

U.P. Ag Connections Newsletter

Agricultural News from MSU Extension and AgBioResearch

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News and Views

By Frank Wardynski, MSUE

Year-end tax plan and financial analysis. Almost every year about this time, I write about preparing accounting practices to start looking at tax planning and then conducting year-end financial analysis once the year has ended. Once again, I want to offer my services to come work with you to go through any of your finances and financial procedures. I have had the opportunity to work with farm families on all aspects of their finances ranging from accounting systems to helping them build balance sheets.

You may be using various methods to keep track of your accounting. If you keep records by hand, Michigan State University has the Farm Record Book E1144. It is a great system for farmers that are not using a computer. The expenses and income sections are set up to follow IRS Schedule F tax forms and does an excellent job of guiding producers through an accounting system.

Many farmers are using computer programs like QuickBooks. These systems have helped improve accuracy and ease of accounting. At MSU we recommend using PCMars. It was specifically designed for agriculture, it interacts with FinPack, can track units sold, and only costs \$75 per year. Those are some fairly critical pieces to conducting good year-end financial analysis. Many of those are expenses for next year.

I use FinPack, which is a computer program developed at the University of Minnesota, to analyze farm profitability. It looks at both the beginning and ending year balance sheets along with the cash coming in and leaving the farm business to get a true measurement of profit. Too many people look at their taxes as the determining factor of how much money they made. Many farmers pay expenses before the end of the year to lower their taxes due. Also, farmers will sell cows to make ends meet. Both scenarios will alter taxes due and give a false analysis of profit.

Did you develop a balance sheet at the end of last year? If you did, great, we can look at the cash accounting and this year's balance sheet to conduct a financial analysis. If you did not, now is the time to start thinking about developing one for the end of this year. I can help make the process fairly ease and painless. It is one of the most critical steps to measuring your long-term financial progress. In developing the balance sheet, we are simply going to list everything that you own and list all your debts. Looking at assets and debts next to each other can give a sense of your financial situation. If you have a lot of debt and are having trouble paying, I can help look at possibilities to make that easier. Maybe it's looking at extending loan payments, combining short-term debts into one intermediate debt, or finding ways to get some high interest rates paid off first.

Right now, with high inflation and rising interest rates, farms that were doing fine for a long time are seeing some hard times. Knowing where you stand financially is the first step to navigating through those hard times. If you are looking for free help, please call me.

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Market Report

Save the Date! Ag for Tomorrow Conference March 8, 2023

MSU Extension will once again be conducting the Ag for Tomorrow Conference. The format will be similar to past years and the event will be held at Bay College.

Michigan State University



Year-end tax planning is valuable for good years, bad years and everything in between

By Corey Clark, MSUE

One of the only certain things in farming is that the income tax deadline will come every year. Between federal and state income taxes and self-employment tax, prospects of a large tax bill can feel overwhelming. Year-end tax planning can address this concern and is an essential tool for farm financial management.

We tend to think that tax planning is only necessary in good years. However, a better tax planning strategy is to maintain consistent taxable income across years. This minimizes taxes owed over a longer span of years. Thus, farmers can benefit from tax planning in moderate and poor years too.

Tax planning when net farm income is high

Most tax planning occurs in years where income is high to avoid a large tax liability. In general, there are three major strategies for tax management when net farm income is high: deferring income, prepaying expenses and taking accelerated depreciation.

Deferring income commonly refers to carrying over crops or livestock for sale to the next year. Remember that income is recognized when funds are available to your farm, not when the check is cashed. A deferred sale is also effective as long as a contract states that payment will occur in the next year. In addition, some insurance claims can be deferred.

Prepaying expenses not only increases cash expenses in this year but may also allow discounts on next year's inputs. Remember that expenses can only be recognized when payment is extended to a vendor. Purchases made on account are not deductible.

Taking accelerated depreciation refers to using section 179 and bonus depreciation methods. These depreciation options allow many asset purchases to be depreciated entirely or in large part for the current tax year. In high income years, farmers often want to heavily rely on accelerated depreciation to reduce taxable income. However, while accelerated depreciation can significantly increase current year expenses, relying too heavily on it can leave you with a large tax liability on top of debt payments in future years.

Tax planning when net farm income is low

Tax planning can also be advantageous in low income years. Planning helps to maintain a stable taxable income over time and avoid tax losses that have limited long-term benefit. Taxable income can be boosted by increasing farm income and/or decreasing expenses, as well as taking advantage of nonfarm tax provisions.

The most common way to increase income is to sell farm products that may otherwise have been carried over to next year. Recognizing all insurance claim payments instead of deferring them may provide an opportunity to manage income as well.

Deferring common bills, such as insurance premiums, rent or interest until after the first of next year can reduce the current year expenses. Since expenses are only recognized when a vendor is paid, you might also choose to buy inputs on vendor account. Reducing prepaid expenses is another option, although you need to consider how this offsets purchases that take advantage of available discounts.

Although it does not impact self-employment income, a low income year may also be an opportunity to convert traditional IRA funds to a Roth IRA. If negative or extremely low self-employment income is unavoidable, you or your spouse may still want to pay enough to gain credits for social security.

Tax planning when net farm income is moderate

Maintaining a level taxable income is often a wise long term tax management strategy. Your tax preparer can help you plan a target net farm income to maintain consistent total tax liability. You can also use a combination of available options to reach that target.

The primary tools in year-end tax planning are income timing, increasing or decreasing expenses and managing depreciation. Crop and livestock sales may be most effective to manage an increase or decrease of income. Managing expenses should first be done with cash options. Prepaying expenses during a production year can allow you to reach a target balance of income and expenses. Accelerated depreciation can provide flexibility, allowing assets to be purchased when they are most advantageous to your overall financial condition.

Even after year end, a few tools exist to further refine your tax liability. Contributions to personal IRAs and health savings accounts (HSAs) are not due until the April tax deadline. Depreciation decisions can also be made when preparing the tax return. In addition, farm income averaging is a tool that your tax preparer can use to reduce federal income tax.

Although year-end tax planning takes some effort, it is an important tool to reduce your long-term tax liability. Work with your tax preparer to develop a plan that is right for your farm. More information about farm income taxes can be found at the <u>IRS</u> <u>website</u>. Additional tax planning information is available from the <u>MSU TelFarm Center</u>. You can also contact your <u>Michigan</u> <u>State University Extension Farm Business Management Educator</u> with questions.

Final call to register for 2022 Integrated Crop and Pest Management Update By Eric Anderson, MSUE

Less than two weeks remain to register for the <u>2022 Integrated Crop and Pest Management Update</u>. The meeting will be held in-person at the <u>Michigan State University Livestock Pavilion</u> on Monday, Dec. 19, 2022, from 9 a.m. to 4 p.m. with an option to attend virtually. Check in and a light breakfast will begin at 8 a.m. with the program beginning at 9 a.m. If attending virtually, plan to join by 8:45 a.m. Registration will be live until Dec. 11 for the in-person meeting and Dec. 15 for the virtual meeting.

The program this year includes:

Торіс	Speakers	
Registration and light breakfast		
Welcome	Eric Anderson, MSU Extension Field Crops Educator	
General Session		
Michigan Check-Off Programs Update	Michigan Soybean, Michigan Wheat and Michigan Corn	
MAEAP Update	MDARD MAEAP Program	
2022 Michigan Soybean On-farm Research Program Update	Mike Staton, MSU Extension Senior Soybean Educator	
Field Crops Insect Pests Update	Chris DiFonzo, MSU Field Crops Entomologist	
Field Crops Diseases Update - To Spray or Not To Spray?	Marty Chilvers, MSU Field Crops Pathologist	
Break		
Breakout Session #1		
Strategies for Purchasing Farm Inputs	Jon LaPorte, MSU Extension Farm Management Educator	
Ag Land Rental Market	Matt Gammans, MSU Agricultural Economist	
Lunch Break		
General Session		
Nutrient Management Update	Kurt Steinke, MSU Field Crops Nutrient Management Specialist	
Agronomy Research Update	Manni Singh, MSU Cropping Systems Agronomist	
Crop Nematode Research Update	Marisol Quintanilla, MSU Nematode Specialist	
Break		
Breakout Session #2		
Overview of 2022 Wheat Season and Trials Update	Dennis Pennington, MSU Wheat Specialist	
Forage Research Update	Kim Cassida, MSU Forage and Cover Crop Specialist	
General Session		
Corn and Soybean Weed Research and 2023 Weed Control Guide (E 434) Updates	Erin Burns and Christy Sprague, MSU Field Crops Weed Specialists	
Program Evaluation, Credits and Adjourn	Eric Anderson	

Participants of both the in-person and virtual meeting will receive <u>Michigan State University Extension</u>'s "2023 Weed Control Guide for Field Crops." Six Michigan pesticide recertification (RUP) credits and 5.5 continuing education units (CEUs) for certified crop advisers will be available. Cost for the in-person meeting is \$65 per person when pre-registering or \$80 per person when registering onsite. Cost for the virtual event is \$35 per person. The in-person meeting will include a light breakfast, hot lunch and snacks. Registrants for the virtual option will receive information on how to join via Zoom.

Contact Eric Anderson at <u>eander32@msu.edu</u> or call 269-359-0565 with questions or accessibility requests.

Manure analysis provides accurate account of plant available nutrients

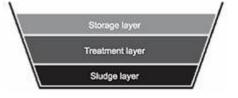
By Sarah Fronczak, MSUE

With the current economic challenges faced by Michigan farmers, taking full advantage of the plant nutrients found in livestock manure is an easy choice. But if you aren't testing manure for its specific nutrient content, you need to depend on published "book values" to estimate nutrients applied from manure application. This approach can result in significant miscalculation of nutrients applied to fields.

Fertilizer is too valuable to not take credit for manure nutrients in your nutrient management plan. Book values of manure are just averages and don't consider factors such as varying storage and application losses, temperature, diet or other factors. The first step to figuring the value of your manure is to take a representative sample and send it in for analysis. <u>Several certified laboratories</u> are available, with a typical cost of around \$32 per sample for a basic analysis. It is important to use proper collection technique when the sample is collected. The lab you select will have sampling instructions on their website.

Collecting a liquid manure sample

Liquid storage structure stratifies over time. If you have a large liquid storage, it is recommended that you take at least three representative samples as you empty it. Each layer will have a differing manure analysis that will affect the application rate and dollar savings on fertilizer. Since these layers vary so widely, and the manure has such a high value, it just makes good economic sense to take multiple samples.



Graphic by Roberta Osborne

Over time, solids tend to settle to the bottom of the manure storage. According to <u>Fertilizer Nutrients in Livestock and Poultry</u> <u>Manure</u> by Fulhage et al., up to 80% of the phosphorus can remain in the sludge layer of a liquid storage structure if not completely agitated.

A good guideline when hauling solids from the bottom of a storage structure is to utilize it on your lowest phosphorus testing fields, even if that means driving some distance. Depending on the analysis, you may also have to apply it much thinner compared to the manure in the upper portion of the storage.

If manure is a significant source of nutrients for your crops, <u>Michigan State University Extension</u> recommends you have it tested annually following recommended sampling procedures. With the current high nutrient prices, the cost of manure sampling in time and cash, along with good manure storage, handling, application and incorporation practices, can be a very good investment.

What should you test for on the analysis?

A basic analysis includes moisture, total N (Nitrogen), NH4 (Ammonium- N), P (Phosphorus) and K (Potassium). Both analyses of the nitrogen are vital and will tell you not only the total N content, but also the portion that is in the ammonium form. Under some conditions, ammonium (NH4) is readily transformed to ammonia (NH3) and is lost as a gas. When this happens, the total N available for the plant is reduced.

Taking good samples and keeping the results year after year builds confidence in the value of your manure. You can compare these tests with corresponding soil tests where manure was applied. You will see and learn the differences between the season of application, incorporation methods, field-to-field variations, and other variables. This year-to-year tracking will lead to more confidence in crediting manure nutrients adequately, optimizing use, and fine tuning purchased fertilizers. Remember, using manure effectively is an important economic management tool and promotes good environmental stewardship. The true value of manure is only realized when you take credit for it in your nutrient management plan for the fertilizer value it contains and reduce purchased fertilizer accordingly.

FIELD TO BENCH: MICHIGAN STATE PUTS SMALL GRAINS AND PRODUCERS ON THE MAP IN THE MITTEN STATE

By Emily Hutto, RadCraft and Craft Maltsters Guild

Our 2022 Field To Bench series has illuminated the collaboration required to execute barley research that yields useful results for producers, and our Q4 spotlight on Michigan State University (MSU) is no exception.

MSU is actively researching winter malting barley, and other grains like corn, oats, and rye, in the context of brewing and distilling, among many other agricultural studies. "Our broad interests stem from agro-ecology questions, around how ecosystems work in relation to farming systems. We aim to develop applied tools to improve farming systems for the better of the environment while still supporting yield and profit," says Brook Wilke, Associate Director for Science and Agronomy at the university's Kellogg Biological Station (KBS) in Hickory Corners, Michigan. "We are good at growing corn and soybeans across the Midwest, but our ag systems perform better when we integrate winter annuals like barley and wheat, both of which grow well across Southern Michigan. Markets for winter malting barley in the U.S. are still in developmental stages, but droughts, pre-harvest sprout, and competition from other crops are all affecting spring barley production, which is starting to open up interest and demand for winter barley."

MSU added winter barley to its research and education program in 2017, and these researchers haven't looked back.

"Winter barley is a natural fit for Michigan because winter wheat is very common; If people are growing small grains that's generally the one," says James D. DeDecker, Director of MSU's Upper Peninsula Research & Extension Center (UPREC) in Chatham, Michigan.

Wilke chimes in again. "It's been surprisingly successful. Not once have we had winter survival issues at KBS and most years we achieve American Malting Barley Association (AMBA) quality standards with the majority of the varieties. Learning that we *can* grow winter barley that archives high yields, meets standards, and provides double cropping opportunities and thus high-profit potential for farmers is super exciting."

Winter barley doesn't come without its challenges, though. "It's apparent that winter is a complex phenomenon," DeDecker explains. "We face the multifaceted challenge of winter hardiness in barley. Beyond cold, you have desiccation and anoxic environments from ice cover— all these aspects that challenge the crop in unique ways. No one variety will stand up well to all of those things. We and other folks like Kevin Smith at the University of Minnesota are looking at how varieties differ in stem and leaf architecture, crown height, xylem diameter (how skinny or wide plant vascular tissues are), antioxidative enzyme activity, DNA repair, and other factors that might influence winter hardiness."

Despite challenges, diversifying with winter barley has the potential to "help with the resilience of the industry and the resilience of individual farmers looking to achieve a profitable, sustainable system," Wilke beams.

Data supporting this resilience is made possible by MSU's Quality Labs, located at UPREC and on campus in East Lansing, which take in samples and analyze them for quality. The labs test private and commercial grains for crude protein, germination, assortment, pre-harvest sprout, and mycotoxins. There are also three malt quality packages available for processed grain. Christian Kapp, a research technician who heads the lab at UPREC, says, "our program now encompasses all parts of the barley world – spring and winter – and beyond to other small grains like rye and oats. We have a good core group of at least ten growers across the state who work closely with maltsters and university professionals. The level of collaboration and open sourcing amongst small grain researchers, maltsters, and growers both in and outside the state is quite unique and refreshing."

Kapp makes a point to highlight the final piece of MSU's puzzle for supporting the beverage industry with the best quality grains: the work of Teaching Specialist, Master Brewer, and winning <u>Moonshiners: Master Distiller</u> (yes, you read that right- check out season 3, episode 8) Dr. Nicole Shriner who directs MSU's Fermented Beverage Lab and fermentation studies program. She's working with professional brewing and distilling collaborators like Bell's Brewery, Mammoth Distilling, Ethanology, and Valentine Distilling to generate and analyze data that supports the best possible performance of small grains in processing. "There's a disparity between the data that can and should be collected in commercial breweries and distilleries based on scale and the cost of equipment," she posits. "I'm trying to bridge that gap for producers in Michigan. It's a good use of our equipment to better the industry."

Perhaps the only barley research program on the continent without its own breeding program, MSU researchers rely upon many scientific, funding, and industry collaborators to do their work. This network includes farmers and producers, as well as leaders of regional variety trial networks across the country such as the University of Minnesota, North Dakota State University, and Virginia Tech; as well as funding partners that include AMBA, the Michigan Craft Beverage Council, the Michigan Crop Improvement Association, the Michigan Brewers Guild, Bell's Brewery, Origin Malt, and the Michigan Department of Agriculture Rural Development, among others. "We owe these leaders a lot of credit for making it possible for us to do barley research," Wilke says. "It's unique that we're doing this work without a breeding program. We're totally indebted to those other states and institutions," adds DeDecker. Ultimately, the fermented beverage industry is indebted to Michigan State for this profound research too. These professionals aren't just shedding light on the viability of winter barley, they're also highlighting Michigan as a major player in the broader small grains industry.

Beyond barley, MSU researchers are also making headway in rye production. They have found that rye can come with tradeoffs between agronomic performance and flavor. High yields of starchy grains can dilute important flavor compounds of interest to brewers and distillers. "We find ourselves asking 'Who's the customer and what do they value?' AC Hazlet [a fall rye variety originally developed in Canada] is high in 4-VG, which lends spicy flavor notes, and is also a good yielder. The industry is starting to recognize this variety, and we're thrilled to be able to scale that up." DeDecker says. You can read more about MSU's rye variety trials and results in this report.

Michigan additionally deserves credit for new legislation that supports state-grown grains in its beverages. Enacted earlier this year, <u>House</u> <u>Bill 4842</u> assists Michigan's craft distilling industry by lowering the tax rate on spirits derived from at least 40 percent Michigan-grown ingredients (grain or otherwise), and increasing the number of bottles distillers can produce while saving them and their customers money. "House Bill 4842 represents an opportunity for Michigan to become one of the leading states in the country in support of the growing craft distilling industry," said Jon O'Connor, President of the Michigan Craft Distillers Association, in a <u>press release</u>.

In their continued efforts to serve as liaisons between growers and processors, MSU will once again partner with the Michigan Brewers Guild to host the third annual Michigan Great Beer State Conference on January 11-13, 2023 in Kalamazoo, MI. This event offers educational sessions and a trade show targeting barley and hops growers, maltsters, and brewers. This winter there is a special focus on conveying the value of locally grown and processed beer ingredients. Find details about the conference and register <u>here</u>.

"If there's one key thing that makes Michigan special and drives the team's beverage research, it's our apparent climate resilience," DeDecker concludes. "Whether you're talking about diversifying sourcing of barley and other grains for beverages and looking to places in the Great Lakes Region, or identifying in the state where we can grow spring and winter varieties and diversifying to deal with climate risk— it brings all the work we're doing together. Hopefully, climate change can create opportunities in Michigan where it's creating challenges elsewhere. I think about the droughts in the West. Maybe Michigan deserves a second look in terms of small grains."

Learn more about MSU's grain research and application on the UPREC and KBS websites.





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Market Report				
Choice Steers		\$135-\$155 per 100 lbs.		
Holstein Steers		\$125-\$135 per 100 lbs.		
Hogs		\$56-\$60 per 100 lbs.		
Lambs		\$120-\$180 per 100 lbs.		
Cull cows		\$65-\$80 per 100 lbs.		
Calves		\$130-\$190 per 100 lbs.		
Goats		\$200-\$350 per 100 lbs.		
Breeding and Feeder Animals				
Grade Holstein cows top \$2025/head				
Grade Holstein bred heifers top \$2125/head				
Feed Prices across the U.P.				
A	vg. \$/cwt	Avg. \$/ton	Price Range	
Corn	\$17.92	\$358.40	\$265-560	
Soymeal	\$29.55	\$591.00	\$500-690	
Oats	\$17.69	\$353.75	\$319-416	
Barley	\$14.06	\$281.25	\$200-386	
Average price/100 wt. for 1 ton lots				