federal and sometimes state and local taxes. Wage and tax information for employees is reported on a Form W-2 at the end of the year. If an employer neglects to withhold these taxes from your payment, they are then responsible

for paying them, or offering backup withholding on future payments to make up the difference of what should have been withheld.

A payment to an independent contractor is not subject to withholding by the employer. Independent contractors that are paid more that $600 are issued a Form 1099 at the end of the year for the total amount of compensation paid during the year. The independent contractor is then subject to pay the Social Security and Medicare tax (otherwise known as Self-Employment Tax) on their tax return when filed.

Correct characterization of the payment when paid to employees or independent contractors helps to limit confusion and extra tax payments at the end of the year as well as avoid penalties and interest. While it may be easiest to report all workers as independent contractors, it is not always correct. The IRS can and will issue fines and penalties for the improper reporting of paid labor. If you have further questions about how to treat your paid labor, you can consult several IRS publications, or talk with your tax professional.

IRS Publication 1779: https://www.irs.gov/pub/irs-pdf/p1779.pdf

IRS Publication 15: Employers Tax Guide: https://www.irs.gov/publications/p15

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Carbon Markets 101

By: Jordan Shockley & Will Snell

The development of agricultural ecosystem credit markets, specifically carbon markets, is a hot topic in the popular press and Washington, DC. The United States Environmental Protection Agency (EPA) estimates that 10% of carbon dioxide, a primary greenhouse gas, is emitted by the agricultural sector. While this is relatively a small portion of overall carbon dioxide emissions by the economic sector, agriculture has received a lot of attention in reducing overall GHG emissions recently. The ag sector is viewing carbon markets as an opportunity to attract additional revenue while adopting production practices to reduce greenhouse gas (GHG) emissions, improving soil health and yields, and potentially reducing input use. Various forms of carbon markets are being developed across the nation as companies attempt to reduce their own carbon footprint by offering payments to farmers to offset their own carbon emissions and to attract environmentally conscious consumers and investors.

In addition to activity within the private sector, there is much debate about the role of government in carbon markets. The Biden administration has clearly made this a priority in their agricultural policy agenda calling for a significant increase in federal funding and programs to help develop these markets and assist market participants. Consequently, farm organizations and major food and agribusiness groups have been heavily involved in the debate. A coalition of representing farmers, forest owners, the food sector, state governments, and environmental advocates have formed the Food and Agriculture Climate Alliance (FACA). FACA members include the American Farm Bureau Federation (including the Kentucky Farm Bureau), National Farmers Union, National Association of State Departments of Agriculture, the National Corn Growers Association, and the National Cattlemen's Beef Association.

FACA's policy recommendations include:

- Providing voluntary, incentive-based tools for farmers, ranchers and forest owners to maximize the sequestration of carbon and the reduction of other GHG emissions, as well as increase the resilience of the land.
- Supporting the development and oversight of private sector markets for GHG credits.
- Promoting public and private sector tools to incentivize farmers, ranchers, and forest owners to prioritize and scale climate-smart practices.
- Offering incentives for farmers to reduce energy consumption, increase the use of on-farm renewable energy, and make continued progress toward reducing the lifecycle GHG emissions of agriculture- and forestry-based renewable energy.
- Streamlining consumer-facing packaging and implementing a public-private-partnership to reduce the GHG impact of food waste and loss within the food value chain.
- Increasing federal investment in agriculture, forestry, and food-related research substantially and continuously.

Recently, over 300 U.S. corporations, including some industry giants in the agriculture and food industry submitted a letter to President Biden supporting reducing GHG emissions by at least 50% by 2030. The current Chairs of the U.S. Senate and House Ag Committee have prioritized this issue in the current session of Congress with various hearings being planned and bills being drafted. In

addition, the newly appointed U.S. Trade Representative has indicated that environmental issues are going to play a bigger role in future U.S. trade policy.

Given the onslaught of activity surrounding this emerging issue, what are some of the basic characteristics of a carbon market you should know? What key questions should you be asking? What issues currently exist in developing a market for carbon? How will policy affect the development of these markets?

Two types of carbon markets that are driving demand today, compliance markets based on governmentally imposed limits on GHG emissions (e.g., California's Cap and Trade Program) and voluntary markets (e.g., corporate sustainability reporting). Today, most carbon markets are voluntary, incentive-based markets where companies are linking buyers and sellers of carbon credits. The sellers, typically farmers, are paid for generating carbon credits by adopting management practices that meet specific beneficial ecosystem criteria. The most common practices include no-till/reduced-till, cover crops, crop rotation, and buffer strips that sequester carbon. Farmers are typically paid based on the amount of carbon sequestered, either on a per-acre basis or per ton of carbon sequestered. Once the carbon credit is generated, it enters the market where buyers can purchase those credits to meet their sustainability goals (e.g., carbon neutral by 2040). Today, most transactions occur through a third-party entity (aggregator), which links sellers (farmers) to buyers (corporations). Since carbon markets are still developing, price discovering is occurring, and payments for carbon credits may not cover the cost and risk of implementing new management practices. Early pricing ranges in value, but $15-$20 per ton of carbon sequestered is common. However, the amount of carbon sequestered and practice(s) adopted will vary by individual farm. Therefore, it is critical to understand the costs and risks of implementing new practices before enrolling in carbon market programs and the farmer's responsibilities over the life of the agreement.

One key characteristic surrounding a carbon market is the concept of additionality. Some companies will only pay for new (post-enrollment in a carbon program) carbon-sequestering practices, whereas other companies will pay for practices previously adopted on the farm, but only for a limited number of years. As Kentucky is the home of no-till farming, those interested in carbon markets should seek opportunities from programs that pay for previously adopted carbon-sequestering practices. As carbon markets evolve, more companies may offer programs that pay early adopters of conservation practices; however, there are strong opinions on both sides of the argument.

Third-party aggregators are currently enrolling farmers across the country in their carbon market programs. Each program will differ in required criteria to enroll, such as minimum acre requirements, payment structure, participation length, etc. Therefore, it is critical that you ask questions, read the fine print, and seek legal advice before entering any contractual arrangement. Our colleagues at the University of Illinois put together an article publication titled, "What Questions Should Farmers Ask about Selling Carbon Credits?," along with offering a table to review potential breakeven prices for various production practices.

While carbon markets in agriculture are in the developmental stage, numerous issues have surfaced which could prevent such markets from flourishing. Quality control and verification are vital and must be solved to ensure the buyer receives a high-quality carbon credit. The process of determining what constitutes "high-quality" is still in the developmental stage. Other issues include documentation, data privacy, and access to rural broadband to allow for technology adoption that measures reduced GHG emissions. Will there be enough demand for carbon credits to drive prices where carbon sequestration practices are adopted throughout all of agriculture? Could agriculture oversupply market demand leading to depressed prices? What changes in agricultural production practices will qualify for credit and how long must they be in existence? How and when the baseline is established so additional carbon sequestered is measured and compensated accurately?

How are early adopters incentivized to enter carbon market programs? We will continue to monitor these issues, markets, and policy development in future newsletter articles. Additional resources providing more background information can be found by reviewing the videos from Agri Pulse's Ag and Food Policy Summit or from American Farm Bureau's five-part series on Agricultural Ecosystem Credit Markets.

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2020 Beef Summary

By: Tarrah Hardin

In 2020, KFBM saw an increase of 5 farming operations with beef herds from 2019 for a total of 60 farms. Even though there was a slight increase in the number of herds from 2019, the average of cows in a herd decreased slight to 101 in 2020 from 103 in 2019. The average cow produced 612 pounds of beef. With the average of 101 cows in the herd, farm managers had an 85% calving rate resulting in 86 calves being born. Death loss in 2020 was 6 head for market stock and 4 head for breeding stock. On average 78 market animals were sold at 655 pounds and saw a price of $122.77 per CWT, slightly down from $124.87 per CWT in

2019. Farmers culled on average 9% of their breeding herd and received $52.29 per CWT which was an decrease of $2.16 per CWT over 2019.

When looking at total returns 2020 saw an increase of $78 per cow over 2019 resulting an average $576 per cow. The value of feed fed in 2020 was lower than 2019, at $433 per cow down from $474 per cow. After the value of feed fed is deducted from total returns that leave us with returns above feed cost, for 2020 on average was $144 per cow versus the $24 per cow average in 2019. The return above feed fed means that in 2020 beef operations had $144 to cover all other livestock cost after feed. Despite everything that beef operations had to deal with in 2020, the year was an improvement over 2019.

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2020 Tobacco Summary

By: Kayla Brashears

In the 2020 crop year, KFBM farmers across all four associations grew at least one type of tobacco. Tobacco farms have been declining across the state, and in 2020, farms in the Purchase and Lincoln Trail did not have enough data to share. A summary of Pennyroyal and Ohio Valley grown tobacco is below. Tobacco types included burley, dark fired, and air-cured. The air-cured category of production included an increase of wrapper tobacco. The average crop value per acre per type is as follows for the 2020 crop year: $3,450/acre for burley, $3,531/acre for air-cured, $6,249/acre for dark fired.

The average burley yield across KFBM farms was 1,670 pounds per acre, a decrease of 654 pounds to the acre from the prior year. The average farm produced 2,354 pounds to the acre of dark fired tobacco. Statewide yield of air-cured tobacco was 1,602. This is a decrease from the 2019 average of 2,335 pounds/acre. Many farms suffered a decline in yields in 2020 due to unfavorable weather conditions in some areas.

Tobacco prices are typically stable year over year. Average price for new crop burley was $2.04; new crop air-cured was $2.29; and new crop dark fired was $2.60.

The tobacco industry continues to change from year to year. Many producers were subjected to large cuts for the 2020 growing season, and some companies have adopted a grading system, which reduces the average price per pound. KFBM farms are managing these changes with diversification through other crops, like grain and wrapper tobacco, as well as making hard line adjustments to their operation.

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2020 Kentucky Grain Farms

By: Michael Forsythe

In 2020, there were 198 grain farms that were included in the KFBM averages. These farms averaged 2280 tillable operator acres. The average management returns per operator acre for these farms was $146.38. Management returns are accrual adjusted income and expenses plus charges for interest on land and non-land costs and unpaid (operator) labor. Management returns varied when broken down by association and size of operation.

The Pennyroyal area had the highest management returns per operator acre at $184.03, while Central Kentucky had the lowest at $51.10. Ohio Valley and Purchase areas averaged $81.67 and $130.23, respectively. In terms of size, 2000-3999 acre farms had the highest per operator acre management returns at $168.93, while 0-999 acre farms had the lowest at $42.52. 4000+ acre farms averaged $164.79 and 1000-1999 acre farms averaged $80.06. Even though the larger farms averaged higher management returns, this does not mean that all larger farms made more money than smaller farms.

In the 0-999 acre group, the lowest performing third (based on management returns per operator acre) averaged -$188.15 and the highest third averaged $212.45. Additionally, in the 4000+ acre group, the lowest third averaged $31.38 and the highest third averaged $356.32. The high performing third in each acreage group had larger gross farm returns than the low performing group, while the expenses were more varied throughout the groups.

Yields did not play as big of a factor in affecting management returns in 2020 as they have in prior years. In the majority of the

acre groups, there was minimal difference between the yields of the low and the high performing third. There were some variations on yields by geographic area, but they were still similar.

Statewide yellow corn averaged 200 bushels per acre, while Ohio Valley had the highest average at 204 and Purchase was the lowest at 194. Full Season Beans had a statewide average of 59 bushels per acre, while Ohio Valley had the highest average at 63 and Pennyroyal was the lowest at 55. Wheat yields varied greatly based on geographic area. Ohio Valley averaged 79 bushels per acre, Pennyroyal averaged 66, and Central Kentucky averaged 47.

One factor that played a significant roll on the 2020 Net Farm Income and Management Returns was the amount of government payments many farms received. While these payments were greatly needed, farmers should not rely on, nor expect large government payments going forward.

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2020 Dairy Summary

By: Lacey Williams

In 2020, milk prices dropped to $18.99 per CWT compared to $19.80 per CWT in 2019. The overall pounds of milk produced per cow in 2020 was 23,132. This is an increase of 693 pounds of milk more than in 2019.

Net farm income (NFI) per cow grew to $1,222.63 in 2020, up from $202.41 NFI per cow in 2019. In addition, the average KFBM dairy saw positive management returns, at $42,080; up from -$158,702 in 2019. On a per cow basis, the average management returns rose significantly from -$485.59 in 2019, to $495.11 in 2020.

Production grew in 2020, however, that alone was not the only reason for the increases in NFI and management returns. COVID-19 government relief payments were one of the main reasons for the returns, and without them, it could have been a much different year.

Overall, 2020 turned out to be a much better year for dairies than predicted. However, the cost of production continues to rise and the price per CWT is predicted to continue to fall, therefore, it is imperative that Kentucky dairies manage costs wisely.

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Upcoming Events

- KFBM State Board Meeting - July 21

Kentucky Farm Business Management Program

Purchase Association
Jennifer Rogers
270-562-2022

Program Coordinator
Jerry Pierce
859-737-4799

Extension Coordinator
Kenny Burdine
859-257-7273

Pennyroyal Association
Lacey Williams
270-842-5823
Kayla Lilly Brashears
Michael Forsythe
Laura Powers
270-886-5281

Lincoln Trail Association
Tarrah Hardin
270-737-4799

Ohio Valley Association
Lauren Turley
270-827-1395
Suzy Martin
270-685-8480